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*1998-99 Undergraduate and Graduate Catalog*

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# THE CALIFORNIA STATE UNIVERSITY

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges and in 1982 the system became The California State University.

The oldest campus, San Jose State University, was founded as a Normal School in 1857 and became the first institution of public higher education in California. California State University, Monterey Bay became the CSU's 21st campus in September 1994. The California Maritime Academy in Vallejo, founded in 1929, joined the CSU as its 22nd campus in July 1995. The CSU's 23rd campus—California State University, Channel Islands—is in the planning stage to serve students in the Ventura County region.

Responsibility for The California State University is vested in the Board of Trustees, consisting of ex officio members, alumni and faculty representatives, and members appointed by the Governor. The Trustees appoint the Chancellor, who is the chief executive officer of the system, and the Presidents, who are the chief executive officers of the respective campuses.

The Trustees, the Chancellor, and the Presidents develop systemwide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

Academic excellence has been achieved by The California State University through a distinguished faculty, whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as broad liberal education. All of the campuses require for graduation a basic program of general education requirements, regardless of the type of bachelor's degree or major field selected by the student.

The CSU offers more than 1,500 bachelor's and master's degree programs in some 200 subject areas. Many of these programs are offered so that students can complete all upper-division and graduate requirements by part-time late afternoon and evening study, or by distance learning from home or work via computer or television. In addition, a variety of teaching and school service credential programs are available. A limited number of doctoral degrees are offered jointly with the University of California and with private institutions in California.

In fall 1996, the system enrolled approximately 336,000 students, taught by more than 17,000 faculty. Last year the system awarded over 50 percent of the bachelor's degrees and 30 percent of the master's degrees granted in California. More than 1.2 million persons have been graduated from the 22 campuses since 1960.

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# ACADEMIC ADVISING

University undergraduate academic advising services and academic departments are responsible for providing academic direction for new and continuing students. In addition, academic departments provide academic advising for graduate students.

Undergraduate advisors, both in advising service offices and in academic departments, assist students to develop educational plans that are compatible with students' interests, academic preparation and educational and career goals.

While advising offices mainly provide information and advise about general education, academic departments advise students about their major requirements and other important academic issues. Lists of faculty advisors, their locations and phone numbers appear each semester in the Schedule of Classes. Faculty advisors also provide academic advisement and information about minors, certificates, internships and masters programs. Students are advised to check with advisors often for current and relevant information.

The following listings are of advising services that are available to students. Some are involved in special programs. Some are major-specific such as Liberal Studies. The list also includes specific advising services such as the Academic Advising Center. All are anxious to assist students.

## Advisement Centers on Campus

### Academic Advising Center

The Academic Advising Center provides services to the general University student population as well as prospective CSULB students.

### Center Services

- Provide advisement and evaluate transferable coursework for prospective transfer students
- Provide admission information for prospective freshmen and their parents
- Provide small group workshops for entering students
- Provide a home-base to undeclared students
- Provide total academic program planning for entering and continuing students
- Provide unofficial Degree Audits for entering and continuing students
- Provide General Education advising for continuing students
- Provide information, advisement and special evaluation services to adult reentry students
- Provide assistance and information with and for the academic appeals process
- Provide academic probation/disqualification intervention services to high-risk students (in one hour sessions)
- Provide special advisement services to undeclared and pre-majors

The Academic Advising Center is located in Library East, Room 125, telephone number (562) 985-4837. Students are seen on a walk-in-basis and by special appointments for adult reentry and students disqualified by the University. Service is

provided by staff and well trained upper-division and graduate student peer advisors. The Center is open for advising Monday - Tuesday from 9:00 a.m. - noon and 1:00 p.m. - 5:00 p.m. and Friday from 9:00 a.m. - noon. Hours may vary during the holidays and summer.

### Center for Student Athlete Services

The Center for Student-Athlete Services (CSAS) provides support services for NCAA Division I student-athletes. The CSAS staff provide total advisement about academic program planning and appropriate course suggestions for meeting general education and major requirements; assistance in the identification and clarification of educational and vocational goals and in the interpretation of NCAA rules of eligibility; as well as advisement about the CSULB regulations and requirements leading toward graduation.

The CSAS also provides the opportunity both for freshmen and new transfer student-athletes to participate in transitional support programs designed to capitalize on the student-athletes' athletic skills, while learning to transfer those skills to classroom success. CSAS actively monitors SA academic performance, and provides referral to various resources available on campus to enhance student-athletes academic performances. The CSAS is open Mondays through Thursdays 8 a.m. - 5 p.m., Fridays 9 a.m. - noon. Appointments Monday - Thursday from 9 a.m. - 3 p.m. CSAS is located at PE1-63. Students should call (562) 985-4777 for more information.

### Educational Equity Services

Educational Equity Services has two advising components. They are as follows:

Educational Opportunity Program (EOP) is a state funded program that has developed special services to help students overcome the obstacles that may prevent them from furthering their education and reaching their potential. Students that are interested in being considered for EOP must declare their intentions on the University application at the time they apply to the University.

Student Support Services Program (SSSP) is a federally funded program designed to assist students in achieving their maximum potential in higher education. Students are referred to SSSP by faculty, staff and students of CSULB. Interested students apply directly to the program for participation. In addition to an academic need, one of the following must apply for a student to be eligible for SSSP services:

- Low income and first generation college student
- Physically disabled and/or learning disabled
- Low income only
- First generation only

Students should check with SSSP regarding their eligibility for program participation.

### Educational Equity Services:

- Financial Aid Assistance
- Orientation to college-helping students adjust to the college environment

- Academic advising-guidance with graduation requirements, major and course selection
- Writing and college transition course (EOP 100)
- Individual counseling
- Peer advising
- Tutorial and supplemental instruction assistance covering a wide range of courses
- Career counseling
- Probation intervention
- Writing Proficiency Examination workshops
- Graduate placement information

Educational Equity Services is located in LA1-119. The telephone number is (562) 985-5637. Students are seen by appointment.

### Interdisciplinary Studies

Interdisciplinary Studies students can create an individualized program of study using courses from a variety of academic majors. Coastal protection, marine toxicology, biogeography, biomedical ethics and classical studies are among the many diverse areas of concentration recently pursued by students in the Interdisciplinary Studies Program.

The undergraduate degree is a closely correlated program of study (at least 40 units), in two or more departments developed in conference with faculty members from the respective departments who have the academic expertise necessary to support the course of study. The program also offers a Master of Arts and Master of Science degree in Interdisciplinary Studies.

The Interdisciplinary Studies Program is located in Library East 127. Call (562) 985-2396 for more information.

### CSULB Learning Alliance

The Learning Alliance is a three-year program created for students who seek an active, personalized college experience. It was designed to help first-time freshmen make a positive transition to university life and to be academically successful. This learning community offers students a chance to take classes together, learn from challenging instructors and to establish closer ties to CSULB through campus involvement. Students qualify for the program based upon test scores (SAT, ACT, ELM or EPT) and their desire to become a participant in a community that enables them to make informed choices about majors and career/life goals.

The Learning Alliance accepts 200 first-time freshmen (any major) each year. New students will enroll in a set of "connected" general education classes in the fall (English Composition and a social science course) where faculty work together in pairs to integrate the subject matter. In the spring, students will enroll in additional connected Liberal Arts classes. During each semester of the sophomore and junior years, students take one class with the Alliance. By taking courses together in sequence, opportunities to make new friends, form study groups, and attend campus events are an added advantage for students who belong to the Learning Alliance.

Specific benefits include general education advisement, early registration, sequenced general education courses, academic and staff support, social activities, specially selected professors, and opportunities for campus and community involvement.

First-time freshmen students are invited to apply for space in the Learning Alliance. If you have less than 18 transferable units with a cumulative GPA of 2.0 or better and no credits for classes we offer, and you have an SAT Verbal score of 490/higher or an EPT score of 151/higher (scores which place you in a college-level English composition course) you are eligible for the program. Space may also be available for students scoring at the ENGL 001 review class level. Applications are accepted on a first-come, first-served basis until all spaces have been filled. Call our office at (562) 985-7804 or stop by LA4-202 for an application or information.

### Liberal Studies Program

Liberal Studies Program serves two distinct populations: 1) Those who are interested in becoming elementary teachers and 2) Those with more varied academic or career goals who would prefer a sound generalist program to one requiring early specialization. The General Education requirements for students majoring in Liberal Studies are unique. Liberal Studies is not only an approved major, but also an approved alternate general education program. In completing the Liberal Studies major, students concurrently satisfy general education.

The Liberal Studies Program seeks to provide timely and accurate academic advising to all Liberal Studies Majors. To meet that goal, students wishing to declare Liberal Studies as their major must attend an open-file workshop in order to declare the major. Prior to attending this workshop, students must submit a complete set of transcripts of all college work completed (unofficial copies are fine), so that the Program can provide an official Summary of Credits for the major. After students attend the open-file workshop and are declared into the major, they may make appointments with well-trained student peer advisors, or if special circumstances are present, with the Program Director or Assistant Director. Walk in advising hours are also available each week during the academic year.

The Liberal Studies Office is located in Library East 127. During the academic year, the office is open from 9:00 a.m. to 5:00 p.m. Monday through Thursday. Extended hours are available during the first and third week of each month, with the office open one night until 7:00 p.m. and from 9:00 a.m. to noon on Friday. Hours may vary during holiday and vacation periods. Students may call (562) 985-4228 for more information.

### The MESA Center

The MESA Center provides academic advisement and counseling services to the "historically" underrepresented minority students in all of the Engineering disciplines: Aerospace, Chemical, Civil, Computer Engineering and Computer Science, Electrical, Engineering Technology, and Mechanical Engineering. This includes the General Education and the upper-division requirements (also referred to as Interdisciplinary courses (IC)). The MESA Engineering staff members work directly with the engineering department undergraduate advisors to provide up-to-date information on all engineering course requirements and changes.

Academic advisement is available in the MESA Engineering Center by appointment and on a walk-in basis, as time permits. The Center is open Monday through Friday from 9:00 a.m. - 5:00 p.m. For additional information, call the MESA Center at (562) 985-8014 or stop by the office which is located in the Engineering 2, Room 300.

## Strategies for Academic Success Program

### (Probation Intervention)

This is a university-wide program designed for undergraduate students who are on academic probation (either your CSULB or all college cumulative grade-point average is below 2.0). The program includes information about university policies and procedures, the reasons why students encounter academic problems, and, last but not least, how to receive the right help from campus services and offices to be a more successful student.

Any undergraduate or undeclared post-graduate student whose CSULB or overall cumulative grade-point average (GPA) is below 2.0. Declared graduate students and credential candidates who are on probation should contact their department for information and assistance.

Attendance in this program is not mandatory but it is highly recommended. Current university policy states that you may only remain on academic probation for two semesters. After that, you will be subject to academic disqualification if your GPA remains below 2.0. If you attend a Strategies for Academic Success program AND do one follow-up activity, you will be eligible for a third semester on academic probation if you need the extra time to bring your GPA to a 2.0 or above. Plus, you have the additional assistance, information and strategies needed to improve your academic performance.

If you would like more information or if you would like to sign up for a workshop please call us at (562) 985-7847 or stop by Library East, Room 127. Workshops are scheduled at a variety of times during each semester and during the winter and summer breaks.

### Student Access to Science (SAS)

Student Access to Science (SAS) encourages and supports undergraduate and graduate students as they prepare for careers in the sciences and/or mathematics. There are many programs that combine to make up SAS. Two programs in particular which relate to academic advising are Science Safari to Success and EONS (Enrollment Orientation to the Natural Sciences). EONS and Science Safari are orientation programs for all incoming freshmen and transfer students. Respectively, these programs welcome students to the College of Natural Sciences and Mathematics by providing academic advising, overview of career opportunities and degree programs, peer mentoring, and access to appropriate courses for students majoring in the sciences and/or mathematics.

For more information or assistance call (562) 985-8395, or come by the SAS Center located in Faculty Office Building 5, Room 109 (FO5-202).

### University Honors Program

Students with SAT scores of 1,000 or above and a high school GPA of 3.2 or above or with a college GPA of 3.2 or above who still need 21 units of General Education are urged to apply to the University Honors Program. Interested students are urged to apply for an interview with the Director of the program. Applicants who are accepted to the Program are given personal advisement and schedule planning for the following semester. The Program requires no extra classes and includes small discussion classes with students who share similar interests and abilities; scholarships for outstand-

ing students; personalized academic advisement and guidance; opportunities for a distinguished undergraduate record as one of fewer than 250 students on campus; priority registration; professors' profiles of each student's individual performance placed in a file for job and graduate school applications; and the opportunity to do an undergraduate thesis project in the area of the student's major.

It is entirely possible to graduate in four years and to be recognized at graduation as having fulfilled all the requirements of the Honors Program. Students who are interested should telephone Director Dr. Roberta Markman or Duan Jackson at (562) 985-4706 to request an informative brochure and an application which, when submitted, will be responded to with an invitation for a personal interview and individual program advisement. The program is located in the University Library, Room 308.



## Frequently Asked Questions

Students ask many of the following questions. Successful students know the answers to these frequently asked questions. Please read them carefully. Knowing these answers can help you avoid pitfalls during your first semesters on campus.

1. What are the deadlines for admission to CSULB? The University begins to accept applications for Fall semester admission in November of the preceding year; Spring semester admission begins in August of the preceding year. However, only applications received in the months of November and August are given priority. Some departments have supplemental admissions requirements; contact your department for further information. All "impacted" programs and some departments accept applications only in the months of November and August respectively.
2. Can freshmen/sophomore students take upper division (300-499) classes? University policy prohibits lower division students (under 30 units) from taking upper division courses without permission of the instructor.
3. Why is it important that I personally drop classes that I have registered for but am no longer attending? Instructors do not have the responsibility to drop students. Students must drop classes they no longer want through the VRR system during the first two (2) weeks of the semester.  
Beginning the third week, students must use the official withdrawal form to change their schedule.  
Official withdrawal is indicated on the transcript with the symbol "W." This designation does not affect grade point average (GPA). However, students who fail to withdraw officially within the established deadline receive a "U" symbol.  
In the calculation of the GPA, a "U" is counted as an "F" grade.
4. Can my General Education (GE) Courses be used for GE and for my major ("double counted")? Usually courses in a student's major subject may not be used to satisfy GE requirements. However, there are seven (7) exceptions to this rule. The exceptions are listed with the GE requirements in the Schedule of Classes along with the list of approved GE courses. In addition, majors sometimes require GE courses from other departments; these courses can be "double counted" for both GE and major requirements. Remember, you can only earn unit credit once for a course.
5. How many units will transfer from a California Community College to CSULB? All bachelor's level courses transfer, but only 70 units of transferable course work will apply to your bachelor's degree. Additional transferable course work will receive subject credit only.
6. What does General Education (GE) Certification mean? Certification means that you completed the required 39 unit lower division GE pattern at a California Community College. GE certification must be clearly indicated on your official community college transcript. For further information, contact your community college counselor.

7. Does having an A.A. degree from a California Community College mean I am GE Certified? Usually not. The minimum requirements for most A.A. degrees do not include the 39 unit lower division GE pattern required by CSULB. CSULB requires an additional nine (9) units of upper division GE courses.
8. What is partial General Education (GE) Certification? Partial Certification means that transfer students have completed subject and unit requirements in some GE categories, but not others.
9. What can I do if I get a "D" or "F" or "U" in a course? The University has a "repeat/delete" policy which allows you to repeat a course (with a D, F, or U) to receive a higher grade. This can be done only once per course. Both the first and the second grade will appear on your transcript; however, only a second grade of "C" or higher will be used to calculate your GPA. The first grade will be "deleted" from the GPA calculation.

For further information, contact the Academic Advising Center at (562) 985-4837.



# ADMISSION TO THE UNIVERSITY

## Admissions Procedures and Policies

Requirements for admission to California State University, Long Beach are in accordance with Title 5, Chapter 1, Subchapter 3, of the California Code of Regulations. If you are not sure of these requirements you should consult a high school or community college counselor or the Admissions office. Applications may be obtained from the Admissions office at any of the campuses of The California State University or at any California high school or community college. Electronic versions of the CSU undergraduate and graduate applications are accessible on the World Wide Web at <http://www.csumentor.edu>.

An undergraduate applicant who does not qualify for regular admission to the University may be admitted by special action on the basis of exceptional talent; evidence of academic potential through a combination of test scores, recent academic performance and experiential background; or recommendation by an academic department or a university-level faculty committee.

## Importance of Filing Complete, Accurate, and Authentic Application for Admission Documents

The CSU advises prospective students that they must supply complete and accurate information on the application for admission, residence questionnaire, and financial aid forms. Further, applicants must submit authentic and official transcripts of all previous academic work attempted. Failure to file complete, accurate, and authentic application documents may result in denial of admission, cancellation of academic credit, suspension, or expulsion (Section 41301 of Title 5, California Code of Regulations).

## Undergraduate Application Procedures

Prospective students, applying for part-time or full-time undergraduate programs of study, in day or evening classes, must file a complete undergraduate application as described in the undergraduate admissions booklet. The \$55 nonrefundable application fee should be in the form of a check or money order payable to "The California State University" and may not be transferred or used to apply to another term. An alternate campus and major may be indicated on the application, but applicants should list as an alternate campus only a CSU campus that also offers the major. Generally, an alternate major will be considered at the first choice campus before an application is redirected to an alternate choice campus.

## Readmission

Students who break attendance by not enrolling in classes each semester, and who have not filed for educational leave, must reapply for admission. Transcripts of work completed elsewhere during the absence must also be submitted. If the absence exceeds three years, all transcripts must be replaced with official copies. Students who left under academic disqualification must submit an Academic Appeals Petition with their completed application prior to August 1 for Fall semester or December 1 for Spring semester.

## Impacted Programs

The CSU designates programs as impacted when more applications are received in the first month of the filing period than can be accommodated. Some programs are impacted at every campus where they are offered; others are impacted only at some campuses. You must meet supplementary admissions criteria if applying to an impacted program.

The CSU will announce before the opening of the fall filing period which programs are impacted and the supplementary criteria campuses will use. That announcement will be published in the "CSU Review," and distributed to high school and college counselors. Information about the supplementary criteria is also sent to program applicants.

You must file your application for admission to an impacted program during the first month of the filing period (August for Spring; November for Fall). Further, if you wish to be considered for an impacted program at two or more campuses, you must file an application to each.

## Supplementary Admission Criteria

Each campus with impacted programs uses supplementary admission criteria in screening applicants. Supplementary criteria may include ranking on the freshman eligibility index, the overall transfer grade-point average, and a combination of campus-developed criteria. If you are required to submit scores for either the SAT I or the ACT, you should take the test no later than December if applying for fall admission.

The supplementary admission criteria used by the individual campuses to screen applicants appear periodically in the "CSU Review" and are sent by the campuses to all applicants seeking admission to an impacted program.

Unlike unaccommodated applicants to locally impacted programs who may be redirected to another campus in the same major, unaccommodated applicants to systemwide impacted programs may not be redirected in the same major but may choose an alternate major either at the first choice campus or another campus.

## Application Filing Periods

Terms in 1998 - 1999	Applications First Accepted	Student Notification Begins
Fall 1999	November 1, 1998	December 1998
Spring 1999	August 1, 1998	September 1998

## Filing Period Duration

Each campus accepts applications until capacities are reached. Many campuses limit undergraduate admission in an enrollment category because of overall enrollment limits. If applying after the initial filing period, consult the campus admissions office for current information.

## Application Acknowledgment

You may expect to receive an acknowledgment from your first choice campus within two to four weeks of filing the application. A notice that space has been reserved for you will also include a request that you submit the records necessary for the campus to evaluate your qualifications. You may be assured of admission if the evaluation of your qualifications indicates that

you meet CSU admission requirements, and campus requirements for admission to an impacted program. Such a notice is not transferable to another term or to another campus.

## Preparation and Eligibility

### Undergraduate Admission Requirements — Freshmen

You will qualify for regular admission as a first-time freshman if you

1. are a high school graduate,
2. have a qualifiable eligibility index (see section on Eligibility Index), and
3. have completed with grades of "C" or better each of the courses in the comprehensive pattern of college preparatory subject requirements (see "Subject Requirements"). Courses must be completed prior to the first enrollment in the California State University.

You will qualify for regular admission when the university verifies that you have a qualifiable eligibility index and will have completed the comprehensive pattern of college preparatory subjects and, if applying to an impacted program, meet supplementary criteria.

### Eligibility Index

The eligibility index (table at right) is the combination of your high school grade-point average and your score on either the American College Test (ACT) or the Scholastic Aptitude Test (SAT I). Your grade-point average is based on grades earned during your final three years of high school (excluding physical education and military science) and bonus points for approved honors courses.

Up to eight semesters of honors courses taken in the last two years of high school can be accepted. Each unit of "A" in an honors course will receive a total of 5 points; "B", 4 points; and "C", 3 points.

You can calculate the index by multiplying your grade-point average by 800 and adding your total score on the SAT I. Or, if you took the ACT, multiply your grade-point average by 200 and add ten times the ACT composite score (add 2 points to the ACT score you received if taken prior to October, 1989). If you are a California high school graduate (or a resident of California for tuition purposes), you need a minimum index of 2900 using the SAT I or 694 using the ACT;

The Eligibility Index Table illustrates several combinations of required test scores and averages.

If you are neither graduated from a California high school nor are a resident of California for tuition purposes, you need a minimum index of 3502 (SAT I) or 842 (ACT; add 2 points to your ACT score if taken prior to October, 1989).

If your grade-point average is 3.00 or above (3.61 for non-residents), you are exempt from submitting test scores. However, you are urged to submit SAT I or ACT scores since all campuses use test results for advising and placement purposes. Students with a recentered SAT Verbal score less than 490 or an ACT English score less than 21 will probably be placed in a preparatory English class based upon their English Placement Test score (see section on EPT). Students with a recentered SAT Math score less than 520 or an ACT Math score less than 25 will probably be placed in a preparatory math course, based upon their Entry Level Math test score (see section on ELM). Below a 2.00 GPA does not qualify for regular admission. (2.45 GPA minimum required for non-residents.)

## ELIGIBILITY INDEX TABLE

GPA	SAT 1**	ACT*	GPA	SAT 1**	ACT*
2.99	510	10	2.49	910	20
2.98	520	10	2.48	920	20
2.97	530	10	2.47	930	20
2.96	540	11	2.46	940	21
2.95	540	11	2.45	940	21
2.94	550	11	2.44	950	21
2.93	560	11	2.43	960	21
2.92	570	11	2.42	970	21
2.91	580	12	2.41	980	22
2.90	580	12	2.40	980	22
2.89	590	12	2.39	990	22
2.88	600	12	2.38	1000	22
2.87	610	12	2.37	1010	22
2.86	620	13	2.36	1020	23
2.85	620	13	2.35	1020	23
2.84	630	13	2.34	1030	23
2.83	640	13	2.33	1040	23
2.82	650	13	2.32	1050	23
2.81	660	14	2.31	1060	24
2.80	660	14	2.30	1060	24
2.79	670	14	2.29	1070	24
2.78	680	14	2.28	1080	24
2.77	690	14	2.27	1090	24
2.76	700	15	2.26	1100	25
2.75	700	15	2.25	1100	25
2.74	710	15	2.24	1110	25
2.73	720	15	2.23	1120	25
2.72	730	15	2.22	1130	25
2.71	740	16	2.21	1140	26
2.70	740	16	2.20	1140	26
2.69	750	16	2.19	1150	26
2.68	760	16	2.18	1160	26
2.67	770	16	2.17	1170	26
2.66	780	17	2.16	1180	27
2.65	780	17	2.15	1180	27
2.64	790	17	2.14	1190	27
2.63	800	17	2.13	1200	27
2.62	810	17	2.12	1210	27
2.61	820	18	2.11	1220	28
2.60	820	18	2.10	1220	28
2.59	830	18	2.09	1230	28
2.58	840	18	2.08	1240	28
2.57	850	18	2.07	1250	28
2.56	860	19	2.06	1260	29
2.55	860	19	2.05	1260	29
2.54	870	19	2.04	1270	29
2.53	880	19	2.03	1280	29
2.52	890	19	2.02	1290	29
2.51	900	20	2.01	1300	30
2.50	900	20	2.00	1300	30

\* Add two points to your ACT score if test taken prior to October, 1989.

\*\* Subtract 100 points from the required SAT 1 score if you tested prior to April 1, 1995 and your scores have not been recentered. Recentered scores are preceded by an "R".

Graduates of secondary schools in foreign countries must be judged to have academic preparation and abilities equivalent to applicants eligible under this section.

You will qualify for regular admission when the university verifies that you have a qualifiable eligibility index and will have completed the comprehensive pattern of college preparatory subjects and, if applying to an impacted program, meet supplementary criteria.

### Subject Requirements

The California State University requires that first-time freshman applicants complete, with grades of "C" or better, a comprehensive pattern of college preparatory subjects totaling 15 units. A "unit" is one year of study in high school.

English – 4 years

Mathematics – 3 years: algebra, geometry, and intermediate algebra

U.S. History or U.S. History and Government - 1 year

Science – 1 year with laboratory: biology, chemistry, physics, or other acceptable laboratory science

Foreign Language – 2 years in the same language (subject to waiver for applicants demonstrating equivalent competence).

Visual and Performing Arts – 1 year: art, dance, drama/theater, or music

Electives – 3 years: selected from English, advanced mathematics, social science, history, laboratory science, foreign language, visual and performing arts, and agriculture.

#### Alternate Admission Criteria — UC Prepared Applicants

Beginning with the academic year 1995-96 and continuing through 1998-99, the CSU will conduct an admission experiment that will permit campuses to admit applicants who have completed either the CSU or all of the UC college preparatory (a-f) requirements.

#### Foreign Language Waiver

The foreign language subject requirement may be satisfied by applicants who demonstrate competence in a language other than English equivalent to or higher than expected of students who complete two years of foreign language study. Consult with your school counselor or any CSU campus admission or relations with schools office for further information.

#### Subject Requirement Substitution for Students with Disabilities

Applicants with disabilities are encouraged to complete college preparatory course requirements if at all possible. If an applicant is judged unable to fulfill a specific course requirement because of his or her disability, alternate college preparatory courses may be substituted for specific subject requirements. Substitutions may be authorized on an individual basis after review and recommendation by the applicant's academic advisor or guidance counselor in consultation with the director of a CSU disabled student services program. Although the distribution may be slightly different from the course pattern required of other students, students qualifying for substitutions will still be held for 15 units of college preparatory study. Students should be aware that course substitutions may limit later enrollment in certain majors, particularly those involving mathematics. For further information and substitution forms, please call the Director of Disabled Student Services at (562) 985-5401.

#### Honors Courses

Grades, in up to eight semester courses designated as honors courses in approved subjects and taken in the last two years of high school, receive additional points in grade-point average calculations. Each unit of A in approved courses will receive a total of 5 points; B, 4 points; C, 3 points; D, 1 point; and none for F grades.

#### High School Students — Young Scholars Program

Students still enrolled in high school will be considered for enrollment in certain special programs if recommended by the principal and the appropriate campus department chair and if preparation is equivalent to that required of eligible California high school graduates. Such admission is only for a given program and does not constitute the right to continued enrollment. Please contact the Office of University Outreach and School Relations for more information.

#### Provisional Admission

California State University, Long Beach may provisionally admit first-time freshman applicants based on their academic preparation through the junior year of high school and planned for the senior year. The campus will monitor the senior year of study to ensure that those so admitted complete their senior year of studies satisfactorily, including the required college preparatory subjects, and graduate from high school.

California State University, Long Beach may provisionally admit transfer applicants based on their academic preparation and courses planned for completion. The campus will monitor the final terms to ensure that those admitted complete all required courses satisfactorily.

#### Undergraduate Admission Requirements — Transfer Applicants

You will qualify for admission as a transfer student if you have a grade-point average of 2.0 ("C") or better in all transferable units attempted, are in good standing at the last college or university attended and meet any of the following standards:

1. You will meet the freshman admission requirements in effect for the term to which you are applying (see "Freshman Requirements" section).
2. You were eligible as a freshman at the time of high school graduation except for the subject requirements, have made up the missing subjects, and have been in continuous attendance in an accredited college since high school graduation.
3. You were eligible as a freshman at the time of high school graduation except for the subject requirements, have made up the missing subjects, and have been in continuous attendance in an accredited college since high school graduation.
4. You have completed at least 56 transferable semester units and meet the requirements listed below based on high school graduation date. Nonresidents must have a 2.4 grade-point average or better.

Applicants who graduated from high school 1988 or later:

- You have completed all subject requirements in effect when you graduated from high school (you can use both high school and college coursework) OR
- You have completed at least 30 semester units of college coursework with a grade of "C" or better in each course to be selected from courses in English, arts and humanities, social science, science and mathematics at a level at least equivalent to courses that meet general education requirements. The 30 units must include all of the general education requirements in communication in the English language and critical thinking (at least 9 semester units) and the requirement in mathematics/quantitative reasoning (usually 3 semester units), OR the Intersegmental General Education Transfer Curriculum (IGETC) requirements in English communication and mathematical concepts and quantitative reasoning.

Applicants who graduated from high school prior to 1988:

You should contact the admission office to inquire about alternative admission programs.

Transferable courses are those designated for baccalaureate credit by the college or university offering the courses.

## Making Up Missing College Preparatory Subject Requirements

Undergraduate applicants who did not complete subject requirements while in high school may make up missing subjects in any of the following ways:

1. Complete appropriate courses with a "C" or better in adult school or high school summer sessions.
2. Complete appropriate college courses with a "C" or better. One college course of at least three semester units will be considered equivalent to one year of high school study
3. Earn acceptable scores on specified examinations.

Please consult with any CSU admission office for further information about alternative ways to satisfy the subject requirements.

### Test Requirements

Freshman and transfer applicants who have fewer than 56 semester or 84 quarter units of transferable college work must submit scores, unless exempt (see "Eligibility Index" on page 34), from either the Scholastic Aptitude Test (SAT) of the College Board or the American College Test Program (ACT). If you are applying to an impacted program and are required to submit test scores, you should take the test no later than early December if applying for fall admission. Test scores are also used for advising and placement purposes. Registration forms and the dates for the SAT I or ACT are available from school or college counselors or from a campus testing office. Or you may write to or call:

The College Board (SATI)  
Registration Unit, Box 592  
Princeton, NJ 08541  
(609) 771-7588

American College Testing Program (ACT)  
Registration Unit, P.O. Box 168  
Iowa City, Iowa 52240  
(319) 337-1270

### TOEFL Requirement

Each undergraduate applicant, regardless of citizenship, whose prior education was in a country where English was not the primary language of social, educational, and business interaction, must demonstrate English competency by receiving a minimum score of 500 on the Test of English as a Foreign Language (TOEFL), unless the applicant:

1. has proof of at least three years attendance at a secondary level educational institution in a country where English was the principal language of instruction.\* CSULB interprets "where English was the principal language of instruction" to mean that a school is located in a country where English is the native language (the daily medium of communication of the majority of residents is English), and that the students receive academic instruction in all subjects (except foreign language courses) at all levels of education in English, or
2. completed at least 56 transferable units from accredited U.S. community colleges and/or universities and a grade of A, B, or C in English 100 or its equivalent\*, or
3. successfully completed CSULB's American Language Institute's Intensive English Language Program.\*

EXCEPTION: Applicants applying for Film and Electronic Arts, which requires a 550 TOEFL score, and Journalism, which requires a 600 TOEFL score, will not be waived from the TOEFL requirement.

\*For this exemption to remain valid, once having met the exemption, the student must not have left the U.S.A. for more than two years to reside or study in a country where English is not the predominant language of business, education and day-to-day societal functions.

## Systemwide Tests Required of Most New Students

The CSU requires new students to be tested in English and mathematics as soon as possible after they are admitted and before enrollment. These are not admission tests, but a way to determine whether you are prepared for college work and, if not, to counsel you how to strengthen your preparation. You might be exempted from one or both of the tests if you have scored well on other specified tests or completed appropriate courses.

### English Placement Test (EPT)

The CSU English Placement Test must be completed by all non-exempt undergraduates\* prior to placement in appropriate university English coursework. All new undergraduate students must take the test or be exempted from it prior to enrollment in classes. Exemptions from the test are given only to those who present proof of one of the following:

- a score of 3, 4, or 5 on either the Language and Composition or the Composition and Literature examination of the College Board Advanced Placement Program;
- a score on the CSU English Equivalency Examination that qualified a student for "Pass for Credit" or "Exemption" prior to July 1993;
- a score of 470 or above on the Verbal section of the College Board Scholastic Aptitude Test (SAT) taken prior to March 1994;
- a score of 470 or above on the Verbal section of the College Board SAT I\*\* Reasoning Test taken between March 1994 and March 1995 (If taken after March 1995, see note below);
- a score of 550 or above on the Verbal section of the College Board SAT I\*\* Reasoning Test taken on or after April 1, 1995 (see note below);
- a score of 600 or above on the College Board Achievement Test\*\* in English Composition with essay taken prior to January 1994;
- a score of 600 or above on the College Board SAT II\*\* Writing Test taken between January 1994 and March 1995 (if taken after March 1995, see note below);
- a score of 660 or above on the College Board SAT II\*\* Writing Test taken on or after April 1, 1995 (see note below);
- a score of 22 or above on the American College Testing (ACT) English Usage Test taken prior to October 1989;
- a score of 25 or above on the enhanced ACT English Test taken October 1989 or later;
- for transfer students, completion and transfer to the CSU of a college course that satisfies the General Education Breadth requirement or the Intersegmental General Education Transfer Curriculum requirement in English composition, provided such a course was completed with a grade of "C" or better.

Information bulletins and registration materials for the EPT will be mailed to all students subject to the requirements. The materials may also be obtained from the Admissions Office or from Testing and Evaluation Services. EPT registration does not require a fee

\*Undergraduates admitted with 56 or more transferable semester units and who are subject to a campus catalog or bulletin earlier than 1986-87 are not required to complete the EPT.

\*\*NOTE: The College Board SAT and Achievement Tests were replaced by SAT I and SAT II, respectively, beginning March 1994. Beginning April 1, 1995, the SAT I and SAT II exams have been scored on a new scale.

## Examination in English as a Second Language (EESL)

All students admitted to CSULB whose native language is not English and who have not lived in the United States for at least 10 years continuously prior to admission must take the Examination in English as a Second Language (EESL) during their first semester on campus. The EESL results place students in English as a Second Language courses in the American Language Institute or equivalent courses in the American Language Program. These courses are required for graduation and must be taken in sequence at the earliest opportunity; course loads may need to be adjusted accordingly. American Language requirements can be modified only by proving proficiency within the class or by appeal to the American Language Petitions Committee; classes or exams taken elsewhere cannot be substituted for American Language requirements.

## Entry-Level Mathematics (ELM) Exam

The ELM examination tests for entry-level mathematics skills acquired through three years of rigorous college preparatory mathematics coursework (normally Algebra I, Algebra II, and Geometry). All undergraduate students must take the test or be exempted from it prior to enrollment in classes. Specific policies regarding retesting and placement will be determined by the campus. Exemptions from the test are given only to those students who can present proof of one of the following:

- a score of 3 or above on the College Board Advanced Placement mathematics examination (AB or BC);
- a score of 560 or above on the mathematics section of the College Board SAT taken prior to March 1994.
- a score of 560 or above on the mathematics section of either the College Board SAT or SAT I: Reasoning Test. (Please note that recentering has not affected the exemption cut score of 560.)\*\*
- a score of 560 or above on the mathematics section of the College Board SAT I\*\* Reasoning test OR on the College Board SAT II\*\* Mathematics Tests Level I, II, or IIC (Calculator) taken on or after March 1, 1994. (See note below.)
- a score of 24 or above on the American College Testing (ACT) Mathematics Test taken prior to October 1989;
- a score of 25 or above on the enhanced ACT Mathematics Test taken October 1989 and later;
- for transfer students, completion and transfer to the CSU of a college course that satisfies the General Education Breadth requirement or the Intersegmental General Education Transfer Curriculum requirement in Quantitative Reasoning, provided such a course was completed with a grade of "C" or better.

Information bulletins and registration materials for the EPT and ELM will be mailed to all students subject to the requirements. Required exams will be indicated in the Letter of Admission. The materials may also be obtained from the Office of Enrollment Services or Testing and Evaluation Services. There is a \$16.00 registration fee for the ELM.

\*\*NOTE: The College Board SAT and Achievement Tests were replaced by SAT I and SAT II, respectively, beginning March 1994. Beginning April 1, 1995, the SAT I and SAT II exams are scored on a new scale; however, the SAT scores qualifying for exemption from the ELM remain the same.

## Graduation Requirement in Writing Proficiency

All students must demonstrate competency in writing skills as a requirement for graduation. This is done by passing the Writing Proficiency Examination (WPE). Information on this graduation requirement may be obtained from Testing and Evaluation Services.

Baccalaureate seeking students must take the Writing Proficiency Examination (WPE) by the end of the semester in which 75 units are earned or a hold is placed on all future registration privileges. Students must satisfactorily complete the test and file an approved Program Planner prior to filing a Request to Graduate form with Enrollment Services. Students who have met this requirement while in residence at another CSU campus are exempt from this requirement, but proof of meeting the Writing Proficiency requirement must be submitted to Enrollment Services.

Master's and doctoral seeking students must take the Writing Proficiency Examination during the first semester they are in residence, or a hold is placed on all future registration privileges. Students must satisfactorily complete the test and obtain approval of their graduate degree program prior to being advanced to candidacy. Students who have met the WPE requirement during their baccalaureate degree program at CSULB or at another CSU campus are exempt from retaking the WPE as a graduate student. Graduates need to provide proof of fulfillment to both Enrollment Services and the department Graduate Advisor.

## Graduate and Postbaccalaureate Application Procedures

All graduate and postbaccalaureate applicants (i.e., master's degree applicants, those seeking credentials, and those seeking certificates) must file a complete graduate application as described in the graduate and postbaccalaureate admission booklet. Postbaccalaureate students who wish to continue their education for personal enrichment but without seeking a degree, credential, or certificate may only enroll through University College and Extension Services. CSULB does not admit postbaccalaureate unclassified students. Applicants who completed undergraduate degree requirements and graduated the preceding term are also required to complete and submit an application and the \$55 nonrefundable application fee. Since applicants for postbaccalaureate programs may be limited to the choice of a single campus on each application, redirection to alternate campuses or later changes of campus choice will be minimal. To be assured of initial consideration by more than one campus, it will be necessary to submit separate applications (including fees) to each. Applications may be obtained from the Admissions Office of any California State University campus in addition to the sources noted for undergraduate applications.

## Graduate and Postbaccalaureate Admission Requirements

Graduate and postbaccalaureate applicants may apply for a degree objective, a credential or certificate objective. Depending on the objective, the CSU will consider an application for admission as follows:

- General Requirements – The minimum requirements for admission to graduate and postbaccalaureate studies at CSULB are in accordance with university regulations as well as Title 5, chapter 1, subchapter 3 of the California Code of Regulations. Specifically, a student shall:

1. have completed a four-year college course of study and hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association, or shall have completed equivalent academic preparation as determined by appropriate campus authorities;
2. be in good academic standing at the last college or university attended;
3. have attained a grade-point average of at least 2.5 (A = 4.0) in the last 60 semester (90 quarter) units attempted (excluding lower-division and extension coursework taken after the degree); and
4. satisfactorily meet the professional, personal, scholastic, and other standards for graduate study, including qualifying examinations, as appropriate campus authorities may prescribe. In unusual circumstances, a campus may make exceptions to these criteria.

If you meet the minimum requirements for graduate and postbaccalaureate studies, you will be considered for admission in one of the three following categories:

- Postbaccalaureate Classified – If you wish to enroll in a credential or certificate program, you will be required to satisfy professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus; or
- Graduate Conditionally Classified – You may be admitted to a graduate degree program in this category if, in the opinion of appropriate campus authority, you can remedy deficiencies by additional preparation; or
- Graduate Classified – To pursue a graduate degree, you will be required to fulfill all of the professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus.

### TOEFL Requirement

Each applicant for graduate or post-baccalaureate studies, regardless of citizenship, whose prior education was in a country where English was not the primary language of social, educational, and business interaction, must demonstrate English competency by receiving a minimum score of 550 on the Test of English as a Foreign Language (TOEFL), unless the applicant:

1. Submits proof of having obtained a bachelor's degree from an accredited post-secondary institution where English was the principal language of instruction.\* CSULB interprets "where English is the principal language of instruction" to mean that a school is located in a country where English is the native language (the daily medium of communication of the majority of residents is English), and the applicant received academic instruction in all subjects (except foreign language courses) at all levels of education in English, or
2. Notification from CSULB's American Language Institute that the applicant has successfully completed levels 5 and 6 of the American Language Institute Program.\*

EXCEPTION: Applicants applying for Public Policy and Administration, which requires a 600 TOEFL, will not be waived from the TOEFL requirement.

\* For this exemption to remain valid, once having met the exemption, the student must not have left the U.S.A. for more than two years to reside or study in a country where English is not the predominant language of business, education and day-to-day societal functions.

### Auditors

Persons who have not been accepted by the University for the semester they wish to attend may request permission to audit courses through University College and Extension Services.

Students who have been accepted by the University may audit courses. See the regulation under "Grades and Administrative Symbols." The deadline to declare an "audit" grade option is the end of the third week of instruction. Follow the instructions in the Schedule of Classes for requesting a course as an "audit" grading option. At the end of the semester the instructor will assign an "audit" grade to the official grade sheet which will be forwarded to the Office of Enrollment Services for recording. Courses taken for audit may be repeated in subsequent terms for credit.

Courses successfully audited are listed on the student's academic record but carry no credit or grade points.

### Adult Students

As an alternative to regular admission criteria, an applicant who is twenty-five years of age or older may be considered for admission as an adult student if he or she meets all the following conditions:

1. Possesses a high school diploma (or has established equivalence through either the Tests of General Educational Development or the California High School Proficiency Examination).
2. Has not been enrolled in college as a full-time student for more than one term during the past five years.
3. If there has been any college attendance in the last five years, has earned a "C" average or better.

Consideration will be based upon a judgment as to whether the applicant is as likely to succeed as a regularly admitted freshman or transfer student and will include an assessment of basic skills in the English language and mathematical computation.

### Senior Citizen Education Program

California State University Long Beach, is pleased to continue the Senior Citizen Education Program on campus. This program enables eligible California residents who are 60 years of age or older to enroll as regular students at a cost of \$3.00 per semester. The program, which was founded at CSULB, has been in operation since 1975. Individuals are attending courses in a variety of subject areas and class levels from freshman through graduate standing.

Note: Regular admission standards apply for those individuals seeking a degree. Requests to waive the application filing fee must accompany the application. Once admitted to the University, registration information will be sent to the student advising them of the procedures for fee payment and the dates that they may register. Courses are available to program participants approximately three weeks before the beginning of each semester on a "space available" basis. Due to high enrollment and impacted programs some courses may not be available for participation by Senior Citizens.

Participants in the Senior Citizen Education Program are required to maintain good academic standing and are subject to all university policies, procedures, late fee payments and deadlines.



## Returning Students

Returning students must reapply to the university under the same conditions and deadlines as all other applicants.

Students who have not maintained continuous attendance status shall be subject to the General Education requirements in effect at the time of their re-entry to the University with the following exceptions:

Previous CSULB students who completed their entire lower-division general education package before returning to CSULB, shall not be held for additional general education requirements except for the 9 upper-division general education units which must include 6 units of IC credit.

Previous CSULB students who were under the pre-1981 general education requirements AND who before leaving the University completed 90 or more units, including 24 general education units in categories 1-5 (with at least one course in each area) shall not be held to post-1981 general education requirements other than the requirement of 9 upper-division units which must include 6 units of IC credit. Such students may satisfy the general education mandate by completing the pre-1981 40-unit requirements appropriately and completing the 9 unit upper-division requirement (overlap is permitted).

California Community College transfer students who provide official full certification of general education requirements shall not be held for additional general education requirements except for the 9 upper-division general education units which must include 6 units of IC credit.

## International (Foreign) Student Admission Requirements

CSULB encourages eligible international students to apply for undergraduate and graduate level studies. International students are defined as those who hold non-immigrant (student or exchange) visas. Application requests and questions should be directed to International Admissions, which is located in the Center for International Education (SSA 201).

International students need to complete a different application process than U.S. students, and there are different application deadlines. The following documents are required:

1. International application form
2. \$55.00 application processing fee
3. Affidavit of support from financial sponsor
4. Bank statement/letter from financial sponsor
5. Proof of acceptable English proficiency (usually met by the Test of English as a Foreign Language)
6. Official academic documents and certified English translations
7. ACT or SAT (required for student athletes and graduates of U.S. high schools)
8. GMAT (required for graduate business majors only)
9. Letters of recommendation (graduate level applicants)

The recommended latest deadline to turn in an application form is October 15 for the Spring semester, and March 1 for the Fall semester.

Once all the documents are submitted to the International Admissions Office, eligibility for admission will be determined based on your English proficiency and academic history, as well as other considerations. Graduate applications will be forwarded to the graduate departments for review by the

graduate coordinators. Once admitted, international students will receive pre-arrival, arrival, and orientation information, and the appropriate immigration form and instructions on how to legally enter and/or remain in the U.S.

The Immigration and Naturalization Service (INS) requires that international students be aware of and follow INS regulations to remain legally in the U.S. for the duration of their academic status. International students on "F" and "J" visas must be enrolled as full time students. Courses taken through the University College and Extension Services at CSULB or courses taken concurrently at other colleges nearby may only count toward full time status when approved in advance of course registration by the Center for International Education. Questions about INS policies may be directed to the Center for International Education.

All foreign students for whom English is a second language are required upon arrival to take the Examination in English as a Second Language (EESL) and enroll in any necessary class(es) in English as a second language. In some cases this may mean that students will be required to take reduced course loads in their major field until English proficiency can be demonstrated. This requirement cannot be postponed.

For students who need English language training prior to enrolling at CSULB, the American Language Institute provides professional instruction in all four language skills: reading, writing, listening and speaking. Conditional admission to CSULB is available for qualified students.

## Insurance Requirement

Effective August 1, 1995, as a condition of receiving an I-20 or IAP-66 form, all F-1 and J-1 visa applicants must agree to obtain and maintain health insurance as a condition of registration and continued enrollment in the California State University. Such insurance must be in amounts as specified by the United States Information Agency (USIA) and MAFSA: Association of International Educators. The campus President or designee shall determine which insurance policies meet these criteria. Further information may be obtained from Grace Winchell, Center for International Education, SSA 201, (562) 985-4106.

## Hardship Petitions

The campus has established procedures for consideration of qualified applicants who would be faced with extreme hardship if not admitted. Petitioners should write the Admissions Office regarding specific policies governing hardship admission. (See Admissions Procedures and Policies at the beginning of this Section.)

## Concurrent Enrollment

All students wishing to enroll concurrently at CSULB and one of the other 21 California State University campuses must request permission to do so from the Registration Office. Deadlines are the same as application filing deadlines. Concurrent enrollment within The California State University system is limited to students who have completed a minimum of one semester and 12 units at CSULB with a 2.0 grade-point average and must have paid fees at CSULB for 12 units or more. No additional fees may be collected after the last day to add classes.

Upper-division students wishing to have concurrent enrollment at CSULB and another institution outside of The California State University system must request permission from the Registration Office.

No graduate student may register concurrently at this and any other collegiate institution without advance permission. Permission may be given for concurrent enrollment at CSULB and other institutions if recommended by the department graduate advisor and approved by the Dean of the appropriate college. Forms for concurrent enrollment may be obtained from the college office. When such permission is granted, the academic load at CSULB must be reduced accordingly.

### Other Applicants

Applicants not admissible at this time under any of the preceding provisions are advised to enroll in another institution, such as a community college, to prepare for admissibility at a future date.

Open University (Adjunct Enrollment) — Through Open University, students who are NOT matriculated in the University may take regular University classes for academic credit on a "seat available" basis with permission of the department chairperson and the course instructor. Open University enrollment does NOT constitute admission to CSULB. Students may apply up to 24 units of Open University Credit toward a baccalaureate degree. At the option of the appropriate college and department, up to 6 units of Open University Credit may be applied to a graduate degree. This limit may be increased to 9 units in some instances. For specifics, check with the department chair. For more information call University College and Extension Services at (562) 985-5561.

University College and Extension Services — University College and Extension Services (UCES) programs are designed to meet the personal and professional development learning needs of the community. Through its credit and non-credit classes, certificate programs, seminars and special programs, teleconferences, and customized work-site training, UCES brings the resources of CSULB to individuals and groups in formats convenient to their life/work situations. UCES' Integrated Distance Education for Adult Students (IDEAS) is currently developing three courses for delivery on the World Wide Web. These courses are upper division, general education, credit courses. Offered as Special Sessions courses, they do not require admission to CSULB. Visit the Web site at: <http://www.ideas.uces.csulb.edu/on-line>. UCES also administers the summer and winter session programs, in addition to a variety of credit courses throughout the academic year. For a free bulletin of current offerings, call (562) 985-5561 or stop by the UCES office, located at FEC-104, 6300 State University Drive.

### Visitors

The University restricts attendance in class sessions to those who have been formally registered in the course and who maintain good standing as students. Please see "Audit" and "Visitors to Classes" under General Regulations.

### Summer Session Students

Students who do not intend to become candidates for degrees or credentials at the University need not file an application for admission or transcripts of record to attend

summer session. Registration for credit in the summer session is limited to graduates of accredited high schools and to persons of sufficient maturity to profit by enrollment in courses offered. Individuals who do not wish to enroll for credit may register as auditors with the approval of the instructor and payment of fees. Registration in the summer session does not insure the privilege of enrolling in the fall semester. Students entering the University during the summer session who wish to attend in the fall semester must file an application and the necessary official transcripts of record at the Admissions Office during appropriate filing periods and meet admission criteria. To register for summer session courses, students should contact the Summer Session Office at (562) 985-5561 during the spring semester.

### Student Orientation, Advising and Registration (SOAR)

If you are an incoming freshman or a transfer student, you are encouraged to participate in the Student Orientation, Advising, and Registration (SOAR) program. SOAR will assist you in planning your course schedule and in registering for your classes. An invitation to SOAR will be mailed to you. There is a separate fee to participate which includes the cost of the mid-day meal, a copy of the University Catalog, the Schedule of Classes, and other materials.

### Registration Procedures

When admission or re-admission requirements have been satisfied, the student is eligible to register for classes at the University. Students new to the University will receive information about the Student Orientation, Advising and Registration Program (SOAR) which is designed to help the new student with registration procedures. It should be noted that no new student will be allowed to register for classes prior to SOAR. Registration for students not participating in SOAR will be conducted after all of the SOAR workshops are concluded.

Students returning to CSULB after an absence will receive registration information in the mail. Returning students should purchase the Schedule of Classes in the University Bookstore before registration. Registration dates, times and detailed instructions are included in the Schedule of Classes.

Students are not permitted to attend any class for which they have not officially registered. The deadline to register is the end of the third week of classes.

NOTE: Admission and readmission deadlines are much earlier.

### Adding Classes

Students may add classes by VRR for the first two weeks of the semester. During the third week of the semester written permission, on a Schedule Adjustment form, is required from the instructor and a stamp of approval is required from the department.

Students receiving permission to add classes by VRR or who have been added to an instructor's wait list or roster must complete the add procedures by the dates listed each semester in the Schedule of Classes. No request to add classes will be considered after the third week of the semester unless there is an approved technical error or enrollment exception.

Note: Instructors, advisors and departments cannot add students into classes. The add procedures must be completed by the student.

## Advanced Placement

California State University, Long Beach grants credit toward its undergraduate degrees for successful completion of examinations of the Advanced Placement Program of the College Board. Students who present scores of three or better will be granted up to six semester units (nine quarter units) of college credit for each AP course.

Applicants to CSULB who wish to obtain Lower Division course credit for completed International Baccalaureate Higher Level courses must submit an official IB transcript. Course equivalency for Higher Level courses completed is determined by the faculty of the appropriate department subsequent to careful review of course syllabi.

For questions or information, please call Enrollment Services at (562) 985-5471 or consult your department.

## Credit by Examination

The California State University grants credit to those students who pass examinations that have been approved for credit systemwide. These include the Advanced Placement Examinations and some CLEP examinations.

Students may challenge courses by taking examinations developed at the campus. Credit shall be awarded to those who pass them successfully. The Petition to Establish Credit by Examination for Unit Credit is available in the department offering the course and in the Registration Office. Approval by the department offering the examination is required prior to registering for the course. The examination must be conducted within the first three weeks of classes. If a student does not take the examination at the time offered or does not pass the examination, he or she may either continue in the course as a regular student or withdraw officially from the course, following the procedures for withdrawal pertaining to all courses. (See the current Schedule of Classes.) For a student passing the examination, a grade of CR will be recorded at the end of the semester. Please refer also to Unit Credit by Examination in the General Regulations section of this Catalog.

## Credit for Noncollegiate Instruction

The California State University grants undergraduate degree credit for successful completion of noncollegiate instruction, either military or civilian, appropriate to the baccalaureate, that has been recommended by the Commission on Educational Credit and Credentials of the American Council on Education. The number of units allowed are those recommended in the Guide to the Evaluation of Educational Experience in the Armed Services and the National Guide to Educational Credit for Training Programs.

## Health Screening

All new and readmitted students, born after January 1, 1957, will be notified of the requirement to present proof of measles and rubella immunizations. This is not an admissions requirement, but shall be required of students by the beginning of their second term of enrollment in CSU. Proof of measles and rubella immunizations shall also be required for certain groups of enrolled students who have increased exposure to these diseases.

## California Articulation Number (CAN) System

California State University, Long Beach participates in the CAN System. The CAN system is a cross-reference course identification system designed to identify lower-division, transferable courses commonly presented by transferring students. The CAN system not only simplifies the transfer process, but makes it easier for students, faculty, and counselors.

The development of a written faculty-approved bilateral articulation agreement for each course with four public four-year institutions provides the foundation of the CAN system. Articulation agreements for each course are periodically reviewed with each campus by the faculty and Department Chairs.

The CAN system is based on bilateral course articulation – courses considered to be comparable, not necessarily identical, and acceptable “in lieu of” each other. The system assures students that CAN courses on one participating campus will be accepted “in lieu of” the comparable CAN course on another participating campus. Example: CAN H EC 2 on one campus will be accepted for CAN H EC 2 on another participating campus. Each participating campus not only retains and uses its own course number, prefix, and title, but also adds the appropriate CAN designation parenthetically in its publications when it has qualified the course.

CSULB now articulates some pre-baccalaureate courses. For further information contact the University Articulation Office, (562) 985-8221 or 985-8223.

## CAN Number

## CSU, Long Beach Course

CAN AJ 2	CRIM 101	CRIMINAL JUSTICE SYSTEM
CAN AJ 4	CRIM 151	BASIC CONCEPTS CRIMINAL LAW
CAN AJ 6	CRIM 155	CONCEPTS OF EVIDENCE
CAN AJ 8	CRIM 161	INTRO TO INVESTIGATION
CAN ANTH 2	ANTH 210	INTRO TO PHYSICAL ANTH
CAN ANTH 4	ANTH 120	INTRO TO CULTURAL ANTH
CAN ANTH 6	ANTH 140	INTRO TO ARCHAEOLOGY
CAN ART 2	ART 115B	FOUNDATION OF ART HISTORY II
CAN ART 4	ART 115C	FOUNDATION OF ART HISTORY III
CAN ART 6	ART 151A	BEG CERAMICS: HANDBLDG
CAN ART 8	ART 181	BEGINNING DRAWING
CAN ART 10	ART 187	BEGINNING PAINTING
CAN ART 12	ART 263	BEGINNING SCULPTURE
CAN BIOL SEQ A	BIOL 211 A & B	BIOL SCIENCES I & II
CAN CHEM 2	CHEM 111A	GENERAL CHEMISTRY
CAN CHEM 4	CHEM 111B	GENERAL CHEMISTRY
CAN DRAM 6	THEA 112	BEG VOICE/SPEECH
CAN DRAM 8	THEA 114A	FUNDAMENTALS OF ACTING
CAN ECON 2	ECON 202	PRIN OF ECON (MACRO)
CAN ECON 4	ECON 201	PRIN OF ECON (MICRO)
CAN ENGL 2	ENGL 100	COMPOSITION
CAN ENGL 8	ENGL 250A	SURVEY ENGLISH LIT
CAN ENGL 10	ENGL 250B	SURVEY ENGLISH LIT
CAN ENGR 2	M E 172	ENGR DESIGN GRAPHICS
CAN ENGR 6	E E 211+	ELECTRIC CIRCUITS I
	E E 211L	ELECTRIC CIRCUITS LAB
CAN ENGR 8	C E 205	ANALYTICAL MECH I (STATICS)
CAN ENGR 10	C E 225	SURVEY - MAPPING
CAN ENGR 12	E E 211	ELECTRIC CIRCUITS I
CAN FREN 2	FREN 101A	FUNDAMENTALS OF FRENCH
CAN FREN 4	FREN 101B	FUNDAMENTALS OF FRENCH
CAN GEOG 2	GEOG 140	INTRO TO PHYSICAL GEOG
CAN GEOG 4	GEOG 160	INTRO TO CULTURAL GEOG
CAN GEOL 2	GEOL 102+104	GENERAL GEOL+GEOL LAB
CAN GEOL 4	GEOL 240	HISTORICAL GEOL
CAN GOVT 2	POSC 100	INTRO TO AMERICAN GOVT
CAN H EC 2	FCS 232	NUTRITION AND YOU
CAN H EC 8	FCS 235	PRIN OF FOOD PREPARATION
CAN H EC 10	FCS 254	FUND APPAREL PROD/DESIGN
CAN H EC 14	FCS 111	PRESCHL CHILD + OBSERV
CAN HIST 2	HIST 131	EARLY WESTERN CIVILIZATION
CAN HIST 4	HIST 132	MODERN WEST CIVILIZATION
CAN HIST 8	HIST 172	EARLY US HISTORY
CAN HIST 10	HIST 173	RECENT US HISTORY
CAN JOUR 2	JOUR 120	NEWS WRITING & REPORTING
CAN JOUR 4	JOUR 110	INTRO TO MASS COMM
CAN MATH 2	MATH 103	MATHEMATICAL IDEAS
CAN MATH 4	MATH 110	MATH FOR ELEM TEACHERS I
CAN MATH 8	MATH 101	TRIGONOMETRY
CAN MATH 12	MATH 114	FINITE MATH
CAN MATH 16	MATH 117	PRECALCULUS MATHEMATICS
CAN MATH 18	MATH 122	CALCULUS I
CAN MATH 20	MATH 123	CALCULUS II
CAN MATH 22	MATH 224	CALCULUS III
CAN MATH 26	MATH 247	INTRO TO LINEAR ALGEBRA
CAN MATH 30	MATH 119A	SURVEY OF CALCULUS I
CAN MATH 32	MATH 119B	SURVEY OF CALCULUS II
CAN MATH 34	MATH 115	CALCULUS FOR BUSINESS
CAN PHIL 2	PHIL 100	INTRO TO PHILOSOPHY
CAN PHIL 4	PHIL 160	INTRODUCTORY ETHICS
CAN PHIL 6	PHIL 170	ELEMENTARY LOGIC
CAN PHYS 2	PHYS 100A	GENERAL PHYSICS
CAN PHYS 4	PHYS 100B	GENERAL PHYSICS
CAN PHYS SEQ B	PHYS 151+	MECHANICS AND HEAT
	PHYS 152+	ELECTRICITY AND MAGNETISM
	PHYS 154+	MODERN PHYSICS AND LIGHT
	PHYS 155	LAB ON LIGHT & MODERN PHYS
CAN PSY 2	PSY 100	GENERAL PSYCHOLOGY
CAN RUSS 2	RUSS 101A	FUNDAMENTALS OF RUSSIAN
CAN RUSS 4	RUSS 101B	FUNDAMENTALS OF RUSSIAN

## CAN Number

## CSU, Long Beach Course

CAN REC 2	REC 241	INTRO LEISURE SERVICES
CAN REC 4	REC 211	REC PROGRAM
CAN SOC 2	SOC 100	PRIN OF SOCIOLOGY
CAN SOC 4	SOC 142	SOCIAL TRENDS & PROBLEMS
CAN SPAN 2	SPAN 101A	FUNDAMENTALS OF SPANISH
CAN SPAN 4	SPAN 101B	FUNDAMENTALS OF SPANISH
CAN SPAN 8	SPAN 201A	INTERMEDIATE SPANISH
CAN SPAN 10	SPAN 201B	INTERMEDIATE SPANISH
CAN SPCH 4	COMM 130	ESSENTIALS OF PUBLIC SPEAK
CAN SPCH 6	COMM 131+131W	ESSENTIALS OF ARGUMENT
CAN SPCH 8	COMM 210	INTERPERSONAL COMM
CAN SPCH 10	COMM 132	SMALL GROUP DISCUSSION
CAN STAT 2	MATH 180	ELEMENTARY STATISTICS



# ACCOUNTANCY

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Michael Constas

Rose M. Martin

Loc Nguyen

Department Secretary

Kellee Zbornak

For all degree requirements see Business Administration.

## Courses (ACCT)

### Lower Division

#### 201. Elementary Financial Accounting (3)

Introduction to financial accounting theory, practice. For business majors. Laboratory and/or class computer applications are a requirement of the course.

### Upper Division

#### 300A-B. Intermediate Accounting (4,4)

Prerequisites: 300A: ACCT 201 or equivalent with a grade of "C" or better; 300B: ACCT 300A with a grade of "C" or better. Accounting theory including recording, valuation, and statement presentation of assets, liabilities, capital, earnings; funds statements; financial analysis; compound interest theory and applications. Laboratory and/or class computer applications are a requirement of the course.

#### 310. Managerial Accounting (3)

Prerequisites: ACCT 201 or equivalent. Use and interpretation of financial statements; evaluation of accounting information systems; accounting for and analysis of costs; managerial use of accounting data for planning and decision making. Not open to accounting majors for course or unit credit. Lab and/or class computer applications are a requirement of the course.

#### 320. Cost Accounting (4)

Prerequisites: ACCT 201 or equivalent with a grade of "C" or better. Theory and practice of cost accounting. Managerial use of cost accounting data for planning, controlling and decision making. Emphasis on cost accumulation and management information systems. Laboratory and/or class computer applications are a requirement of the course.

#### 400. Advanced Accounting (4)

Prerequisites: ACCT 300B with grade of "C" or better. Specialized problems in partnership and corporate accounting, consolidations, foreign currency transactions and translations, fund accounting and selected topics. Laboratory and/or class computer applications are a requirement of the course.

#### 410. Advanced Managerial Accounting (4)

Prerequisites: ACCT 320 with a grade of "C" or better. Managerial accounting concepts as they apply to planning, decision making, performance evaluation and control. Laboratory and/or class computer application are a requirement of the course.

#### 450. Federal Tax Law I (4)

Open to all upper division students. A survey course of Federal taxation, tax policy, and the historical development of taxation emphasizing the individual taxpayer. Laboratory and/or class computer applications are a requirement of the course.

#### 451. Federal Tax Law II (4)

Prerequisites: any upperdivision accountancy course with a grade of "C" or better. Federal income taxation of partnerships, corporations, s corporations, personal and family tax planning, and ethics. Laboratory and/or class computer applications are a requirement of the course.

#### 460. Accounting for Not-for-Profit Organizations (4)

Prerequisites: ACCT 300B and 320 with grades of "C" or better, or consent of instructor. Financial and managerial concepts as they apply to organizations whose objectives are primarily to provide service rather than generate profit. Laboratory and/or class computer applications are a requirement of the course.

#### 465. International Accounting (4)

Prerequisites: Any 300-level accounting course with grade of "C" or better. Contemporary accounting theory and practice from an international perspective. Comparative accounting systems in various countries based on prevailing practice in the United States. Analysis of international accounting and auditing standards. Laboratory and/or class computer applications are a requirement of the course.

#### 470. Auditing (4)

Prerequisites: ACCT 300A, 300B, 320 with grades of "C" or better. Problems of verification, valuation and presentation of financial information in reports covered by the opinion of an independent public accountant. Major concepts of operational auditing and its relationship to the independent audit. Responsibilities of the public accountant, internal auditor and rules of professional conduct. Laboratory and/or classroom computer applications are a requirement of the course.

#### 480. Accounting Systems and Data Processing (4)

Prerequisites: IS 240, ACCT 300B and 320 with grades of "C" or better. Course is designed to familiarize students with the accounting information systems development process. Major topics include analysis, design, development and implementation of accounting information systems. Consideration will be given to the automation of accounting information systems through the use and application of computers. Laboratory and/or classroom computer applications are a requirement of the course.

#### 493. Accounting Internships (3)

Prerequisite: Accounting 300B, Accounting GPA 3.0, Overall GPA 3.0. Students work in public accounting or accounting divisions of private industry or governmental agencies to gain accounting experience in real world situations. Class seminar analysis, evaluation of academic theory in terms of the real world environment

#### 495. Selected Topics (I-4)

Consent of instructor. Topics of current interest in accounting selected for intensive study. Course may be repeated for a maximum of eight units. Topics will be announced in the Schedule of Classes.

#### A. CPA Review Course (1-4)

Course covers all parts of the CPA exam. Topics are tailored to individual needs utilizing computer based materials and the traditional published CPA Review material. Curriculum may be tailored to individual student needs with the consent of instructor.

#### 497. Directed Studies (I-4)

Prerequisites: Consent of instructor and department Chair, on Dean's List and 3.0 GPA or higher in accounting. Individual projects, study and research of advanced nature in accounting.

#### Graduate Prerequisite Course

#### 500. Managerial and Financial Accounting (3)

Prerequisite: MBA standing required. Evaluation of accounting systems, preparation of financial statements, computer information processes and analysis and interpretation of accounting information as an aid to business decisions. Laboratory and/or class computer applications are a requirement of the course.

#### Graduate Division

#### 510. Advanced Cost Accounting, Budgeting and Control (3)

Prerequisite: ACCT 500 or equivalent with a grade of "C" or better. Problems in planning, budgeting and cost control for decision making from a quantitative analysis approach with emphasis on evaluation of the accounting information system. Laboratory and/or class computer applications are a requirement of the course.

#### 612. Tax Research and Procedures (3)

Prerequisites: ACCT 450, 451. The study of the primary sources of income tax law; their uses and interrelationships in researching problems arising under the federal tax laws. Research techniques will be applied to compliance and tax planning problems of individuals, business organizations, estates and trusts. Analysis of the organization of the Internal Revenue Service and the procedures relating to audits, tax collections criminal prosecutions and federal tax litigation. Laboratory and/or class computer applications are a requirement of the course.

#### 695. Special Topics (3)

Prerequisite: MBA standing and consent of instructor. Topics to be announced in the Schedule of Classes. May be repeated once under a different topic.

#### 697. Directed Studies (1-3)

Prerequisite: MBA standing and consent of instructor. Individual study under the direction of the faculty.

# AEROSPACE ENGINEERING

## *College of Engineering*

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#### Undergraduate Advisor

Orhan Kural

#### Graduate Advisor

Orhan Kural

#### General Education Advisor

Hamid Hefazi

#### Secretary

Laju Tejwani

## Bachelor of Science in Aerospace Engineering (code 3-4310) (136 units)

The curriculum is designed to supplement mathematics, science and basic engineering courses in order to give students the specialization needed in different areas of aerospace engineering. In addition to acquiring technical knowledge, graduates will have completed appropriate courses in communications and in humanistic social studies. The Department of Aerospace Engineering is well equipped with state-of-the-art laboratories and computer facilities for undergraduate and graduate instructions.

### Requirements

A grade of "C" or better must be achieved in all prerequisites for aerospace engineering courses.

Lower Division: ENGR 101, CHEM 111A, MATH 122, 123, 224, PHYS 151, 152, AE 270, ME 172, CE 205, EE 211, EE 211L, CECS 271.

Upper Division: ECON 300, MATH 370A, EE 370, ME 330, 371, 373, AE 320, 336, 337, 350, 355, 374L, 437, 440L, 462, 470, 470L, 471, 472, 482, 490, and approved electives to total at least 136 units.

## Master of Science in Engineering (code 6-4301)

For requirements, see the description in the College of Engineering part of this Catalog.

## Master of Science in Aerospace Engineering (code 6-4310)

The Master of Science in Aerospace Engineering program has been created to educate graduate students in subjects relevant to the requirements of industry and in deductive reasoning which will benefit them and the community. This program is unique in its emphasis on practical applications and intimate interaction with the aerospace industry. It involves the most modern computational and experimental methods and provides the essential information permitting the students to acquire knowledge and skills of immediate practical importance. This knowledge is communicated in the courses listed below and used in the conduct of a thesis project to be carried out with participation from industry.

Both graduate and undergraduate programs benefit from the advice of an advisory committee made up of senior staff of aerospace companies, government agencies and universities.

Further information and applications may be obtained from the Department of Aerospace Engineering, California State University, Long Beach, CA 90840.

### Requirements for Admission

A bachelor's degree in an accredited curriculum in Aerospace or Mechanical engineering with a minimum grade point average of 2.70 in the last 60 (semester) units attempted. Applicants with lower GPA may be admitted subject to successful completion of appropriate deficiencies.



A bachelor's degree in engineering, mathematics, science or other appropriate discipline with the requirement that essential undergraduate prerequisites in engineering be satisfied.

Graduate students must consult with the graduate advisor for information concerning procedures and requirements for appropriate approval of their courses of study prior to enrolling in their graduate programs.

#### Requirements

1. The student must complete 31 units of which 25 units is course work and 6 units is thesis work.
2. Courses must include the following required courses: AE 502, 537, 554, 551, 571, and 690.
3. The student must consult the graduate advisor for appropriate choice of minimum 3 other elective courses.

#### Advancement to Candidacy

Prerequisites for advancement to candidacy are:

1. Classified status.
2. An approved program of studies for the Master of Science in Aerospace Engineering.
3. Satisfactory completion of the CSULB Writing Proficiency Examination (WPE). Information is available in the Testing Office (SS/A-216). This requirement can also be met by evidence that the student passed the WPE while an undergraduate at CSULB or at certain CSU campuses.
4. Be enrolled in regular session.
5. Application for Advancement to Candidacy must be done prior to or concurrent with enrollment in AE 698, Thesis.

The Graduate courses are arranged in four categories, as detailed below. Graduate students must complete the courses designated by an asterisk as "core courses", plus three additional elective courses from the first three categories. The objective of this curriculum is to give students a well-rounded education in aerospace engineering, combined with the opportunity to specialize in a specific subject of the field.

#### Category A: Aerodynamics

AE \*537 (3), 631 (3), 632 (3), 696 (3)

#### Category B: Design, Performance, Propulsion, Avionics

AE \*551 (3), \*554 (3), 652 (3), 661 (3)

#### Category C: Structures

AE 471 (3), \*571 (3), 575 (3), 577 (3), 672 (3)

#### Category D: Special Topics, Research and Ph.D. courses

\*AE 502 (3), 680 (3), \*690 (1), 697 (1-3), 698 (1-6), 731 (3), 796 (3)

\*Core Courses

#### Courses (AE)

All courses in this Department are Traditional Grading Only unless otherwise stated.

#### 270. Introduction to Aerospace Engineering I (3)

Prerequisites: This two semester course is designed to introduce the student to the various aspects of aerospace engineering through a case history study of an actual aerospace vehicle product development and production program. This broad review highlights the roles of the various types of engineering specialists involved in the total program, and will enable students to define their areas of specialization in their junior and senior years. (Lecture-problems 3 hours.)

#### 320. Space Environments (3)

Prerequisites: AE 350, 355. Design principles of automated spacecraft, including mechanical, electrical and thermal technologies. Systems consideration for altitude control, data processing, communications and payload requirements. Manned space systems. (Lecture-problems 3 hours.)

#### 336. Engineering Fluid Dynamics (3)

Prerequisites: PHYS 151, MATH 370A, or consent of instructor. Continuity and momentum equations. Elements of two-dimensional potential and real flows, boundary layers theory. (Lecture-problems 3 hours.)

#### 337. Aerodynamics I (3)

Prerequisite: AE 336. Incompressible inviscid flows, airfoil and wing aerodynamics, compressible flows, incompressible viscous flows, supersonic and hypersonic flows. (Lecture-problems 3 hours.)

#### 350. Flight Mechanics (3)

Prerequisite: ME 371. Introduction to mechanics of atmospheric and orbital flight. Application of basic aerodynamics to performance analysis of aircraft, missiles and spacecraft. (Lecture-problems 3 hours.)

#### 355. Stability and Control of Aerospace Vehicle (3)

Prerequisites: EE 370, ME 371, or consent of instructor. Generalized coordinates and the dynamic analysis of aircraft and spacecraft. Linear control theory for aerospace systems. (Lecture-problems 3 hours.)

#### 374L. Aerospace Materials Laboratory (1)

Prerequisite: ME 373. Mechanical properties of materials. Testing procedures, analysis of testing data, tension, compression and flexure tests of metal and composite materials, mode I fracture testing. (Laboratory 3 hours.)

#### 410. Metal Working, Theory and Applications (3)

Prerequisite: AE 374L or consent of instructor. Three-dimensional stress, strain analysis, yield criteria, plastic deformation process, characteristics of metal flow. Capabilities and limitations of various deformation processes applied to industrial metal working. (Lecture-problems 3 hours.)

#### 412. Design for Aerospace Manufacturing (3)

Prerequisite: AE 374L or consent of instructor. Modern aerospace manufacturing with an emphasis on manufacturing equipment, control and systems, and design for manufacturing. Integration of engineering tools for determining manufacturing rate, cost, quality, and flexibility in aerospace engineering. (Lecture-problems 3 hours.)

#### 415. Production Methods for Aerospace Manufacturing (3)

Prerequisite: Consent of instructor. Survey of production processes, sequence of operations, equipment and facilities, methods, tools, plans and requirement of various aerospace products. Observation of an actual aerospace manufacturing activity. (Lecture-problems 3 hours.)

#### 425. Space Flight and Orbital Mechanics (3)

Prerequisite: ME 371 or consent of instructor. Rocket engines. Solid fuel rockets. Liquid fuel rockets. Hybrid rocket engines. Rocket performance characteristics. Staging. Orbital missions. Governing equations for orbital mechanics. Circular, elliptical, parabolic and hyperbolic orbits. Hohmann and Oberth transfer orbits and other orbital maneuvers. (Lecture-problems 3 hours.)

#### 437. Aerodynamics II (3)

Prerequisite: AE 337 or consent of instructor. The three-dimensional differential equations for conservation of mass, momentum and energy in Newtonian fluids. Exact solutions. Two-dimensional boundary layer flows. Stability of boundary layers. Turbulent flows and boundary layers. Introduction to computational fluid dynamics. (Lecture-problems 3 hours.)

#### 440L. Aerodynamics Laboratory I (1)

Prerequisites: AE 336. Experimental techniques in aerodynamics, wind tunnel measurements, use of pitot tubes, hot wire and laser doppler velocimetry systems, flow visualization techniques, calibration of transducers. Computer controlled data collection and analysis. (Laboratory 3 hours.)

**462. Propulsion (3)**

Prerequisites: ME 330, AE 337. Thermodynamics analysis of reacting systems. High temperature thermodynamics. Theory and performance of aircraft propulsion systems; reciprocating, turbine and rocket engines. Aerothermodynamics of inlets, combustors and nozzles. (Lecture-problems 3 hours.)

**470. Avionics and Opto-Electronics (3)**

Prerequisite: AE 355. Corequisite: AE 470L. Electronic and optical systems of aircraft and spacecraft; system requirements for sensing, processing and display of control and data signals in aircraft and spacecraft. (Lecture-problems 3 hours.)

**470L. Avionics and Opto-Electronics Laboratory (1)**

Corequisite: AE 470. Experimental studies on electronic and optical instrumentation systems used in aircraft, e.g., signal processing techniques for communication, navigation and control. (Laboratory 3 hours.)

**471. Introduction to Aircraft Structures (3)**

Prerequisites: ME 373 or consent of instructor. Mechanical behavior of aerospace materials; bending, extension and torsion of advanced beams; stress analysis of flight vehicle structures. (Lecture-problems 3 hours.)

**472. Composite Materials (3)**

Prerequisite: AE 374L or consent of instructor. Stress-strain relations for non-isotropic composites such as fiber-reinforced plastic laminates. Continuum mechanics applied to composites. Manufacturing, strength and life determination. Applications to airplane and spacecraft structures. (Lecture-problems 3 hours.)

**478. Aerospace Capstone Design (3)**

Prerequisites: Consent of instructor, satisfactory completion of the writing proficiency exam. Completion of a design project under faculty supervision. The design will emphasize the essential aspects of aerospace systems design through the use of trade-off studies. Design for manufacturing is emphasized for students wishing to specialize in manufacturing. Written report and oral presentation are required. Capstone experience in aerospace engineering design. (Lecture-problems 3 hours.)

**478L. Aerospace Manufacturing Lab (1)**

Prerequisite: AE 374L or consent of instructor. A design project is given and students are required to complete the design taking into account the manufacturing equipment, control and systems available. (Laboratory 3 hours.)

**482. Aerospace Design (3)**

Prerequisites: AE 462 and 471, completion of writing proficiency exam. Completion of design projects under faculty supervision emphasizing the essential ingredients of aerospace systems design through the use of trade-off studies. Written report and oral presentation are required. Capstone experience in Aerospace Engineering Design. (Lecture-Discussion 3 hours.)

**483. Special Topics in Aerospace Manufacturing (3)**

Prerequisite: Consent of instructor. Group study of selected topics in aerospace manufacturing involving current issues in manufacturing engineering. (Lecture-problems 3 hours.)

**484. Aerospace System Engineering and Integration (3)**

Prerequisite: Consent of instructor. Principles of System Engineering. Requirements development and management. Functional analysis, trade studies and requirements verification. Configuration management, interface management, technical performance planning, risk assessment and management synthesis. (Lecture-problems 3 hours.)

**490. Professional Practice and Seminar (1)**

Prerequisites: Senior standing. Oral and written presentation skills, recent topics in aeronautical sciences, graduate studies. Professional practice of engineering. (Seminar 1 hour.)

**502. Applied Numerical Methods for Aerospace Engineers (3)**

Prerequisites: MATH 370A, 323 or equivalent. Numerical solution of ordinary differential equations, parabolic, elliptic, and hyperbolic partial differential equations. Applications to viscous and inviscid flows, and problems in vibration of structures, static wave propagation and buckling.

**537. Fundamental of Fluid Flows (3)**

Prerequisites: Consent of instructor. Incompressible inviscid flows, thin airfoil theory, finite wings theory, panel methods, two-dimensional supersonic flows. Introduction to computational fluid dynamics. (Lecture-problems 3 hours.)

**551. Aircraft Preliminary Design and Performance (3)**

Prerequisites: Consent of instructor. Complete aircraft preliminary design including mission definition, applicable specifications and regulations. Preliminary takeoff weight and weight empty for a specific mission. Aircraft geometric characteristics including engine size are developed. Detailed aerodynamic data are estimated and used to calculate aircraft performance. (Lecture-design project 3 hours.)

**554. Avionics Systems (3)**

Prerequisites: EE 330, equivalent or consent of instructor. Avionics systems, requirements definition process, designing the system, core avionics, common avionics, software, integrated circuits and device technology, testing and certification. (Lecture-problems 3 hours.)

**571. Aerospace Structures I (3)**

Prerequisites: ME 373 or consent of instructor. Energy methods of structural analysis, principles of stressed skin construction, bending, shear and torsion of open and closed thin-wall stiffened tubes, shear lag, diagonal tension, structural instability. (Lecture-Problems 3 hours.)

**575. Structural Analysis of Composite Laminates (3)**

Prerequisites: ME 373 or consent of instructor. Basic theory of anisotropic elasticity, properties of laminated composites, classical lamination theory, bending, buckling, and vibration of laminated plates, strength of composite materials. Applications in aircraft structures, recent research topics, delamination growth analysis, interlaminar stress calculations. (Lecture-problems 3 hours.)

**577. Stability of Aircraft Structures (3)**

Prerequisite: ME 373 or consent of instructor. Theory of stability, flexural and torsional instability of columns, lateral instability of beams, beams-columns, stability and failure of flat plates, buckling analysis and design of aircraft structure components, optimum configuration of grid-stiffened plates. (Lecture-problems 3 hours.)

**631./731. Computational Fluid Dynamics I (3)**

Prerequisites: AE 537 or consent of instructor. Conservation equations and their reduced forms. Boundary-layer approximations. Uncoupled and coupled laminar and turbulent shear flows and their calculations. Additional topics for Ph.D. students: Turbulence models, and numerical solutions of conservation equations and their appraisal of a wide range of engineering applications. (Lecture-problems 3 hours.)

**632. Inviscid Flow Theory (3)**

Prerequisites: AE 537 or consent of instructor. Transonic flow, small disturbances and full potential methods, grid generation, Euler and Navier-Stokes methods, supersonic flow, linear theory. (Lecture-problems 3 hours.)

**652. Aircraft Stability and Control (3)**

Prerequisites: EE 370 or consent of instructor. Longitudinal, lateral and directional stability of aircraft. Neutral points, control effectiveness, trim in maneuvering flight. Configuration determinants. Transient modes. Methods, types and applications.

**661. Propulsive Systems (3)**

Prerequisites: AE 537 or consent of instructor. Description, design criteria, analysis and performance of: piston engines, turboprops, turbojets, turbofans, ramjets and solid-, liquid-, and hybrid-fuel rockets. Analysis of components: diffusers, compressors, combustors, turbines, nozzles and afterburners. (Lecture-Problems 3 hours.)

**672. Aerospace Structures II (3)**

Prerequisite: AE 571 or consent of instructor. Application of principles of virtual work and virtual force, and finite element method to basic aircraft structural components; theory of plates and shells; application of finite element computer programs. (Lecture-Problems 3 hours.)

674. Manufacturing and Testing of Composite Laminates (3)  
Prerequisite: AE 575 or consent of instructor. This course will pursue advanced level manufacturing and testing methods for composite laminates. (Lecture-Laboratory 3 hours).

680. Special Topics in Aerospace (3)  
Prerequisites: Consent of instructor. Topics in aeronautics not covered in formal courses and selected according to the specialized needs of the students, as well as current interest. (3 hours, Lecture-problems).

690. Aerospace Engineering Seminar (1)  
Prerequisites: Consent of Instructor. Oral presentations by students and seminars given by guest lecturers of material related to thesis and research problems. (Lecture-problems 1 Hour.)

696./796. Computational Fluid Dynamics II (3)  
Prerequisites: AE 631 consent of instructor. Panel methods, introduction to numerical methods for the solution of boundary-layer equations and their application to internal and external flow problems. Calculation of stability and transition. Additional topics for Ph.D. students: Numerical solution of boundary-layer and stability equations for three-dimensional flows. (Lecture-problems 3 hours.)

697. Directed Research (1-3)  
Prerequisite: Graduate Standing. Research in computational and experimental aerodynamics, structures or design problems.

698. Thesis (1-6)  
Prerequisites: Consent of instructor, advancement to candidacy. Research on a chosen topic for thesis.

731./631. Computational Fluid Dynamics I (3)  
Prerequisites: AE 537 or consent of instructor. Conservation equations and their reduced forms. Boundary-layer approximations. Uncoupled and coupled laminar and turbulent shear flows and their calculations. Additional topics for Ph.D. students: Turbulence models, and numerical solution of conservation equations and their appraisal of a wide range of engineering applications. (Lecture-problems 3 hours.)

796./696. Computational Fluid Dynamics II (3)  
Prerequisites: AE 631 consent of instructor. Panel methods, introduction to numerical methods for the solution of boundary-layer equations and their application to internal and external flow problems. Calculation of stability and transition. Additional topics for Ph.D. students: Numerical solution of boundary-layer and stability equations for three-dimensional flows. (Lecture-problems 3 hours.)

# AEROSPACE STUDIES

*College of Health and Human Services*

## U. S. Air Force Reserve Officers Training Corps (AFROTC)

Through arrangements with Loyola Marymount University (LMU) in west Los Angeles, students may participate in the Air Force Reserve Officer Training Corps (AFROTC) program. AFROTC offers a variety of two, three, and four year scholarships, many of which pay the full costs of tuition, books, and fees. Successful completion of as little as four semesters of AFROTC academic classes and leadership laboratories can lead to a commission as a second lieutenant in the United States Air Force.

Classes consist of one hour of academics and two hours of laboratory for freshmen and sophomores and three hours of academics and two hours of laboratory for juniors and seniors. The academic hours earned can normally be counted as elective credit toward graduation. All AFROTC classes and laboratories are held on Fridays to better accommodate students commuting from other colleges and universities. Currently, LMU does not charge for the courses and offers cross-town students free parking while attending AFROTC activities. Additionally, AFROTC cadets under scholarship and all juniors and seniors receive a \$150 per month tax-free stipend.

For more information, contact the Loyola Marymount University Department of Aerospace Studies (AFROTC) at (310) 338-2770.

# AMERICAN INDIAN STUDIES

*College of Liberal Arts*

## Director

Lester B. Brown

## Telephone

(562) 985-5293 or (562) 985-4644

## Faculty

Lester B. Brown (Associate Professor, Social Work)

Richard G. Danay (Professor, Art)

Troy Johnson (Assistant Professor)

Craig Stone (Associate Professor)

## Academic Advisor

Lester B. Brown

## Department Secretary

Olga Alvarez

## Adjunct Faculty

Michael Burgess

Little Crow (Emeritus)

Mabelle Drake

Cecilia Reza

Georgiana Sanchez

Gina Worthington

Students desiring information should contact the department office for referral to one of the faculty advisors. American Indian Studies is an interdisciplinary study of the American Indian. The American Indian Studies program options are designed to provide students with the various fields of knowledge of American Indian Studies with opportunities for emphasis on particular topical, cultural and geographical interests.

The courses in the program offer two distinct directions: (1) classes that contain course content solely directed toward American Indian culture in the North Western Hemisphere; and (2) courses that contain sections or units on American Indians that have content relevant to understanding the American Indian experience.

American Indian Studies is governed by a committee of faculty representing a variety of schools and departments throughout the University.

In addition to offering a broad liberal education focusing on American Indian culture, traditions, and social issues, the various program options offer a useful background for careers in such diverse fields as Law, Administration, American Indian Affairs, Counseling, Teaching, Social Work, Government, Museums and Public Service.

Students may pursue a program in American Indian Studies through a minor, a certificate, a concentration in American Indian Studies within the Liberal Studies Degree Program, or an individually-designed undergraduate special major program under the Special Programs Office. Advisement in American Indian Studies is available in Program Office, F03-300 by appointment.

## Certificate in American Indian Studies (code 1-8000)

Students pursuing any approved degree or credential program of the University may at the same time earn a Certificate in American Indian Studies. Courses taken to meet the requirements may also simultaneously be used, where applicable, to meet General Education requirements or the degree or credential requirements of cooperating departments. Certification of successful completion of requirements will be issued upon the recommendation of the Director of the American Indian Studies Program.

### Requirements

1. A Bachelor's degree with a major in a traditional discipline. (Certificate requirements may be completed prior to the completion of B.A. requirement).
2. Submission of all college/university transcripts to the academic advising coordinator, who will work with the student to develop a well-integrated program of studies. Interested students are strongly encouraged to meet with the academic advising coordinator after having completed the lower division core courses.
3. A minimum of 21 units, distributed as follows:

### Required Core Courses

Lower Division Core Courses (select 6 units from): AIS 100, 101, 200;

Upper Division Core Courses (9 units from): AIS 319, 320, 335, 340, 361, 485;

Upper Division AIS Electives (3 units from): AIS 420, 440, 450, 490, 497, 499;

Upper Division Electives Courses (select 3 units from): AIS Upper Division Core Courses not selected above and from: ANTH 321, 322, 347, 349; ART 456/598S, 457/598T; EDSE 435; HIST 372, 471; HDEV 401; CHLS 380, 420.

## Minor in American Indian Studies (code 0-8420)

### Requirement

A minimum of 21 units, including 18 units in American Indian Studies, distributed as follows:

### Required Core Courses

Lower Division Core Courses: (select 6 units from): AIS 100, 101, 200;

Upper Division AIS Core Courses:

(select 6 units from): AIS 319, 320, 335, 340, 361, 485;

Upper Division AIS Elective Courses:

(select 6 units from): AIS 420, 440, 450, 490, 497, 499;

(select 3 units from): ANTH 321, 322, 347, 349; ART 456/598S, 457/598T; EDSE 435; HIST 372, 471; HDEV 401; CHLS 380, 420 or other AIS upper division offerings.

Upper Division Elective Courses: Course offerings in this section contain classes that either have content relevant to the American Indian experience or include a section or unit devoted

to American Indians. Although some of these courses contain a minimum amount of Indian material, they have been included because of their relevance to American Indian Studies as well as offering the student a wider selection to meet individual programmatic needs and goals; (AIS Upper Division Core Courses not selected in Section II can be used to meet requirements in this section.)

## Courses (AIS)

### Lower Division

#### 100. American Indian History: Pre 1871 (3)

A survey of the histories and cultures of American Indian Peoples in North America from pre-contact to 1871 and an analysis of the political, cultural, legal and military relationships that developed between the American Indians and foreign nations.

#### 101. American Indian History: Post 1871 (3)

A survey of the histories and cultures of American Indian Peoples in North America from 1871 to the present.

#### 200. Contemporary Issues in American Indian Studies (3)

Analysis of the diverse contemporary issues that have impacted upon the American Indian in contemporary society. Overview of the major issues in American Indian affairs: politics, art, philosophy, music, education, reservation life, economics, government relations, Indian organizations, Indian-white relations, legal issues, land rights, media issues, Indian activist movements, community concerns and additional topics of interest of a contemporary nature.

#### 208. California Indian History (3)

This course in California Indian History is designed to provide students an opportunity to study the relationship between the Indian people of the state of California and the various European powers who influenced the settlement of this state. Areas to be explored include the indigenous people of the present day state of California prior to European contact; the Spanish invasion of 1769, the Mexican secularization in 1834, and the seizure of California in 1846 by the United States. These experiences and the resultant impact will be further studied as steps toward understanding contemporary issues involving California Indian people. Traditional grading.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 319. The Ethnic Experience in the U.S. (3)

Ethnic Studies 319 is an examination of the dynamics of the development of our multicultural society, emphasizing study of the four distinct ethnic strands of American society (Asian American, Black American, Mexican American, and American Indian) and their role in the maintenance of cultural diversity in the United States. Same course as ASAM 319, B/ST 319, CHLS 319, W/ST 319. Lecture/Discussion.

#### 320. American Indian Art (3)

A survey of the arts of the North American Indian with special emphasis on the major art forms of the continental United States, Alaska, and Canada. Traditional and contemporary art and artists will be explored with attention to aesthetic, theoretical, historical, religious, and philosophical aspects as they relate to American Indian Culture.

#### 335. American Indian Philosophies (3)

Prerequisites: AIS 100, 101, 200, or permission of instructor. A detailed examination of Iroquois, Navajo, Lakota/Dakota (and others) as tribal groups and their world views. Comparing and

contrasting of these cultural groups with the Anglo-American and each other. Giving insight to the student into the traditional world views, their establishments and on-going practices in a contemporary setting, including the effect/affect of their contact with outside cultures and assimilation into the larger U.S. culture. Traditional grading only.

#### 340. American Indian Literature (3)

An analysis of the written and oral literary traditions developed by American Indians. The range of works studied are: oral history, tales, myth, song, prayer, poetry, short story, and novel.

#### 361. American Indian Education (3)

A study of the historical developments of American Indian Education and proposed solutions to selected problems of education in the various types of schools. Overview of the role of women in traditional Indian societies and in the modern world. Changes in Indian societies occasioned by contact with Europeans and how these changes have altered sexual role definitions will be examined. (Lecture-discussion 3 hours.)

#### 420. American Indian Studio Art (3)

Prerequisites: AIS 320, or permission of instructor. Techniques, materials, concepts and processes in the creation of American Indian Traditional arts and crafts. Selected artistic projects in the creation of tribal arts. (Lecture-activity 6 hours.)

#### 440. Native American Women in Literature (3)

Prerequisites: AIS 340 or equivalent ethnic studies literature course. The course is the study of literatures of North American Native women writers with oral literature forming the base of understanding. The range of works is from tale, myth, song, prayer, poetry, essay, short story and novel from various periods, areas and cultural groups. Traditional grading only. Same course as W/ST 445.

#### 485. Federal Indian Law (3)

This course is designed to provide an in-depth study of the legal relationship between the United States and Indian people and Indian tribes as the field of Indian law was developed and has changed over the years. The legal development will begin with first contact between Indian people and English colonist and continue to 1995.

#### \*450. Cross Cultural Issues for Service Provision to American Indians (3)

Prerequisite: Upper division status. This course is designed for those students entering a service career or profession such as therapists, counselors, teachers, physicians and other helping professionals. This course will help the service professional to have a better understanding of American Indian societies and cultures and the service issues which are unique to those communities. The course will deal with various theories and therapeutic techniques and their effective/or noneffectiveness with these ethnic groups. The course will address community organization as well as techniques for working with individuals, families, and groups of American Indians. This course is designed to explore these qualities in the context of cross-cultural efforts to be of assistance to the American Indian community. Juniors and Seniors Only. Traditional grading only.

#### 490. Special Topics in American Indian Studies (1-3)

Prerequisite: Consent of instructor. Topics of current interest in American Indian studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

#### 497. Fieldwork in American Indian Studies (1-3)

Prerequisites: Upper division standing, consent of instructor. Supervised experiences relevant to specific aspects of the American Indian community in off-campus settings. The fieldwork project must be directly related to the student's major or certificate program. Regular meetings with faculty supervisor and written reports required. May be repeated for a maximum of six units.

#### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Directed Studies to permit individual students to pursue topics of special interest. May be repeated for a maximum of six units.

# AMERICAN STUDIES

*College of Liberal Arts*

## Directors

David R. Peck

David Fine

## Telephone

(562) 985-4262

## Faculty Advisors

Robert Brophy (English)

David Fine (English)

Joe Krause (Art)

Ronald Schmidt (Political Science)

David Peck (English)

Federico Sanchez (Chicano/Latino Studies)

Sharyn Blumenthal (Radio, Television, Film)

## Department Office

FO3-310

## Department Secretary

Olga Alvarez

## Bachelor of Arts in American Studies (code 2-8004)

Students desiring information should contact the department office for referral to a faculty advisors.

American Studies is an interdisciplinary study of American culture. The American Studies Program offers a major leading to the bachelor's degree, a minor, a single subject teaching credential (in cooperation with English), and a Liberal Studies concentration. The program also offers a variety of general education and interdisciplinary courses. Most students majoring or minoring in American Studies are interested in both (1) studying American culture as a whole from several disciplinary perspectives and (2) studying in depth a problem or theme according to individual choice. Reflecting these two interests, the major consists of a 6 course core sequence and a 5 course elective pattern that centers on one theme or problem.

The American Studies Program is governed by a committee of faculty from various departments and schools who also serve as advisors. Students majoring in American Studies confer with advisors to plan their programs, which are recorded on official advising forms.

In addition to providing a broad liberal education focusing on American culture, traditions and institutions, the major in American Studies offers a useful background for careers in law, journalism, public service, government, business and teaching. The program also provides the foundation for graduate work in American Studies and related fields.

In preparation for the upper division major in American Studies, students are expected to have completed lower division courses appropriate as background to the study of American culture. Students planning to major in American Studies should consult the program director or one of the above-named faculty advisors early in their academic careers for general education and preparatory course recommendations and for teaching credential information.

## Requirements

A minimum of 33 units distributed as follows:

Six core courses: AMST 300, and one course in American literature chosen from ENGL 370A,B, 474, 475, 476, 477A,B.

Elective pattern: The student chooses one of the following topics or themes and with an advisor (who will have an up-to-date master list of appropriate courses) plans an elective pattern of a five course sequence with no more than two courses coming from any one academic department: (A) American Institutions; (B) American People; (C) Women in America; (D) American Environment; (E) Arts and Communication in America; (F) American Mind; (G) Student Designed Pattern. In place of one of the above topics or themes, the American Studies major, with the approval of the advisor and the program director, may design a sequence of courses focusing on a topic, theme, or problem in which he or she is particularly interested.

## Minor in American Studies (code 0-8004)

A minimum of 18 units, including 12 in American Studies (AMST 300) and 6 or more chosen from at least two of the following categories: (A) ENGL 370A,B, 474, 475, 476, 477A,B; (B) ART 413A, 413B, MUS 393; (C) GEOG 306, POSC 308, SOC 445.

## Courses (AMST)

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

300. Introduction to American Studies (3)  
Interdisciplinary approaches to the study of American civilization. Significant issues and problems in American life will be examined from the perspectives of several disciplines.

**NO NEW STUDENTS ADMITTED DURING  
THE 1998-1999 YEAR.**

# ANTHROPOLOGY

*College of Liberal Arts*

Department Chair  
Marcus Young Owl

Department Office  
FO3-305

Telephone  
(562) 985-5171

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(562) 985-4379

Faculty

Professors

Pamela Bunte  
Robert C. Harman  
Eugene E. Ruyle

Associate Professors

Daniel O. Larson  
George Scott  
Marcus Young Owl

Assistant Professors

Jayne Howell  
Barbara C. LeMaster

Department Secretary

Jane E. Docherty

Students desiring information should contact the department office for referral to one of the faculty advisors:

Undergraduate Advisor  
Marcus Young Owl

Graduate Advisor  
Pamela Bunte

**A**nthropology is the systematic study of our own species in our biological, social, and cultural aspects. Anthropologists study the full range of human experience in both the past and present. The breadth of anthropological studies gives students a unique perspective to understand other societies and their own. The programs offered by the Department of Anthropology are designed to enrich the personal and professional lives of our students.

The undergraduate major in Anthropology is designed to provide students with knowledge of the various fields of Anthropology and with opportunities for emphasis in particular topical and geographical interests. Students will find that Anthropology provides a useful perspective that has many applications in daily social interaction. The Anthropology major provides a strong liberal arts background that can contribute to success in many fields, such as teaching, public service, or business. Anthropology majors intending to pursue careers in these fields are urged to consider minoring in fields which provide appropriate entry-level skills, such as the Minor in Business Economics or in Public Policy. The major also prepares students for advanced studies in Anthropology. The undergraduate minor in Anthropology is recommended for students preparing for careers which will require practical knowledge of different cultural backgrounds. These include teaching, international business and engineering, foreign service, and public and social services within our own multicultural society.

The Department of Anthropology also offers a graduate program leading to the Master of Arts degree. The graduate program is designed to meet the needs of students who are: 1) seeking to expand their knowledge and increase their competence in Anthropology, 2) preparing for further advanced degrees, 3) need an advanced degree for career opportunities. Graduate students are responsible for observing the general requirements for the M.A. degree as stated in this Catalog. It is also recommended that prospective students consult with the Graduate Advisor at their earliest opportunity.

## Bachelor of Arts (code 2-8505) (124 units)

Lower Division Requirements: ANTH 120, 140, 170 and 210 and either HDEV 250, PSY 210 or an approved statistics course substitute.

Upper Division Requirements: 30 units, selected in consultation with the Undergraduate Advisor to include:

Required Core Courses (6 units): ANTH 401 and either ANTH 313 or 314.

Comparative Cultures (3 units): One of the following: ANTH 321, 322, 323, 324, 331, 332, 333, 335, 345, 347, 349.

Biological Anthropology (3 units): One of the following: ANTH 315, 318, 319, 363, 434, 435, 480A, 480B.

Sociocultural Anthropology (3 units): One of the following: ANTH 329, 351, 353, 414, 415, 416, 417, 419, 420, 421, 436, 454.



Linguistics Anthropology (3 units): One of the following:  
ANTH 413, 475.

In consultation with the advisor an additional 12 units of upper division course work, of which a minimum of 6 units must be from the Department of Anthropology.

### Minor in Anthropology (code 0-8505)

A minimum of 21 units in a program approved by the major advisor, as follows:

Lower Division Required: ANTH 120, 140, 170 and 210.

Upper Division Electives: 9 units of anthropology courses selected in consultation with the major advisor to meet the specific needs of the student.

### Master of Arts in Anthropology (code 5-8505)

The Department of Anthropology offers graduate work in archaeology and linguistic anthropology leading to a master's degree in anthropology. Students interested in sociocultural anthropology should refer to the option in applied anthropology below.

#### Prerequisites

1. A bachelor's degree in anthropology; or
2. A bachelor's degree with 24 units of upper division courses in anthropology, comparable to those required of anthropology majors at this University;
3. A B.A. degree in any field and other background appropriate to graduate study in anthropology. Students whose background in anthropology seems inadequate may be required to fulfill specific undergraduate deficiencies before admission to candidacy. Deficiencies will be determined by the departmental graduate advisor after consultation with the student and a review of the student's transcript records.

#### Advancement to Candidacy

1. Acceptance into the M.A. program by the department;
2. Satisfaction of the general University requirements for advancement to candidacy (including passing the WPE);
3. Approval of the candidate's graduate program by the departmental graduate advisor;
4. The candidate must have taken ANTH 501 (Development of Anthropological Theory), ANTH 510 (Proseminar) and either ANTH 560 (Ethnographic Research Methods) or ANTH 561 (Computer Research Applications in Anthropology), for a total of nine core units.

#### Requirements

1. A minimum of 33 units of 400-level upper division and graduate courses, of which 21 units must be at the 500-600 level in a program approved by the Graduate Advisor. These 33 units must include the following courses: ANTH 501, 510 and 560 or 561;
2. Up to six units of course work outside the Department of Anthropology may be included in the 33 unit total;
3. Competence in appropriate research skills. These may include: familiarity with computer languages and use of computers, or statistical training and facility, or a reading knowledge of a foreign language;
4. Either A) a Comprehensive Examination, or B) a M.A. Thesis.

### Option in Applied Anthropology (code 5-8506)

The Department of Anthropology offers graduate work in applied anthropology leading to a Master of Arts degree in Anthropology. Students with a B.A. in Anthropology, as well as those who can apply their previous training and experience to the practice of anthropology, are welcome to apply. In order to meet the growing demand in California and elsewhere for professionals capable of addressing the complex problems of multicultural urban and regional environments, the Applied Anthropology Program emphasizes specialized training concurrently with knowledge of anthropological theory. All graduate students participate in local research projects and internships. Within the general context of urban and regional development, the particular focus areas of the program include such concerns as multicultural education, medical/health care, and community. Regional emphasis is on southern California and the Southwest.

#### Prerequisites

1. A bachelor's degree in anthropology; or
2. A bachelor's degree with 24 units of upper division courses in anthropology, comparable to those required of anthropology majors at this University; or
3. A bachelor's degree in another field, either a social science, humanity, education, or medical science one, with fewer than 24 units of upper division course work in anthropology, showing evidence of strong potential skills in applied anthropology.

Students under category (3) should submit a petition together with whatever supporting materials as recommended by the Graduate Advisor. If the Graduate Student Committee considers an applicant to lack a basic understanding of anthropological theories and methods, such an applicant will be accepted provisionally into the program (as an unclassified post-baccalaureate student), in which case he/she will be advised to enroll in courses during the first semester recommended by the Committee. Providing that the student performs satisfactorily in these courses, he/she will be admitted into the program the following semester, gaining classified status, and credit will be given for those courses completed the previous semester that are required for the Master of Arts degree.

#### Advancement to Candidacy

1. Classified status;
2. Satisfaction of the general University requirements for advancement to candidacy (including passing the WPE);
3. Approval of the candidate's graduate program by the departmental graduate advisor.

#### Requirements

The student must complete a minimum of 39 units of 400-level upper division and graduate courses in a program approved by the Graduate Advisor. Note: Students may substitute other courses for those normally required, but only with the approval of the Graduate Advisor.

1. ANTH 501, 505, 510, 517, 522, 560, 561, 675, 698;

2. Three upper division/graduate elective courses related to the student's main research interest. At least one of the three electives must be taken outside the Department of Anthropology;
3. Satisfy the language requirement. Each student will be considered individually in relation to this requirement, which must be satisfied before he or she begins work on the thesis;
4. Undertake and satisfactorily complete, under the supervision of the committee, a Thesis.

## Courses (ANTH)

### Lower Division

120. Introduction to Cultural Anthropology (3)  
Nature of culture; a comparative and historical approach to the religion, social organization, subsistence patterns and other aspects of the great variety of cultures around the world; the meanings of human nature, cultural universals and cultural differences. (CAN ANTH 4)
140. Introduction to Archaeology (3)  
Survey of methods used by archaeologists to understand the growth and development of human cultures; discoveries in world-wide prehistory from the Old Stone Age to the Iron Age. (CAN ANTH 6)
150. Elements of Human Integration (3)  
An integration of social, physiological and psychological factors which influence or determine our daily lives; taught from an anthropological perspective.
170. Introduction to Linguistics (3)  
Nature of language; its relation to culture; language structure and processes of change; language universals, contrasts and relationships.
210. Introduction to Physical Anthropology (3)  
Prerequisite: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Physical nature of human beings: relation of humans to other animals: heredity and principles of biological evolution: human fossils: significance of physical variation in modern populations: the origin and adaptive value of cultural behavior. (CAN ANTH 2)
290. Special Topics (3)  
Topics in Anthropology, considered in a small class format. Special topics will be announced in the Schedule of Classes. May be repeated with different topics for a maximum of eight units.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

3051. Radical Social Analysis (3)  
Prerequisites: ENGL 100 and upper division status. Radical analysis of society and culture, focusing on classic Marxian texts as well as current critical theory and analysis.
3071. Modernization in Global Perspective (3)  
Prerequisites: ENGL 100 and upper division status. An exploration of the ways in which the current psychological and material problems in modern society (both western and Third World) can be traced to a process of accelerating change which began with the advance of technology, the rise of capitalism, the abandonment of "old values," the increasing complexity of bureaucracy, and a lowering of social barriers. Exploration of all facets of modernization utilizing films, discussions and readings (fiction and non-fiction). Same course as HIST 3071.

3111. Human Adventure (3)  
Prerequisites: ENGL 100 and upper division status. A synthesis of Anthropology and Marxism; examination of the processes of evolution and revolution in the development of humanity, from earliest times to the present.

313. Peoples of the World: Prehistory (3)  
The origin of human beings and their cultures, the development of agriculture, the growth of city life, and the rise of civilization; a survey of world-wide prehistory from the Old Stone Age to the Iron Age.

314. Peoples of the World: Ethnography (3)  
Recent and contemporary cultures around the world; a comparative survey of their ecological adaptations, social institutions, technology, subsistence strategies, degrees of complexity, and patterns of change.

315. Human Variation (3)  
Prerequisite: ANTH 210 with a grade of "C" or better. Biological variation and differences in the two sexes of modern humans. The biological concepts of biospecies and subspecies are examined. Biological adaptations of human males and females to the various environments of the world are considered. Racism and genocide are discussed in relation to ethnic groups. The rise of the race concept in North America and the social meaning of this concept. An indepth look at the biology of several American ethnic groups. Traditional grading only.

318. Human Genetics (3)  
Prerequisites: ANTH 210 or equivalent BIOL course, a quantitative course. Genetic background for normal and abnormal development; population differences; human reproduction, pregnancy, prenatal diagnosis and birth defects; introduction to population and evolutionary genetics; application to social, moral, legal and ethical problems and to genetic counseling.

319. Human Growth and Development (3)  
Prerequisites: A/P 107 or 207. Analysis of the sequence of events in the development of people from conception to death; organ development; rapid and retarded growth patterns; the processes of aging and death from a broad ethnic and ecological perspective.

321. North American Indians (3)  
Comparative study of traditional Native American societies, social organization, belief systems and religions, crafts and adaptation to varied environments; cultural changes in response to European contacts.

322. California Indians (3)  
Survey of native Californian groups; discussion of the diversity of aboriginal culture prior to western contact as background for analysis of the impact of Europeans; problems of intercultural relations; and the current status of native Californians.

323. Peoples of Mexico and Central America (3)  
Survey of present-day peoples of Mexico and Central America; indigenous and mestizo cultures and their heritage; examination of recent change.

324. Peoples of South America (3)  
Survey of the present day peoples of South America; tribal Indians, peasant communities, village life, the emerging middle class, and other social groups; examination of the Indian, European, and African heritage and present day cultural and social changes.

329. Cultural Diversity in California (3)  
An examination of the various dimensions of the current cultural diversity in California, including ethnicity, nationality, class, gender, religion, and region. Various relationships between these dimensions will be analyzed, a historical background for each dimension and relationship will be presented, and the impact of this diversity on public institutions will be covered. Traditional grading only.

331. Eurasian Culture and Society (3)  
Anthropological perspectives on revolution, socialism, and institutional change in the area of the former Soviet Union; ethnic diversity, family and kinship patterns, politics, economy,

international relations, and religion in premodern and modern times.

**332. Chinese Culture and Society (3)**

Anthropological perspectives on revolution, socialism, and institutional change in China, ethnic diversity, family and kinship patterns, politics, economy, international relations, and religion in premodern and modern times.

**333. Cultures and Societies of Southeast Asia (3)**

Comparison of ecological, social, and symbolic systems of mainland and island Southeast Asia. Emphasis of traditional cultures of agricultural and small-scale societies. Effects of colonialism and modernization are also covered.

**335. Japanese Culture and Society (3)**

Cultural and social institutions; kinship, family structure, religion, law, politics and economy from traditional to modern times.

**345. Ancient Civilizations of Mexico and Central America (3)**

Origin and growth of the Aztec, Maya and other civilizations of Mexico and Central America.

**347. Prehistoric Cultures of North America (3)**

Archaeological evidence of origin and growth of the native American cultures north of Mexico; regional cultures and broad continental patterns of development.

**349. The Prehistory of California and the Southwestern United States (3)**

Development of the native cultures of California and American Southwest from the earliest human occupation to the historic period.

**351. Sex Roles and Culture (3)**

Interaction of biological, cultural and historical factors on male/female roles and status in traditional and contemporary cultures and societies.

**353. Health and Healing (3)**

Cultural perspective of health and health care delivery; coverage of diverse cultures in the United States and abroad; emphasis on increasing personal awareness through exposure to diverse perceptions of illness and treatment.

**363. Natural History of Primates (3)**

Prerequisites: ANTH 210. Relationship of primates to other mammals; adaptation of arboreal mammals; functional and evolutionary aspects of primate anatomy and physiology; effects of size; primate ecology; survey of the Order Primates: Prosimii, Tarsiidea, New World and Old World Monkeys, Hominoids.

**401. Foundations of Anthropology (3) F**

Prerequisites: ANTH 120 and 210 with grade of "C" or better, or permission of instructor. Provides introduction to history of anthropological theory from inception to current approaches. Frames theories in the social context in which they emerged. Traditional grading only.

**412I. Culture and Communication (3)**

Prerequisites: ENGL 100 and upper division status. Introduction to culture and its influence on the communication process in the 1990's. Emphasis on practical application to intercultural and multicultural situations. Attention to cultural patterns in America and abroad and their effect on verbal and nonverbal communicative behavior; cultural dimensions of ethnocentrism, stereotypes, and prejudices and their effect on communication; multicultural approaches to human interaction.

**\*413. Language and Culture (3)**

Relation of language patterns to social life; problems of meaning in cross-cultural communication and language translation; practical application to business, government and religious contacts. Not open to students with credit in ANTH 440. Same course as LING 413.

**414./514. Anthropology of Religion (3)**

Prerequisites: ANTH 120 and upper-division/graduate standing or permission of the instructor. An anthropological examination of religious behavior and beliefs, which will focus on these phenomena in their sociocultural and adaptive contexts. Using the cross-cultural and cultural evolutionary approach, hunter-gatherer religions through civilized ones will be covered.

**415./515. Economic Anthropology (3) S**

This course compares and contrasts the economies characteristic of hunter-gatherers, horticulturalists, and peasants; investigates the changing relations of tribal and peasant peoples to the developing global economy; and looks at a range of production and marketing strategies within local, regional, and urban settings. It is a balanced presentation of appropriate ethnographic materials, economic theory, and alternative modes of analysis.

**416./516. Urban Anthropology (3)**

Comparative analysis of development and role of urban centers in ancient and modern cultures; interrelationships of urban and rural populations; patterns of similarity and difference in urbanism of contrasting cultures; implications for a multi-national world.

**417./517. Applied Anthropology (3)**

Prerequisites: ANTH 120 and upper division standing or Graduate standing or permission of the instructor. Applications of anthropological theory, knowledge and skills to problems related to community development, education, medicine and public health with special reference to cross-cultural problems.

**419./519. Concepts and Theories of Ethnic Identity (3)**

Prerequisites: ANTH 120 and upper-division/graduate standing or permission of the instructor. An examination of concepts and theories of ethnic identity and acculturation/assimilation, as well as the causes of ethnic conflict and the means of its resolution. Traditional grading only.

**420./520. Political Anthropology (3)**

Prerequisites: ANTH 120 and upper-division/graduate standing or permission of the instructor. Political behavior and thought will be examined through the anthropological perspective, which will view these phenomena in their sociocultural and adaptive contexts; in addition, it will compare and contrast various types of political systems across the world, from the simple to the complex.

**\*421. Education Across Cultures (3)**

Cross cultural perspectives on education in modern society; problems in education of non-western peoples by those from western cultural backgrounds. Same course as LING 425.

**434. Primate Evolution (3)**

Prerequisite: ANTH 210. Recommended: ANTH 363, upper division physical anthropology, biology, or anatomy/physiology course. This course will focus on primate evolutionary biology, minus the family hominidae. Particular emphasis will be placed on the fossil record and the analysis of fossils (through the use of fossil casts). Detailed cranial anatomy (particularly teeth) will be examined in the laboratory section. Literature on primate evolution will be surveyed.

**\*435. Human Evolution (3)**

Prerequisites: ANTH 210. Fossil evidence for human evolution with a consideration of the importance of cultural factors. Not open to students with credit in ANTH 430.

**\*436. Medical Anthropology (3)**

Prerequisites: ANTH 353 recommended. Interaction of cultural, biological and environmental elements in human response to disease; emphasis on an ecosystem approach with evolutionary and comparative perspectives.

**\*450. Archaeological Field Methods (4)**

Methods of recording field data including mapping, drawing and photography; practice in the use of field equipment; participation in local site surveys and excavations when feasible. May be offered on Saturdays.

**451./551. Laboratory Techniques in Archaeology (3)**

Prerequisites: ANTH 140 or consent of the instructor. ANTH 451/551 is designed to introduce students to the techniques used in processing collections in an archaeological laboratory and identifying attributes of artifacts relevant to the kinds of analysis current in archaeology today. Considerable emphasis will be placed on the kinds of behavioral inferences that can be derived from laboratory analysis of artifacts and other cultural items (animal bone, plant seeds, etc), as well as the context of laboratory operations in archaeological projects and in the construction of research designs. Traditional grading only.

#### 454. Culture and Aging (3)

Cultural perspectives on aging and the aged in America and elsewhere. Attention to insider views from specific societies and to comparison of aging concerns in diverse settings.

#### \*475. Language and Gender in Cross-Cultural Perspective (3)

Analysis of men's and women's communication in its social and cultural context; role of gender in interpreting conversational interactions in the U.S. and elsewhere; acquisition of gender differences; cultural dimensions of perceptions and stereotypes and their effect on communication. Same course as LING 470, W/ST 475.

#### \*480A. Osteology I (3)

Introduction to skeletal anatomy, measurement and analysis of osteological collections, applied anthropometrics and morphometrics.

#### \*480B. Osteology II (3)

Prerequisites: ANTH 480A or consent of instructor. Osteological analysis of skeletal materials; detection of pathological conditions on archeological populations; methods of dietary analysis; faunal analysis from archeological sites.

#### \*490. Special Topics in Anthropology (3)

Topics of current interest in anthropology selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

#### A. Archaeological Theory

#### 499. Guided Studies in Anthropology (1-3)

Prerequisite: Consent of department. Selected topics in anthropology and preparation of a research report. May be repeated for a maximum of 6 units.

#### Graduate Division

#### 501. Development of Anthropological Theory (3) S

Prerequisites: Senior or graduate standing. A systematic survey of the development of anthropology as a scientific field; and examination of the principal ideas and theories of leading anthropologists, past and present. Not open to students with credit in ANTH 4985.

#### 505. Practicing Anthropology (3)

Prerequisite: Graduate standing or permission of instructor. Practical contributions by anthropologists employed in nonacademic settings. Attention to current local and national practicing anthropology agenda; recent (1980s and 1990s) case studies with emphasis on knowledge utilization strategies; coverage of anthropologists' involvement with ethnic minorities and disenfranchised groups.

#### 510. Proseminar (3) F

Prerequisites: Six units of upper-division anthropology courses or permission of instructor. Development of proposal writing skills, particularly in applied anthropology, linguistics, archaeology, and physical anthropology. Both academic and contract/consulting types of proposals will be covered.

#### 514./414. Anthropology of Religion (3)

Prerequisite: ANTH 120 and upper-division/graduate standing or permission of the instructor. An anthropological examination of religious behavior and beliefs, which will focus on these phenomena in their sociocultural and adaptive contexts. Using the cross-cultural and cultural evolutionary approach, hunter-gatherer religions through civilized ones will be covered.

#### 515./415. Economic Anthropology (3)

This course compares and contrasts the economies characteristic of hunter-gatherers, horticulturalists, and peasants; investigates the changing relations of tribal and peasant peoples to the developing global economy; and looks at a range of production and marketing strategies within local, regional, and urban settings. It is a balanced presentation of appropriate ethnographic materials, economic theory, and alternative modes of analysis.

#### 516./416. Urban Anthropology (3)

Comparative analysis of development and role of urban centers in ancient and modern cultures; interrelationships of urban and rural populations; patterns of similarity and difference in urbanism of contrasting cultures; implications for a multi-national world.

#### 517./417. Applied Anthropology (3)

Prerequisites: ANTH 120 and upper division standing or graduate standing or permission of the instructor. Applications of anthropological theory, knowledge and skills to problems related to community development, education, medicine and public health with special reference to cross-cultural problems.

#### 519./419. Concepts and Theories of Ethnic Identity (3)

Prerequisites: ANTH 120 and upper-division/graduate standing or permission of the instructor. An examination of concepts and theories of ethnic identity and acculturation/assimilation, as well as the causes of ethnic conflict and the means of its resolution. Traditional grading only.

#### 520./420. Political Anthropology (3)

Prerequisites: ANTH 120 and upper-division/graduate standing or permission of the instructor. Political behavior and thought will be examined through the anthropological perspective, which will view these phenomena in their sociocultural and adaptive contexts; in addition, it will compare and contrast various types of political systems across the world, from the simple to the complex.

#### 522. Community Research Practicum (3)

Prerequisites: ANTH 416/516, 560, 417/517 (may be taken concurrently), or permission of the instructor. Community-based group project emphasizing methods of data collection and analysis in applied anthropology. Professional ethics are discussed. Project changes each year. May be repeated once with different topic.

#### 530. Ethnography of Communication (3)

Prerequisite: Graduate standing. Study of talk and other forms of communication from an ethnographic perspective. Emphasizes relevant methods and theories. Among the major topics presented from this perspective are language socialization, genres of speaking, intercultural communication, speech styles, strategic uses of language, and literacy. Traditional grading only. Same course as LING 533.

#### 551./451. Laboratory Techniques in Archaeology (3)

Prerequisites: ANTH 140 or consent of the instructor. ANTH 551/451 is designed to introduce students to the techniques used in processing collections in an archaeological laboratory and identifying attributes of artifacts relevant to the kinds of analysis current in archaeology today. Considerable emphasis will be placed on the kinds of behavioral inferences that can be derived from laboratory analysis of artifacts and other cultural items (animal bone, plant seeds, etc), as well as the context of laboratory operations in archaeological projects and in the construction of research designs. Traditional grading only.

#### 560. Ethnographic Research Methods (3)

Prerequisites: Graduate standing or consent of instructor. Techniques of qualitative research in anthropology; research methodology, research methods (participant-observation, the case study, interviewing, and content, trace, and network analysis), sampling procedures, data analysis and interpretation/explanation, research problems and ethics, and ethnographic report writing. Traditional grading only.

#### 561. Basic Computer Research Applications in Anthropology (3)

Prerequisite: ANTH 560 or permission of instructor. The basics of both qualitative and quantitative computer methods, employing currently appropriate software and statistical techniques. The methods covered will be specifically related to research in archaeology and applied anthropology; and the presentation of results, as well as various research problems, will be addressed.

562. Advanced Computer Research Applications in Anthropology (3)

Prerequisites: ANTH 561 and graduate standing. The advanced application of computer methods to archaeological and applied anthropological research, employing currently appropriate software and statistical techniques. A variety of research problems, as well as the presentation of results, will be covered.

570. Linguistic Field Methods (4)

This course introduces the student to the practical study of unfamiliar languages. Through the help of a native speaker of a non-European language, the student will learn how to write down the sounds of the language and how to determine the structure of the language. Prerequisite: an introductory linguistics course. Same course as LING 580. (Lecture-activity 5 hours.)

597. Directed Readings in Anthropology (1-3)

Prerequisites: Senior or graduate standing and consent of instructor. Selected topics in anthropology will be studied in depth. A written report will be prepared.

600. Seminar in Ethnology and Social Anthropology (3)

Topics of substantive and theoretical importance and their application to research problems. May be repeated for a maximum of six units. Traditional grading only

620. Seminar in Archaeology (3)

Prerequisites: Six upper division units in archaeological courses or consent of instructor. Important recent discoveries; contemporary ideas, trends and problems. May be repeated for a maximum of six units.

630. Seminar in Anthropological Linguistics (3)

Prerequisite: Consent of instructor. Areas and methods of linguistic study and research; evaluation and intensive scrutiny. May be repeated for a maximum of six units. Same course as LING 630.

675. Internship in Applied Anthropology (3-6)

Prerequisites: ANTH 510, 522, 417/517, 560. Community-based placement to enhance professional preparation in applied anthropology. May be repeated once for credit. Credit/No Credit grading only. Course may be repeated for a maximum of 6 units.

697. Directed Research (1-3)

Prerequisite: Consent of department. Research in anthropology on an individual basis.

698. Thesis (1-6)

Prerequisite: Consent of department. Planning, preparation and completion of a thesis in anthropology. Traditional grading only.

# ART

## *College of the Arts*

### Department Chair

Jay Kvapil

### Department Administrative Office

Fine Arts 4, Room 102

### Department Student Services Office

Fine Arts 4, Room 106

### Telephone/FAX

(562) 985-4376/985-1650

### Graduate/Undergraduate Advisors:

B.A./B.F.A.: John Snidecor

Telephone: (562) 985-4381

M.A./M.F.A.: Cynthia Osborne

Telephone: (562) 985-7910

### Faculty

#### Professors

Ingrid Aall (Emeritus, 1997)

Archie Boston Jr.

Patricia J. Clark

Gene R. Cooper

Domenic A. Cretara

John de Heras (Emeritus, 1997)

A. Thomas Ferreira (Emeritus, 1995)

Connie Glenn

Richard Danay

Jen Grey

David A. Hadlock

Thomas E. Hall

Elisabeth Hartung

Kristi E. Slayman Jones

Joseph H. Krause (Emeritus, 1996)

Thomas J. Krumpak

Robert J. Kunst

Jay A. Kvapil

Neil Lieberman

John R. Lincoln (Emeritus, 1994)

Diane L. Martel (Emeritus, 1998)

Julia I. Miller

Dieter Muller-Stach

Cynthia A. Osborne

John J. Shaak (Emeritus, 1998)

John C. Snidecor

James J. Van Eimeren (Emeritus, 1994)

Stephen G. Werlick (Emeritus, 1995)

#### Associate Professors

Karen Kleinfelder

Anthony Marsh

Peter Mendez

Roxanne Sexauer

Carol Shaw-Sutton

Craig C. Stone

Marie Thibeault

#### Assistant Professors

Lisa French

Todd Gray

Tor Hovind

Carlos Silveira

#### Administrative Coordinator

Merrie Martino

#### Slide Librarian

Loy Zimmerman

Students should contact the Department Student Services Office for referral to one of the faculty advisors: Art/Credential Advisor, B.A./B.F.A. Advisor, Graduate M.A./M.F.A. Advisor.

In recognition of the quality of its programs and the standards it maintains, the Art Department is an accredited institutional member of the National Association of Schools of Art and Design (National Association of Schools of Art and Design, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700).

The Art Department at California State University, Long Beach, is one of several campuses in the California State University system authorized to offer the master of fine arts degree in art with a large number of specializations. The diversity of its programs, the quality of instruction, and the professional caliber of its faculty all combine to provide an exceptional opportunity and challenge to students seeking meaningful educational experiences and careers in the visual arts.

The Art Department has curricular programs leading to the following undergraduate degrees: (1) bachelor of arts (art); (2) bachelor of arts (art history); (3) bachelor of arts (art education); (4) bachelor of fine arts in eight specializations (photography, ceramics, drawing/painting, visual communication (graphic design), illustration, printmaking, sculpture, 3-D media-fiber/metal/wood).

At the graduate level the Art Department offers both the master of arts degree and the master of fine arts degree. As the terminal degree for studio artists, the master of fine arts degree requires a minimum of two years and provides 7 professional specializations as follows: ceramics, drawing/painting, illustration, photography, printmaking, sculpture, 3-D media-fiber/metal/wood.

The master of arts degree, designed as a one-year program, is offered by the Art Department in 10 specializations; in addition to the 7 studio areas listed above, the M.A. degree is granted in art history and art education (Graphic Design does not offer a graduate degree). The department also offers a graduate-level Certificate Program in Museum Studies and an interdisciplinary program leading to a Certificate in Biomedical Art.

As is customary in most schools, the Art Department may request projects completed by students for class credit for a short specified period for purposes of promotion and exhibition.

### Admission to Baccalaureate Degree Programs in Art

Since requests for admission to Art Department programs may exceed the capacity to accommodate, all applicants are encouraged to apply during the first month of any initial filing period. When the initial application is received, an Art Department questionnaire will be sent to each applicant for designation of the specific degree and specialization desired.

Applicants must return this form by the stated deadline directly to the Art Department or they will be considered only for the B.A. in Art. Applicants for admission to the B.A. degree programs (Art, Art Education or Art History) must meet all entrance requirements of the University.

## Admission to the Bachelor of Fine Arts Degree

Students seeking admission to the B.F.A. program must:

1. Meet entrance requirements of the University;
2. Provide the Art department with a transcript of all college level credits. This is in addition to any transcript submitted to the University Admissions Office;
3. Submit a portfolio of creative work to the Art Department.

Students who have not yet achieved sufficient specialization to prepare a portfolio or otherwise demonstrate their qualifications for the B.F.A. program are advised to seek admission to the B.A. program in art. Once in residence, the B.A. student may take more specialized work and apply at a later date to change to the B.F.A. program.

"Impacted status" has been declared for the Graphic Design Option in the Bachelor of Fine Arts program.

## Admission Procedures for Change of Major

Currently enrolled students who are undeclared or majors in other departments and who wish to apply for admission to degree programs in art must:

1. Submit a Change of Degree Objective form to the Art Department Student Services Office during the months of November or August;
2. Students applying for the B.F.A. degree programs in Art must also supply transcripts of college-level academic work attempted, and a portfolio of their creative work.

## Bachelor of Arts in Art (code 2-5850) (124 units)

This program is for students who seek a broad understanding and application in art. Total Art/Design units required: 23 lower division, 36 upper division.

### Requirements

Lower Division: ART 010, 115A, 115B, 115C, 130, 131, 161 or 184, 181,187.

Upper Division:

1. ART 320;
2. Two courses from art history, only one of which may be ART 438 or 439;
3. One course from three of the following programs to total 9 units: Drawing and Painting, Printmaking, Illustration, Photography;
4. One course from three of the following programs to total 9 units: Ceramics, Fiber, Metal, Sculpture, or Wood;
5. Plus an additional 9 units upper division from one of the following programs: Art History, Ceramics, Drawing and Painting, Fiber, Illustration, Metal, Photography, Printmaking, Sculpture, Graphic Design (Visual Communication), Wood.

## Bachelor of Arts Degree in Art (Art History) (code 2-5857) (124 units)

This program is for students who wish to specialize in the study of the history of art.

Lower Division: ART 010, 113A, 113B, 115A, 115B, 115C, 130, 181; HIST 131, 132, plus one course selected from ART 131, 184, 187, or 263.

Upper Division: ART 307 plus one course selected from ART 308, 309, 335I, concentration in "major" field (3 courses from one of the following groups plus required ART 497), plus one

course from each of the remaining five groups: I: ART 408, 409, 410; II: ART 423, 424, 425, 426, 427; III: ART 401, 436, 437, 438, 439; IV: ART 466, 467, 468, 469, 470; V: ART 455, 456, 457; VI: ART 416, 417, 465.

Other: A score of 450 in either French or German on the Graduate School Foreign Language Test or complete two years of French or German with an average grade of "B" or better.

## Bachelor of Arts Degree in Art (Art Education) (code 2-5867) (124 units)

The bachelor of arts for teacher preparation degree is a four-year art major degree program required of those students seeking a single subject teaching credential in art (K-12) under the Teacher Preparation and Licensing Act of 1970 (Ryan Act).

Art: Programs in Art are in the process of being approved to reflect new state standards. Students may not enroll in the previously approved program after September 1, 1996. Consult the credential advisor for information on the programs. Students who are not in an approved program may have to meet subject matter mastery by passing Commission-approved examination.

### Requirements

Lower Division: ART 010, 115A, 115B, 115C, 131, 151A, 151B, 181,184, 187, and 182 or 130.

Upper Division: ART 300, 301, 305, 407, 412, 415, and 438 or 439; One course selected from ART 455, 456, 457, 466, 467, 468, 469, 470; One course selected from ART 381, 383, 384, 385, 387; One course selected from ART 327A, 340, 370, 371A; One course selected from ART 327B, 328A, 355A, 356, 357A, 357B, 358A, 359A, 362A, 363; And one course selected from ART 341A, 341B, or 350.

## Single Subject Credential

The Single Subject Credential in Art requires 30 units of upper division or graduate course work beyond the B.A. However, some or all of the professional education courses and student teaching may be taken in the B.A. program or within the fifth year. These courses are EDSS 300A (recommended for the junior year); H SC 411; 435 and 436; EDSS 450A; EDSE 457; EDP 350; EDST 450; EDSS 472 A,B,C Final Directed Field Experiences (Student Teaching). Before student teaching in art, students must pass a portfolio review for the assessment of subject matter competency. A passing score on the CBEST is also required. For information concerning requirements for the B.A. program, teacher preparation, as well as the fifth year for the credential, consult the art education advisor.

## Bachelor of Fine Arts Degree

The bachelor of fine arts degree is offered for the student eventually seeking a master of fine arts degree, the position of a professional artist or designer, and for the student seeking a career of teaching studio art within a selected specialization. The B.F.A. degree program is demanding, requiring high quality performance in order to develop the professional competence of talented students toward successful entrance into the professional art field. There are seven professionally-oriented specialized programs leading to the B.F.A. degree. Total art and support units required: 70 (30 lower division, 40 upper division). Total units for graduation: 132.

### Requirements

Programs of Specialization:

### Option in Art Photography (code 4-5865) (132 units)

Lower Division: ART 010, 115A, 115B, 115C, 130, 131, 141, 181, 187; select one: ART 161 or 184.

Upper Division: ART 320, 340, 342A, 344, 406A, 411, 413, 444, 447, 499V, 491C; select one: ART 438, 439; select two: ART 342B, 406B, 414, 449; and six ART units outside the specialization.

### Option in Ceramics (code 4-5852) (132 units)

Lower Division: ART 010, 115A, 115B, 115C, 130, 131, 151A, 151B, 161 or 184, 181, 187.

Upper Division: ART 320, 341A, 341B, 343A, 343B, 352A, 451A, 451B, 491A; ART 364 and 6 additional units of art history only 3 of which may be in ART 438 or 439; 9 additional units of art outside specialization.

### Option in Drawing and Painting (code 4-5858) (132 units)

Lower Division: ART 010, 115A, 115B, 115C, 131, 181, 182, 184, 187 and 3 units of electives in Art.

Upper Division: ART 320, 381, 383, 384, 387, 481, 483, 484, 487; 6 units of upper division Art History; and a minimum of 6 units of Art electives outside the specialization; Select 9 total units from the following courses, choosing at least 6 units of any one course: ART 388, 492F, 492G, 492Z, 499D, 499K. Upon approval of the Intermedia faculty, 9 units of ART 499T Intermedia will be substituted for 9 required upper division units in drawing and painting units

### Option in Illustration (code 4-5855) (132 units)

Lower Division: ART 010, 115A, 115B, 115C, 130, 131, 181, 184, 187, 223, 271.

Upper Division: ART 320, 371A, 371B, 372, 471A, 471B.

A minimum of 6 units from ART 373, 385 or 483; select one 374A or 499F, 6 units of art history only 3 of which may be from ART 438 or 439; 382A, 382B, 383, and 3 units outside the specialization.

### Option in 3-D Media (Fiber, Metal, Wood) (code 4-5860) (132 units)

Four specializations offered under this option: Fiber, Metal, Wood, and Integrated 3-D Media.

Lower Division: ART 010, 115A, 115B, 115C, 130 or 182, 131, 151A or 151B, 161 or 184, 181, 187, 263.

Upper Division: ART 320, 350, 381, 491B; select one of the following four specializations:

Fiber: ART 327A, 327B, 328A, 428A, 428B, 499N; select 3 units from ART 328B, 438C or 430, Art History, DESN 368; select 3 units from the following 438 or 439; and 9 units outside the specialization to include ART 335I.

Metal: ART 357A, 357B, 358A, 358B, 458A, 458B; select 3 units from the following: ART 355A, 355B, 356, 359A, 359B or 499J, 6 units Art History to include DESN 368; and 9 units outside the specialization to include ART 335I.

Wood: ART 354A, 354B, 454A, 454B, 499B for 9 units; 6 units Art History to include DESN 368; and 9 units outside the specialization to include ART 335I.

Integrated Media: ART 328A, 354A, 354B, 357A; 3 units from ART 328B or 430; 3 units from ART 355A, 358A, or 359A; 3 units from ART 499B, 499J, or 499N; 6 units Art History to include DESN 368; and 9 units outside the specialization to include ART 335I.

### Option in Printmaking (code 4-5861) (132 units)

Lower Division: ART 010, 115A, 115B, 115C, 130, 131, 141, 181, 184, 187.

Upper Division: ART 320, 370, 376, 377, 378, 379, 381, 475, 480, 499R; 12 units of Art History to include ART 365, 439, and 3 units elective upper division Art History; plus 9 units outside the specialization.

### Option in Sculpture (code 4-5862) (132 units)

Lower Division: ART 010, 115A, 115B, 115C, 130, 131, 161, 181, 184, 187, 263.

Upper Division: ART 320, 361, 362A, 362B, 363, 461, 463, 6 units of 499M; 6 units Art History only 3 units of which may be ART 438 or 439; plus 12 units outside the specialization to include ART 359A.

### Supplemental Screening Criteria for Admission to the BFA Degree in Graphic Design (Visual Communication) (code 4-5859)

Applications for the Graphic Design specialization exceed the spaces available; therefore, this program is considered impacted by The California State University.

Supplemental screening criteria will be used to determine which applicants will be admitted into Graphic Design. The criteria for admission to this program are listed below:

1. Return the Department questionnaire by the stated deadline;
2. Submit also by the stated deadline a complete set of transcripts for all college-level academic work attempted. These are in addition to the transcripts sent to the University Admissions Office;
3. Have earned a 3.0 GPA or better in at least 15 units of design/art, which must include or its equivalent: ART 181.
4. In addition, applicants for this BFA degree must submit a portfolio of their creative work by the stated deadline for a formal review by the faculty in this specialization.

### Option in Graphic Design (Visual Communication) (code 4-5859) (132 units)

Lower Division: ART 010, 115A, 115B, 115C, 130, 131, 181, 184, 187, 223.

Upper Division: ART 318, 322A, 322B, 323, 325, 326, 329, 331, 422A, 422B, 491D; select 6 units from the following: ART 420, 442, 499S; DESN 368 and 3 units of art history; and 6 units outside the specialization

### Certificate Program in Biomedical Art (code 1-5010)

The Certificate Program in Biomedical Art is an interdisciplinary program sponsored by the Art, Anatomy and Physiology, and Biological Sciences Departments.

Biomedical art is commissioned principally by (1) hospitals or individual researchers for publication, (2) by publishers and film and television producers serving the biomedical professions, (3) by producers of educational aids for biomedicine. Therefore,



proficiency in commercial art and printing procedures including photography and typography is required.

Special permission is not required for a student to pursue the Certificate in Biomedical Art. The student may apply for certification upon completion of the following CSULB course work and conditions:

#### Requirements

1. A major in art or biology;
2. A 2.75 overall GPA and 3.25 in the major;
3. 33 units as listed: ART 141 (2), 181 (3), 184 (3), 271 (3), 349A (3), 372 (2), 374A (3), 374B (3), 499F (3); and BIOL 200 (4), 208 (4); the BIOL 200 is waived for Biology majors.

Co-directors of the CSULB Biomedical Art program are in Art: Peter Mendez; and in Biological Sciences: Dr. Kenneth Gregory. Questions may be addressed to them during office hours which are listed in the respective departmental offices.

### Certificate Program in Museum Studies (code 1-5020)

The Certificate Program in Museum Studies is open to graduate students in museum related fields including the visual arts, science, history, but does not exclude other fields. The initial program is to be devoted primarily to art museum studies.

Admission to the program is by permission of the museum studies faculty within the Art Department. Interested students should apply to the Director, the Museum Studies Program.

#### Requirements

A total of 30 units to include: ART 435, 545A-B taken consecutively beginning in the spring semester, 542 in museum internship; ART 307 and 15 additional units selected from ART 499Q, Art History, Anthropology, Business Administration, English, Instructional Media, Journalism or Public Policy and Administration, subject to approval of the director of the program at the time of admission to ART 545A.

### M.A. and M.F.A. Degrees in Art

The Department of Art offers the Master of Arts degree in the Art Education and Art History majors and the Master of Arts and Master of Fine Arts degrees in these Studio Art Specializations: Ceramics, Drawing & Painting, Illustration, Photography, Printmaking, Sculpture, and 3-D Media (Fiber, Metal or Wood) or Integrated 3-D Media (Fiber, Metal and Wood).

Admission to pursue a graduate degree at California State University, Long Beach involves acceptance by both the Department and the University into a specific degree program. Many applicants attempt the Departmental review before making a formal application to the University.

University Admission: Applicants must file a complete application as described in the CSU admissions booklet. Requirements include: a bachelor's degree from a regionally accredited institution; a grade point average of at least 2.5 in the last 60 semester units; and good standing at the last college attended.

Open filing periods (through the Admissions Office) begin November 1st for the following Fall semester and August 1st for the following Spring semester. There is a fee of \$55.00 for the University application process.

Acceptance to a Degree Program in Art: After submitting the Department of Art Application, those who pass the review

and are also accepted by the University may be admitted to either Classified or Conditionally Classified status. A Classified Graduate has met all of the Art prerequisites, while a Conditionally Classified Graduate has outstanding prerequisite or portfolio requirements to complete.

The Departmental reviews are held the month of March for Fall admission and the month of October for Spring admission. Call the Art Student Services Office at (562) 985-4376 to obtain an application packet.

NOTE: The Department of Art requires a GPA of 3.0 in upper division (junior/senior level) art prerequisites for acceptance to the graduate program. All students must be accepted by the Department, which notifies the Admissions Office so that they may be officially accepted by the University. There is no fee for the departmental application process.

Foreign Students must be accepted in Classified or Conditionally Classified standing by the Department of Art and pass the TOEFL examination (minimum score of 550) before they can be admitted to the University.

Degree Outside Art: Students who have a baccalaureate or master's degree in another field need only complete the required Art and Art History (and Education for the Art Education major) prerequisites below to qualify for applying to the graduate program in Art.

### Master of Arts in Art (code 5-5850)

#### Prerequisites for all Majors

1. A bachelor's degree from an accredited institution.
2. A minimum of 24 units of upper division (300-400) art comparable to those required of a major in Art at this university. This must include at least 15 units of upper division work (junior and senior level classes taken as an undergraduate or post baccalaureate student) in the intended major or area of graduate specialization.
3. A minimum GPA of 3.0 in upper division Art and Art History units. A student who does not meet this requirement within the 24 units required as an undergraduate may count units taken as a post baccalaureate student to bring their GPA up to 3.0. This coursework may not be used in the master's program.

#### Art Education Prerequisites

1. Within specialization units, the total of 15 will consist of Art and Education courses approved by the Art Education faculty.
2. In addition to the 24 units in art and education, a minimum of 12 units of Art History, which may include no more than six lower division (100-200) units and must include at least six upper division (300-400) units.

#### Art History Prerequisites

1. Within the specialization, the total of 15 units must include the following courses or their equivalents: ART 307 and one of the following: ART 308, 309 or 335I.
2. A minimum score of 450 in either French or German on the Graduate School Foreign Language Exam or the completion of two years (or a minimum of 12 units) of college-level French or German with an average grade of "B" or better. (With approval from the Art History faculty, another language may be substituted if appropriate.)

## Studio Art Prerequisites

In addition to the 24 units in art (with 15 units required in the studio specialization), 12 units of Art History, which may include no more than six lower division (100-200) units and must include at least six upper division (300-400) units.

## Master of Fine Arts in Art (code 7-5850)

### Studio Art

#### Prerequisites

1. A bachelor's degree from an accredited institution.
2. A minimum of 24 units of upper division art comparable to those required of a major in art at this university. This must include at least 18 units of upper division work (junior and senior level classes taken as an undergraduate or post baccalaureate student) in the intended area of studio specialization.
3. 12 units of Art History, which may include no more than six lower division (100-200) units and must include at least six upper division (300-400) units.

#### Departmental Review Requirements for the M.A. and M.F.A.

The Department of Art Application, transcripts and two letters of recommendation are required. Reviews are held by the faculty from each major or intended area of specialization. Applicants should schedule a meeting with the appropriate faculty representative and/or have application materials into the Graduate

Office the first week of the review month (October or March). While most areas review on an informal basis as applications are received, the Drawing and Painting Area has a formal group review day in the middle of the month (applicants will be notified of this date). If openings are not filled, some areas will consider applicants whose materials arrive after the departmental deadline of the end of the review month.

Call the Art Student Services Office at (562) 985-4376 to confirm if this is the case.

### Art Education

Present to the Art Education faculty a portfolio of studio and written work, along with the required application, transcripts and letters.

### Art History

If possible, arrange an interview with the Art History Graduate Representative to review prerequisites, as well as submit the required application, transcripts and letters.

### Studio Art

Present to the faculty of the intended studio specialization a portfolio of studio work, along with the required application, transcripts and letters.

#### Faculty Contacts for Admission Reviews

Applicants must contact the Art Student Services Office for further information and referral to the appropriate faculty contact for their intended area of study.

#### Transcripts

If you are also applying to the University, send the Department the required official (sealed) set of transcripts. If you plan to apply to the University later, we will accept temporary, "unofficial" photo-copies.

## Transfer Units

With faculty approval, up to six post-baccalaureate units may be accepted into the MA program, and up to 24 units (for example, from a previous MA degree) into the MFA program. In the case of an existing MA degree in the same specialization from CSULB, the total of 30 units will be eligible for acceptance into the MFA.

### Degree Requirements for the M.A. in Art Education, Art History and Studio Art

Completion of all program requirements and courses as established by the student and their chosen three member faculty Graduate Committee, to include:

1. 30 units of approved graduate and upper division courses. The University requires that at least 60% of the total 30 units must be 500-600 level courses taken in residence at CSULB.
2. 18 units in the major or area of specialization, which must consist of a majority of 500/600 level courses and include 6 units of ART 698, Thesis/Project (For the written component of ART 698, see individual majors below.)
3. 12 units of electives must be graduate level or asterisked (\*) for graduate credit and may include: additional specialization classes; art outside the specialization; or classes outside art (optional but limited to 6 units).
4. Successful completion of the Writing Proficiency Exam (WPE) taken the first semester in residence at CSULB and required by the time of Advancement to Candidacy (below).
5. A minimum GPA of 3.0 in all program work, with no grade below a "C".

### Art Education Requirements

1. Within the specialization must be ART 601A and 601B, Seminars in Art Education, to total 6 units.
2. Six units of Art History electives beyond the 12 taken as prerequisites for a cumulative total of 18. (If more than 12 were taken as prerequisites, the number of units needed to equal 18 are required.)
3. In conjunction with ART 698, the final degree component is a written Thesis submitted to the Department of Art and approved by the student's faculty committee.

### Art History Requirements

1. Within the specialization must be ART 611, Seminar in Art History, for a minimum of 3 units.
2. In conjunction with ART 698, the final degree component is a written Thesis submitted to the Department of Art and approved by the student's faculty committee.

### Studio Art Requirements

1. Within the specialization must be ART 692, Public Exhibition, taken for 3 units in the final semester.
2. Six units of Art History electives beyond the 12 taken as prerequisites for a cumulative total of 18. (If more than 12 were taken as prerequisites, the number of units needed to equal 18 are required.)
3. In conjunction with ART 698, the final degree component is a written Project Report submitted to the Department of Art and approved by the student's faculty committee.

## Degree Requirements for the M.F.A. in Studio Art

Completion of all program requirements and courses as established by the student and their chosen three member faculty Graduate Committee, to include:

1. A total of 60 units of approved graduate and upper division courses. The University requires that at least 60% of the 60 units must be 500-600 level courses taken at CSULB.
2. 36 units in the area of specialization, which must include a majority of 500/600 level courses, including: Graduate Seminars (ART 690A and 690B) for 6 units (ART 690A should be taken the first fall semester in residence at CSULB.); ART 699, Thesis/Project for 6 units, and ART 692, Public Exhibition for 3 units.
3. 24 units of electives must be graduate level or asterisked (\*) for graduate credit and should include 6 additional units of Art History beyond the 12 taken as prerequisites for a cumulative total of 18. (If more than 12 were taken as prerequisites, the number of units needed to equal 18 are required.) Other elective choices are: additional specialization classes; art outside the specialization; classes outside art (optional but limited to 6 units).
4. Successful completion of the Writing Proficiency Exam (WPE), taken the first semester in residence at CSULB and required by the time of Advancement to Candidacy (below).
5. A minimum GPA of 3.0 in all program work, with no grade below a "C".
6. In conjunction with ART 699, the final degree component is a written Project Report submitted to the Department of Art and approved by the student's faculty committee.

## Advancement to Candidacy Review for the M.A. and M.F.A. Degrees

Advancement reviews occur after the completion of 15 M.A. or 30 M.F.A. program units and are the point at which the student's program is forwarded to the Records Office and they become an official candidate for graduation. The completed MA or MFA Program Form, along with written minutes of regular semester meetings with the three member faculty Graduate Committee, must be submitted. This is also the point at which proof of passing the Writing Proficiency Exam (WPE) must be presented.

## Art Education Requirements

1. The completion of a written exam which tests the student's knowledge of literature relative to Art Education and shows evidence of writing and research skills.
2. An oral defense presented to the student's faculty Graduate Committee.

## Art History Requirements

1. Faculty review of a qualifying paper demonstrating potential for success in thesis and research writing. This is documented on the Graduate Paper Evaluation form.
2. A minimum score of 600 in either French or German on the GSFL Exam, or pass an Art History language competency test in reading French or German (or an approved substitution).

## Studio Art Requirements — M.A. and M.F.A.

1. Exhibition of selected studio work in group shows in the College of the Arts Galleries, including an Artist's Statement to accompany the installation.
2. An oral defense presented in the gallery to the student's faculty Graduate Committee.

Following Advancement, the student may submit a Request for Graduation Date ("Grad Check") at the Records Office, and enroll for the courses planned in their program or, if changes become necessary, file a Change of Program Form with the Graduate Art Advisor. Prior to registering for ART 698 or 699, the Project Statement form should be filled out and agreed to by the student's Graduate Committee, then signed and returned in to the Graduate Art Office.

## Final Degree Requirements

If all scheduled units for the MA or MFA degree programs have been completed but the final written requirements have not been approved and submitted, students must register for GS 700 (1 unit-no credit) through University Extension in order to maintain enrollment until the semester they graduate. Care should be taken not to exceed the University limit of seven years for all master's degrees.

Additional information may be found in the "Art Department Graduate Guidelines," given to each student accepted into a master's program.

## Courses (ART)

### Lower Division

#### 010. Art Matrix (1)

Participation in art and design exhibitions, openings, lectures and special events. Required of art majors. Must be taken for 1 unit in 5 different semesters for a total of 5 units. Repeatable to 5 units. These units do not count toward graduation. Credit/No Credit grading.

#### 100. Perceptual Skills Through Drawing (3)

Basic theory and concepts of art learned through drawing, with emphasis on developing perceptual skills. (2 hrs. lec., 3 hrs. lab.)

#### 110. Introduction to the Visual Arts (3)

Exploration of the meanings, purposes, and styles of art; introduction to the materials and forms of painting, printmaking, sculpture, and architecture. Orientation to the arts of Africa, Asia, the Americas, Europe, and the Islamic world. Development of an awareness and understanding of diverse cultures through examination and comparison of their arts and artifacts, past and present. Illustrated lectures, supplemented by individual field activities utilizing the abundant visual arts resources of greater Los Angeles.

#### 113A,B. Survey of Eastern Art (3,3)

Survey of art as an integral part of Eastern culture. ART 113A: India and Southeast Asia; 113B: China, Japan and Korea.

#### 115A,B,C. Foundation Art History I, II, III (3,3,3)

115A: Basic theoretical considerations about art and its relation to society in both Western and non-Western cultures.

115B: Chronological survey of art as an integral part of Western culture, from Prehistory through the Middle Ages. (CAN ART 2)

115C: Chronological survey of art as an integral part of Western culture, from Proto-Renaissance to contemporary. (CAN ART 4).

Traditional grading only for Majors/Minors.

Basic theoretical considerations about art and its relation to society in both Western and non-Western cultures.

#### 130. Foundation Two-Dimensional (3)

Introduction to, and exploration of, the basic principles, components and terminology of two dimensional design. Students apply these in a series of problem solving exercises to develop a working vocabulary of those fundamental visual elements and relationships applicable to all forms of visually creative endeavor.

131. Foundation Three Dimensional (3)

Prerequisite: ART 181, 130 or 182. Investigation and problems in the organization of three-dimensional phenomena. (6 hrs. lab.)

141. Basic Photography (2)

A beginning course to familiarize students with the fundamentals of photography. Units pertaining to cameras, exposure meters, films, darkroom technique, lighting, portraiture and optics. (4 hrs. lab.)

151A. Beginning Ceramics: Handbuilding (3)

Introduction to ceramics as an art making material using hand-building techniques such as slab, coil, and molding, including glazing and processes. (9 hrs. lab.) (CAN ART 6)

151B. Beginning Ceramics: Wheel Throwing (3)

Introduction to ceramics as an art making material emphasizing the use of the potters wheel to develop forms. Includes glazing and firing. (9 hrs. lab.)

161. Foundation Life Sculpture (3)

Prerequisites: ART 181. Modeling from the human figure with emphasis on composition. (6 hrs. lab.) Traditional grading only for Majors/Minors.

181. Foundation Drawing (3)

Introduction to drawing with emphasis on perspective, light, shadow, and volume in composition using a variety of media. (6 hrs. lab.) (CAN ART 8)

182. Color Theory and Composition (3)

An intensive study of the behaviors and traditions of color composition with an emphasis on fine arts application. Using theories of the major colorists as a structure, studio projects provide hands-on exploration of specific topics.

184. Foundation Life Drawing (3)

Prerequisites: ART 181 or concurrent enrollment in 181 and 184. Introduction to drawing from the human figure. (6 hrs. lab.)

187. Foundation Painting (3)

Prerequisites: ART 130, 181, 182. Introduction to painting problems using opaque media. (6 hrs. lab.) (CAN ART 10)

222. Calligraphy (2)

Prerequisite: ART 181, 130 or 182. Study of letter design and written letter forms utilizing the broad pen. Examines traditional written letter forms and contemporary interpretations of these forms. (6 hrs. lab.)

223. Lettering-Typography (3)

Prerequisite: ART 181, 130 or 182. Introduction to historic and contemporary letterforms, with emphasis on recognition, construction and representation. Students apply design fundamentals to the modification, combination and composition of existing typographic forms. Computers may be utilized. (6 hrs. lab.)

240. Images and Ideas (3)

Introduction to the theory and practice of contemporary image making. Aesthetic and philosophical concerns will be discussed with regard to visual problems. Students will engage in a variety of exercises; contemporary media will also be examined in relation to visual art practice.

263. Beginning Sculpture (3)

Principles of sculpture expressed through basic experiences in modeling, carving, construction and mold making. (4 hrs. lab.) (CAN ART 12)

271. Rendering (3)

Prerequisite: ART 181, 130 or 182. Graphic visualization for convincing representation. (4 hrs. lab.)

The Art Department upper division courses fall into several curricular sub-groups, as follows:

**Art Education**

(ART 407 and 499P are acceptable for the M.A. with a specialization in Art Education.)

300. Art, Adolescence, and the Child

\*301. Cross-Cultural Perspectives in Art Education

304. Art for Special Programs

305. Art Disciplines and New Technology

\*407. Art Practicum

412./512. Aesthetic Theories and Art Education

415. On-Site Studies in Art Education

\*499P. Special Studies in Art Education

**Art History**

\*307. Historiography in Art

\*308. Art Theory

\*309. Art Criticism

\*364. History of Ceramics

\*365. History of Prints and Drawings

401./598A. American Art

408./598B Early Christian and Byzantine Art

409./598C. Romanesque Art

410./598D. Gothic Art

411./511. History and Criticism of Photography

416./598E. Greek Art

417./598L. Roman Art

423./598F. Early Renaissance Art in Italy

424./598G. High Renaissance Art in Italy

425./598H. Northern Renaissance Painting

426./598J. Baroque and Rococo Trends in Art

427./598K. Baroque Art: Court and Middle Class

436./598M. Neo-Classicism to Romanticism, 1789-1850

437./598N. Impressionism to Post-Impressionism, 1850-1900

438./598P. Twentieth Century Art to 1945

439./598Q. Twentieth Century Art from 1945

440. Art and Society

455./598R. Traditional Art of Africa: A Thematic Approach

456./598S. American Indian Art: Western Perspectives

457./598T. Pre-Columbian Mexican Art

465./598U. Ancient Art of the Near East

466./598V. Buddhist Art of India and S.E. Asia

467./598W. Hindu and Islamic Art of India

468./598X. Early Chinese Art

469./598Y. Later Chinese Art

470./598Z. Japanese Art

496. Special Studies in Art History

497. Special Studies in Art History

**Ceramics**

\*341A. Intermediate Ceramics: Handbuilding

\*341B. Intermediate Ceramics: Wheel Throwing

\*343A. Ceramics Sculpture

\*343B. Advanced Wheel Throwing

\*352A. Ceramics: Glaze Technology

\*352B. Ceramics Plaster Shop

\*451A-B. Advanced Ceramics

\*452. Ceramic Shop Planning and Kiln Design

453. Seminar in Ceramic Arts

491A. Ceramics: Senior Project

\*499A. Special Studies in Ceramics

**Drawing and Painting**

381. Intermediate Drawing

383. Life Painting

384. Intermediate Life Drawing

\*385. Watercolor Painting

\*387. Painting

\*388. Mural Painting

\*389. Materials and Craft of Drawing and Painting

\*481. Advanced Drawing

\*483. Advanced Life Painting

\*484. Advanced Life Drawing

\*487. Advanced Painting

488./688. CSU Summer Art

\*492F. Concentrated Studies in Life Drawing

- \*492G. Concentrated Studies in Abstract Painting
- \*492Z. Concentrated Studies in Life Painting
- \*499D. Special Studies in Drawing
- \*499K. Special Studies in Painting

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### Fiber

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- \*327A-B. Surface Design
- \*328A. Beginning Fiber Structures
- \*328B. Advanced Fiber Structures
- \*428A-B-C. Weaving
- \*430. Fiber Art: Paper
- 491B. 3-D Media Fiber/Metal/Wood and Integrated Media: Senior Project
- \*499N. Special Studies in Fiber

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### Graphic Design (Visual Communications)

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- 318. Typographic Design
- \*322A-B. Visual Communication Design
- \*323. Visual Communication Design/Production
- \*325. Packaging Design
- 326. Computer Graphics
- 329. Advertising Design
- \*331. Visual Communications Design/Comping Skills
- \*420. Visual Communication Design Workshop
- \*422A-B. Advanced Visual Communications Design
- \*442. Internship in Visual Communications
- 491D. Graphic Design – Senior Project
- \*499S. Special Studies in Visual Communications Design

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### Illustration and Biomedical Art

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- \*371A-B. Illustration
- \*372. Anatomy for Artists
- \*373. Costumed Figure Drawing
- \*374A-B. Biomedical Rendering
- \*471A-B. Advanced Illustration
- \*499F. Special Studies in Illustration

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### Metal

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- 355A. Enameling
- 355B. Enameling: Photo Processes
- \*356. Jewelry Casting
- \*357A-B. Beginning Metals and Jewelry
- \*358A-B. Metalsmithing
- 359A. Architectural Metalwork and Blacksmithing
- 359B. Sculptural Metalwork
- 458A,B. Advanced Metalsmithing/Jewelry and Enameling
- 491B. 3-D Media Fiber/Metal/Wood & Integrated Media: Senior Project
- \*499J. Special Studies in Metalsmithing and Jewelry

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### Museum Studies

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- \*435. Introduction to Museums
- \*499Q. Special Studies in Museum Studies

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### Photography

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- \*340. Intermediate Photography
- \*342A. Color Photography
- 342B. Advanced Color Photograph
- \*344. Alternative Photographic Processes
- 406A. Digital Imagery for the Arts
- 406B. Advanced Digital Imagery for the Arts
- \*413. Photo Marketing/Portfolio
- 414./514. Documentary Photography
- \*444. Fine Print Photography
- \*447. Photography Studio Specialties
- \*449. Experimental Photography
- 491C. Photography – Senior Project
- \*499V. Special Studies in Art Photography

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### Printmaking

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- 370. Printmaking
- \*376. Printmaking: Relief Printing
- \*377. Printmaking: Silkscreen
- \*378. Printmaking: Etching
- \*379. Printmaking: Lithography
- \*475. Printmaking: Photo Processes
- \*480. Printmaking: Monotype/Monoprint
- \*499R. Special Studies in Printmaking

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### Sculpture

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- \*361. Life Sculpture
- \*362A. Sculpture Foundry: Investment Casting
- \*362B. Sculpture: Molding and Reproduction
- \*363. Sculpture: Carving and Fabrication
- \*459. Sculpture Foundry: Shell Casting
- \*461. Advanced Life Sculpture
- \*463. Advanced Sculpture
- \*499M. Special Studies in Sculpture

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### Wood

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- \*354A-B Wood
- \*454A-B. Handcrafted Furniture
- 491B. 3-D Media Fiber/Metal/Wood and Integrated Media: Senior Project
- \*499B. Special Studies in Wood

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### Upper Division

300. Art, Adolescence, and the Child (3)  
Experiences in visual art appropriate to developing creative self-expression according to guidelines found in the California Visual and Performing Arts Framework; introduction to children's artistic and aesthetic development. In addition, students will develop aesthetic perception; learn skills of analysis, interpretation, and judgment for application to visual art; and gain an understanding of the historical and cultural contexts of visual art. (6 hrs. lab.) Course fee required. Traditional grading only.

\*301. Cross Cultural Perspectives in Art Education (3)  
A study of the diversity of theory and practice in art and art education as understood in and across cultures. Application of the California Visual and Performing Arts Framework for art education to the integration of content from art history, art production, theory and criticism, and aesthetic viewpoints reflecting a variety of racial, ethnic, linguistic, gender, sexual, cultural and cross-cultural perspectives. This course will also address issues of culturally appropriate practice for understanding art across cultures. Traditional grading only.

304. Art for Special Programs (2)  
Prerequisite: ART 100 or consent of instructor. Art and craft media techniques and processes in recreation and leisure studies. For programs which reach diverse age and interest levels (4 hrs. lab.) Course fee required.

305. Art Disciplines and New Technology (3)  
Development of skills in making and talking about art through interrelating art production with art criticism, cultural-historical connections, and philosophical aesthetics. Emphasis will be placed on the newer art forms and technology including video and computer which help provide additional approaches for the artist and art educator. Course fee required.

\*307. Historiography in Art (3)  
Prerequisite: ENGL 100. Consideration of standard research techniques and resources as well as composition and documentation of written reports specifically related to the study of art.

\*308. Art Theory (3)  
Consideration of historic and contemporary theories and aesthetic frames of reference whereby what has been, or is, identified as art is so identified.

**\*309. Art Criticism (3)**

An examination of a variety of critical approaches to modern art. Discussions will be based upon the writings of 19th and 20th century art theorists and professional art critics.

**318. Typographic Design (3)**

Prerequisite: ART 184, 223 or permission of instructor. More complex design experiences with type families, exploration of combinations of display and text; development of logotypes and design of new typographic forms. Computers may be utilized. (9 hrs. lab.)

**320. Practical and Theoretical Issues in the Visual Arts (3)**

Comparative examination, discussion and study of major theoretical and practical issues in the visual arts with special emphasis on issues that face the artist in contemporary society.

**321. Graphic Production (Non-Major) (3)**

Prerequisites: ART 223. Introduction to design and production techniques for major printing processes from concept to finished art. Similar to ART 323, but with more emphasis on exposure. Field trips, lectures, critiques. (9 hrs. lab.)

**\*322A-B. Visual Communication Design (3-3)**

Prerequisites: for 322A: ART 131, 184, 187, 223; for 322B: ART 322A. Introductory and intermediate experiences in conceptualization, design and finalization of projects appropriate to the visual communication profession. Computers may be utilized. (9 hrs. lab.)

**\*323. Visual Communication Design/Production (3)**

Prerequisites: ART 322A or consent of instructor; majors only. Computer-based introduction to design and production techniques for major printing processes from concept to digital finished art. Field trips, lectures, critiques. (6 hrs. lab.)

**\*325. Packaging Design (3)**

Prerequisite: Visual Communications major or consent of instructor. Materials, processes and the design of packaging. (9 hrs. lab.)

**326. Computer Graphics (3)**

Prerequisite: ART 322A and 331 or consent of instructor. Entry level introduction to the graphics-oriented computer, emphasizing its potential as a visual communication design tool. Includes "hands on" exploration of the major software applications as related to layout, typography and illustration. (6 hrs. lab.)

**327A. Surface Design (3)**

Prerequisites: ART 181, 130 or 182, 187. Variety of design concepts in relation to media and processes appropriate to both hand and commercial application of pattern to textiles and other surfaces. (6 hrs. lab.) Traditional grading only.

**\*327B. Surface Design (3)**

Prerequisites: ART 181, 130 or 182, 187. Variety of design concepts in relation to media and processes appropriate to both hand and commercial application of pattern to textiles and other surfaces. (6 hrs. lab.) Traditional grading only.

**\*328A. Beginning Fiber Structures (3)**

Prerequisites: ART 130 or 182, 131, 181, 187. In this Introductory course the student will explore concepts and materials using non loom textile techniques. Development from the 2-D relief surface to full 3-D form will take place. The basic fiber structures of stitching, wrapping, feltmaking, and twining will be introduced. (6 hrs. lab.)

**\*328B. Advanced Fiber Structures (3)**

Prerequisite: ART 328A. Designed to strengthen a working understanding of non-loom fiber structures. There will be an emphasis on the development of personal expression within the media to include: coiling, lashing, papermaking and other dimensional techniques. (6 hrs. lab.)

**329. Advertising Design (3)**

Prerequisites: ART 322A, 331, majors only. This course will explore small space advertising, television, and outdoor billboards from the conceptual stage through comprehensive layouts. (9 hrs. lab.) Traditional grading only.

**330I. Cross Cultural Visual Literacy (3)**

Prerequisites: ENGL 100 and upper division status. Cross-Cultural Visual Literacy is an exploration of how and what traditional art communicates about the culture from which it issues. Based on the premise that Art is an aesthetic counterpart of a culture's ethos,

a method of inquiry has been designed to integrate: a) exposure to the basic technical aspects of art-making, together with b) a discussion of core concepts in two different culture-clusters, the Euro-American, and the Pan-Asian. The significance of the concept of cultural relativity applied to the study of art cross-culturally will be emphasized.

**331. Visual Communications Design/Comping Skills (3)**

Prerequisites: ART 181, 130 or 182, and 187. Development of concepts and representational skills in all applications from thumbnail sketches to tight comprehensives. Emphasis on rendering of various materials, surfaces and typographic forms. Computers may be utilized. (9 hrs. lab.) Traditional grading only.

**335I. Art and Anthropology: Theory and Practice (3)**

Prerequisites: ENGL 100 and upper division status. An introduction to and critical examination of the conceptions, misconceptions, attitudes and judgments which have attended the artifacts of African, Oceanic, and American Indian manufacture since their "discovery" as art early in the 20th century will serve as a case study for understanding the complex theoretical and practical interrelationships among the disciplines of art, aesthetics, museology, and anthropology.

**\*340. Intermediate Photography (3)**

Prerequisite: ART 141. Course designed to further increase photographic knowledge in camera, darkroom and lighting. An emphasis is placed on reaching a higher level of print quality (2 hrs. lecture, 3 hrs. lab.) Traditional grading only.

**\*341A. Intermediate Ceramics: Handbuilding (3)**

Prerequisites: ART 131, 151A. Design problems with handbuilt ceramic forms with emphasis on surface. (9 hrs. lab.)

**\*341B. Intermediate Ceramics: Wheel Throwing (3)**

Prerequisites: ART 131, 151B. Design problems with wheel-thrown ceramic forms with emphasis on surface. (9 hrs. lab.)

**\*342A. Color Photography (3)**

Prerequisite: ART 340. Survey of current color materials and processes with emphasis on exposing, developing and printing. Contemporary approach to color photography will be stressed. (2 hrs. lecture, 2 hrs. lab.) Traditional grading only.

**342B. Advanced Color Photography (3) F,S**

Prerequisite: ART 342A. A continuing course in color photography to familiarize students with the options available for use in color photography. Units pertaining to hand manipulation, chormes, films, and other contemporary approaches. Traditional grading only.

**\*343A. Ceramics Sculpture (3)**

Prerequisites: ART 341A. Advanced studies in ceramic sculpture. (9 hrs. lab.)

**\*343B. Advanced Wheel Throwing (3)**

Prerequisites: ART 341B. Advanced studies in ceramic form employing the potters wheel. (9 hrs. lab.)

**\*344. Alternative Photographic Processes (3)**

Prerequisites: ART 340. A survey of non-traditional photographic processes, including silver, ferric and dichromate, and their historical development. Includes the formulation, application, exposure and processing of various photographic emulsions. Incorporates aesthetic concerns with process selection. (Lecture 2 hrs., lab 2 hrs.)

**349A-B. Microcomputer Art Studio (3-3)**

Prerequisite: ART 181, 187. Basic theory and (6 hrs. lab.) tool. Hands-on use of microcomputers employing graphics in "Paint Programs" with color hardcopy output and animation production on video tape. Emphasis on computer graphic applications in students' individual studio art disciplines. (6 hrs. lab.)

**350. Survey Fiber, Metal, Wood (3)**

Prerequisites: ART 115B, 115C, 131, 181. In this introductory course, the student will work with the 3-D materials of fiber, metal and wood. The student will gain knowledge of the histories of these and their artmaking potential. They will learn to use the tools and concepts unique to each area with the goal of a future focus in one area, or an option of integrating all three. (6 hrs. lab.)

- \*352A. Ceramics: Glaze Technology (3)**  
Prerequisite: ART 151A or 151B. Nature of raw materials as they relate to the development of clay bodies and ceramic glazes. (6 hrs. lab.)
- \*352B. Ceramics Plaster Shop (3)**  
Prerequisites: ART 151A or 151B. The use of plaster molds for making ceramic art including press molds, slip casting, and jiggering. (6 hrs. lab.)
- \*354A-B Wood (3-3)**  
Prerequisites: ART 131, 181, 187. Woodworking processes techniques and concepts in the design and making of utilitarian art objects. (6 hrs. lab.) Traditional grading only.
- 355A. Enameling (3)**  
Prerequisite: consent of instructor. Techniques, materials and concepts of enameling on metals. Introduction to tools and metalworking techniques associated with making enameled metal objects. Emphasis on the exploration of characteristics of enamels and metals, stressing individual advancement of interest and expression. May be repeated once for credit. (6 hrs. lab.)
- 355B. Enameling: Photo Processes (3)**  
Prerequisites: ART 141, 355A or consent of instructor. Introduction to concepts and skills utilizing photo processes in enameling such as photo silkscreen, thermoscreens and photo etching with other enameling techniques. (6 hrs. lab.) Course fee required.
- \*356. Jewelry Casting (3)**  
Prerequisite: 3-D Media major or consent of instructor. The design and creation of jewelry through lost-wax casting techniques and processes. May be repeated once for credit. (6 hrs. lab.) Course fee required.
- \*357A-B. Beginning Metals and Jewelry (3-3)**  
Prerequisites, ART 131, 181, 187. The design and creation of jewelry. (6 hrs. lab.) Course fee required. Traditional grading only.
- 358A. Metalsmithing (3)**  
Prerequisites: ART 357A. The design and creation of flatware and hollowware. (6 hrs. lab.)
- \*358B. Metalsmithing (3)**  
Prerequisites: ART 357A, DESN 252. The design and creation of flatware and hollowware. (6 hrs. lab.)
- 359A. Architectural Metalwork and Blacksmithing (3)**  
Prerequisite: ART 131. Techniques, materials and concepts of the metal craft for developing art forms in larger scale and in an architectural context. Hot forging and fabricating with ferrous metals. Basic techniques of cutting, forming, joining welding and surface design of metals. Making of tools. May be repeated for a maximum of 6 units. (6 hrs. lab.) Course fee required.
- 359B. Sculptural Metalwork (3)**  
Prerequisite: ART 131 or consent of instructor. Introduction to metalforming and construction techniques in the design and creation of sculptural form and composition in metal on an architectural scale. Traditional grading only. May be repeated for a maximum of 6 units. (6 hrs. lab.) Course fee required.
- \*361. Life Sculpture (3)**  
Prerequisite: ART 161. Intensive study of the figure through individual student concepts. Mold and casting techniques and direct plaster parging. (6 hrs. lab.) Course fee required.
- \*362A. Sculpture Foundry: Investment Casting (3)**  
Prerequisites: ART 131, 161, 181. The traditional lost wax techniques of casting non-ferrous metal. Wax formation and manipulation, gating theory and practice. Investment procedures, foundry management, metal casting, patination and tool making. (6 hrs. lab.)
- \*362B. Sculpture: Molding and Reproduction (3)**  
Prerequisites: ART 131, 161, 181. Construction and use of flexible and plaster molds. (6 hrs. lab.)
- \*363. Sculpture: Carving and Fabrication (3)**  
Prerequisites: ART 131, 161, 181 or consent of instructor. Composition in sculpture utilizing stone and woodcarving, metal and wood fabrication. (6 hrs. lab.)
- \*364. History of Ceramics (3)**  
Materials and techniques as they relate to the historical development of pottery styles and forms.
- \*365. History of Prints and Drawings (3)**  
Historical survey of prints and drawings, with emphasis on technical and stylistic developments and on the role played by these media in relation to other arts through the 20th century.
- 370. Printmaking (3)**  
Prerequisites: ART 115B, 115C, 181, 187. A studio course exploring a range of printmaking techniques and imagery, selected from the areas of etching, lithography, silkscreen, relief and monoprinting. (6 hrs. lab.)
- \*371A-B. Illustration (3-3)**  
Prerequisites: 371A: ART 115B, 115C, 131, 181, 184, 187; 371B: ART 271, 223, 371A. Editorial and advertising drawing; professional media, skills and techniques survey. (6 hrs. lab.) Traditional grading only.
- \*372. Anatomy for Artists (3)**  
Prerequisites: ART 181, 184. Skeletal and muscle structure emphasizing the development of skill in depicting the human figure. (4 hrs. lab.) Course fee required.
- \*373. Costumed Figure Drawing (3)**  
Prerequisites: ART 371A, 372. Drawing and painting from costumed models with props and controlled lighting. Emphasis is on the development of a sense of "staging." The manipulation of composition, light, shadow, value, color, proportion, and scale are explored to achieve mood, gesture, drama, and attitudes related to human reactions, situations and character. (6 hrs. lab.) Course fee required.
- \*374A-B. Biomedical Rendering (3-3)**  
Prerequisite: Biomedical Art major or consent of instructor. Introduction to and practice in techniques of descriptive drawing and press reproduction of drawing. Emphasis on skill. (6 hrs. lab.)
- \*376. Printmaking: Relief Printing (3)**  
Prerequisites: ART 115B, 115C, 181, 187. Instruction in relief printing techniques and image development, including woodcut, wood engraving, linocut, collagraphs and alternative print surfaces. In black and white and color. (6 hrs. lab.)
- \*377. Printmaking: Silkscreen (3)**  
Prerequisites: ART 115B, 115C, 181, 187. Instruction in fine art screen printing techniques and image development, including resist, paper, film, emulsion and alternative stencil methods. (6 hrs. lab.)
- \*378. Printmaking: Etching (3)**  
Prerequisites: ART 115B, 115C, 181, 187. Instruction in intaglio printing techniques and image development, including etching, engraving, dry-point, aquatint and alternative platemaking methods. In black and white and color. (6 hrs. lab.)
- \*379. Printmaking: Lithography (3)**  
Prerequisites: ART 115B, 115C, 181, 187. Instruction in stone lithography techniques and image development, including crayon drawing, flats, washes, transfers and alternative drawing methods. In black and white and color. (6 hrs. lab.)
- 381. Intermediate Drawing (3)**  
Prerequisites: ART 131, 130 or 182. Problems and concepts in drawing using a variety of media. (6 hrs. lab.) Traditional grading only.
- \*382A-B. Production for Fine Art (3-3)**  
Prerequisites: ART 371B or instructor permission. A: Exploration of printing and reproduction process related to the needs of the artist, illustrator and museum professional, and an introduction to the skills and vocabulary necessary for the preparations of art for print and electronic media. Emphasis is on direct interaction with the various commercial production professionals. B: Implementation of processes learned in 382A, but within the context of sequential esthetics, (i.e., students produce limited edition books). (6 hrs. lab.)
- 383. Life Painting (3)**  
Prerequisites: ART 181, 182, 184, 187. Painting from the human figure with emphasis on representing form in space, structure, color, value, and composition. (6 hrs. lab.) Course fee required.

**384. Intermediate Life Drawing (3)**

Prerequisites: ART 181, 130 or 182, and 184. Continued study in drawing from the human figure from direct observation. (6 hrs. lab.) Course fee required. Traditional grading only.

**\*385. Watercolor Painting (3)**

Prerequisites: ART 181, 130 or 182, and 187. Nature and use of the watercolor media. (6 hrs. lab.) Traditional grading only.

**\*387. Painting (3)**

Prerequisites: ART 181, 187. Problems and concepts in space, form, structure, color and content in studio painting. (6 hrs. lab.)

**\*388. Mural Painting (3)**

Prerequisite: Drawing and Painting major or consent of Instructor. Problems and concepts in the development, proposal and creation of individual and collaborative mural paintings. Students will paint murals in selected public places located on or off campus. May be repeated for a maximum of 6 units, limited to 3 units in one semester. (6 hrs. lab.)

**\*389. Materials and Craft of Drawing and Painting (3)**

Prerequisites: ART 181, 187. Theory and practice in the craft of drawing and painting. Limited to 3 units in one semester and a total of 6 units. (6 hrs. lab.) Course fee required.

**401./598A. American Art (3)**

A survey of American art from 1760 to 1945. Emphasis will be given to painting from Colonial portraiture to 20th century Abstract Expressionism.

**406A. Digital Imagery for the Arts (3)**

Prerequisites: ART 340, equivalent, or consent of instructor. An introduction to photographic digital imaging. Lectures and laboratory activities will involve current principles, use and procedures of microcomputers, scanners, and conversion of analog images into digital formats as it relates to photography, art and design. Emphasis will be placed on the expressive qualities of combining photographic principles with computer generated images. Software programs, still photography, video, flatbed scanning, inkjet, laser, and thermal output devices will be presented. (6 hrs lab.) Traditional grading only.

**406B. Advanced Digital Imagery for the Arts (3) F,S**

Prerequisite: ART 406A. Exploration of theory and practice of digital imaging and advanced techniques. Emphasis on multimedia and individual projects. Traditional grading only.

**\*407. Art Practicum (3)**

Prerequisite: Art Education major or consent of instructor. Development of attitudes and skills required for the production, evaluation, and appreciation of the visual arts. Consideration of the value of the art process and product to the individual in an ethnically diverse society. Methods of inquiry used by artists, art critics, art historians and aestheticians will be examined in relationship to learning about art. The Art Education Bound Portfolio is begun in the course and a preliminary portfolio review is held for assessment of student competency in art. (6 hrs lab.) Course fee required.

**408./598B Early Christian and Byzantine Art (3)**

Architecture, mosaics and sculpture of Rome, Ravenna and Constantinople from the decline of the Roman Empire to the end of the Byzantine era.

**409./598C. Romanesque Art (3)**

Arts of Northern Europe from Merovingian through the Romanesque periods.

**410./598D. Gothic Art (3)**

Stylistic analysis in the historical content of the architecture, sculpture and stained glass of the great cathedrals of Europe.

**411./511. History and Criticism of Photography (3)**

History of photography from its origins to contemporary developments in the twentieth century. Critical and philosophical approaches to the photographic medium.

**412. Aesthetic Theories and Art Education (3)**

Past and current philosophical writings of aestheticians, critics, artists, and art educators will be investigated with theoretical, practical, and cross-cultural implications for the arts educator. Traditional grading only.

**\*413. Photo Marketing/Portfolio (3)**

Prerequisites: ART 141, 340. Professional practices and procedures for the development of an engaging photographic portfolio. Emphasis placed on photo-illustration, art direction, creative problem solving, and the development of a unique visual/conceptual style.

**414./514. Documentary Photography (3)**

Prerequisites: ART 340. History, theory, practice, and production of still documentary photographic works with emphasis on the photograph as an instrument for social influence and change. (2 hrs. lec., 2 hrs. lab.)

**415. On-Site Studies in Art Education (3)**

Theory is both generated and put into practice during study and participation at approved sites including The Art Workshop for Youth and Art to the Schools Program. Considerations are given to the various art and educational components found in state and national documents involving multifaceted, cross-cultural, and interdisciplinary experiences with art.

**416./598E. Greek Art (3)**

This survey will trace Greek Art from its first beginnings in the Aegean period and survey its development on through the late Hellenistic period. The key monuments of architecture, sculpture, painting, vase-painting, and the so-called minor arts will be discussed against the background of contemporary theories, criticism, and history. Of particular concern are the techniques and materials of the various arts.

**417./598L. Roman Art (3)**

This survey will begin with an overview of the arts of Italy before the Romans including both the indigenous art of the Italic peoples as well as the better known art of the Etruscans. The survey of Roman Art itself will begin with the early Republic and end with the Age of Constantine. The major art forms of architecture, painting, sculpture and the so-called minor arts will be discussed. Contemporary criticism, theory, and history will be part of the sub-text of the course.

**\*420. Visual Communication Design Workshop (3)**

Prerequisite: Consent of instructor and portfolio review; majors only. On-campus design studio experience oriented toward development of printed portfolio-quality design work. Professional designer/art director environment with involvement in actual projects with clients, budgets and deadlines. Students are responsible for all project phases from design to production, print supervision and completion. Course may be repeated for a maximum of 9 units. (9 hrs. lab.)

**\*422A-B. Advanced Visual Communications Design (3-3)**

Prerequisites: ART 322B, 323. ART 422A involves advanced projects in computer-based design, typography, photographic modification and grid layout systems development. ART 422B emphasizes advanced advertising design, art direction and campaign development for the advertising agency environment. (9 hrs. lab.)

**423./598F. Early Renaissance Art in Italy (3)**

Painting, sculpture and architecture in Italy from the 13th through the 15th centuries, especially in Florence and Siena. The course examines stylistic and technical aspects of the works, along with the interaction of cultural, social and religious developments with the visual arts. Special attention paid to issues such as the importance of patrons, the rise of mendicant orders, and the revival of classicism.

**424./598G. High Renaissance Art in Italy (3)**

Painting, sculpture and architecture in Italy from the 16th century, especially in Florence, Venice, and Rome. Provides an historical, cultural, religious and theoretical framework within which the meaning and function of the works can be better understood. Works by a handful of major artists (Leonardo da Vinci, Michelangelo, Raphael, Titian, and the Mannerists) will receive special attention.

**425./598H. Northern Renaissance Painting (3)**

Covers artistic developments in Northern Europe, particularly Flanders, France and Germany, from the 14th century through 16th century. The course provides an historical, cultural, and religious framework within which the style, meaning and function of the works can be better understood. Special attention to issues such as iconography, and the changing role of the artist in society.



- 426./598J. Baroque and Rococo Trends in Art (3)  
Mainstreams of art in Italy, Holland and Germany in the 17th and 18th centuries. Emphasis on art of Bernini, Borromini, Carravaggio, Rembrandt, Vermeer, Piranesi, Guardi. Examination of representative examples of the art of the period in the Norton Simon and Getty Museums.
- 427./598K. Baroque Art: Court and Middle Class (3)  
Palace of Versailles and its influence on the court art of Germany and Austria in the 17th and 18th centuries. Paintings of Poussin, Rubens, Velasquez, Gainsborough and their followers. Influence of Caravaggio upon the bourgeois art of the period. Examination of representative examples of art of the period in the Norton Simon and Getty Museums.
- \*428A-B-C. Weaving (3-3-3)  
Prerequisites: ART 131, 181, 187. Weaves, techniques and materials of structural textile design with emphasis divided between commercial application and personal expression within the contemporary idiom. For ART 428B and 428C 3-D Media/Fibers major or consent of the instructor. (6 hrs. lab.)
- \*430. Fiber Art: Paper (3)  
Prerequisites: ART 131, 181, 328A. Basic materials and techniques of papermaking and molding, including emphasis on concept and form development. May be repeated for a maximum of 6 units. (6 hrs. lab.)
- \*435. Introduction to Museums (3)  
Designed for students interested in pursuing the Museum Studies Certificate: also open to art majors and students from other disciplines. Study of current museums, their functions, services, audience and ethics. Field trips to local museums are included.
- 436./598M. Neo-Classicism to Romanticism, 1789-1850 (3)  
Examination of Neo-Classicism, Realism, Romanticism, photography and the academic tradition in art and culture of Europe from 1789-1850.
- 437./598N. Impressionism to Post-Impressionism, 1850-1900 (3)  
Analysis of the development of Impressionism and Post-Impressionism in France from 1850-1900.
- 438./598P. Twentieth Century Art to 1945 (3)  
Examination of Abstraction, Non-Objective art, Expressionism, Dada and Surrealism.
- 439./598Q. Twentieth Century Art from 1945 (3)  
Examination of Pop Art, Happenings, Minimal Art, Art and Technology, Environmental, Concept, Performance and Video Art.
440. Art and Society (3)  
This course will consider the nature of art in Western culture from several disciplinary perspectives including art theory, social and political theory, history, philosophy and economics. It seeks to demonstrate that art is a construct based on human intellect and belief.
- \*442. Internship in Visual Communications (3)  
Prerequisite: Visual Communications major or consent of instructor. Student internship experience in selected studios, advertising agencies and in-house creative departments. Opportunity to work under supervision of professionals in the field for six hrs. per week. May be repeated for a maximum of 6 units, limited to 3 units in one semester. (9 hrs. lab.)
- \*444. Fine Print Photography (3)  
Prerequisites: ART 340. Presentation of advanced printing techniques and mastery of darkroom skills. Includes exposure/development, processing chemistry, film and paper types, toners and archival processing. Lab fee required. (Lec. 2 hrs., lab 2 hrs.)
- \*447. Photography Studio Specialties (3)  
Prerequisite: ART 340. A course designed to give exploration of camera and laboratory techniques as applied to studio work in photography. (2 hr. lecture, 2 hrs. lab.) Traditional grading only.
- \*449. Experimental Photography (3)  
Experimental solutions to conceptual problems. Emphasis placed on the exploration of new ideas and procedures for the development of art work and meaning significant to each individual student (laboratory included).
- \*451A-B. Advanced Ceramics (3-3)  
Prerequisite: A: ART 343A or 343B. Individual problems in ceramics. (9 hrs. lab.) B: Prerequisites: ART 451A. Individual problems in ceramics. (9 hrs. lab.)
- \*452. Ceramic Shop Planning and Kiln Design (3)  
Prerequisites: ART 341A or 341B. Ceramic equipment including kilns, their design and construction. (9 hrs. lab.)
453. Seminar in Ceramic Arts (3)  
Prerequisite: Senior Ceramics major or consent of instructor. Critical analysis of work of historical and contemporary ceramic artists; the changing role of ceramic art as it becomes part of the contemporary art mainstream. May be repeated for credit with study of different artists each semester up to a maximum of 6 units.
- \*454A-B. Handcrafted Furniture (3-3)  
Prerequisites: ART 354A and B. Concepts and skills necessary for the production of handcrafted furniture. Emphasis on the use of hand techniques as a means of understanding the philosophy and aesthetics of handcrafted furniture. (6 hrs. lab.)
- 455./598R. Traditional Art of Africa: A Thematic Approach (3)  
Prerequisite: ART 335I or consent of instructor. Exploration from a Western perspective of the conceptual, expressive and aesthetic aspects of traditional African art as related to its cultural context and to Western concepts of art. Focus on West Africa.
- 456./598S. American Indian Art: Western Perspectives (3)  
Prerequisite: ART 335I or consent of instructor. Exploration from a Western perspective of the historically various and changing frames of reference surrounding perception, interpretation and consideration of Native American art through focus on selected traditions.
- 457./598T. Pre-Columbian Mexican Art (3)  
A survey from the Olmec to the Aztec of the art and architecture of Mexico and adjacent areas prior to the Spanish conquest.
- 458A,B. Advanced Metalsmithing/ Jewelry and Enameling (3)  
Prerequisites: ART 350, 355B, 357B, 358B or consent of instructor. Individual problems in metalsmithing, jewelry, enameling and architectural metalwork and blacksmithing. (6 hrs. lab.)
- \*459. Sculpture Foundry: Shell Casting (3)  
Prerequisite: Sculpture major or consent of instructor. Lost-wax casting of expressive and/or functional art forms in bronze using ceramic shell molds. May be repeated for a maximum of 6 units. (6 hrs. lab.)
- \*461. Advanced Life Sculpture (3)  
Prerequisites: ART 361, 362A and B. Large-scale sculpture from the model emphasizing expressive content. Work in clay and plaster, armature and stand construction, oil-clay formulation and advanced moldmaking techniques. (6 hrs. lab.) Course fee required.
- \*463. Advanced Sculpture (3)  
Prerequisites: ART 361, 362A,B, 363 or consent of instructor. Advanced composition in sculpture. (6 hrs. lab.)
- 465./598U. Ancient Art of the Near East (3)  
Prehistoric, Near Eastern, Egyptian and Aegean art.
- 466./598V. Buddhist Art of India and S.E. Asia (3)  
The formation and development of Buddhist art in India and its subsequent metamorphoses in Cambodia, Thailand and Indonesia will be examined.
- 467./598W. Hindu and Islamic Art of India (3)  
The formation and development of Hindu Art in India and the genesis as well as transformation of Islamic art of India compared to pan-Islamic characteristics will be examined.
- 468./598X. Early Chinese Art (3)  
The formation and development of Chinese art from the third millennium to the 10th century A.D.
- 469./598Y. Later Chinese Art (3)  
Development of Chinese Art from the 11th century A.D. through the culmination of the tradition and its transformation in the 20th century will be explored.
- 470./598Z. Japanese Art (3)  
The characteristics of Japanese art from 10,000 B.C. to the present will be examined and the development and transformation of native styles studied in relation to influences from Buddhist, Chinese, Korean and Western Art, respectively.

**\*471A-B. Advanced Illustration (3-3)**

Prerequisite: ART 371B. Illustration in part from live models. (6 hrs. lab.) Course fee required.

**\*475. Printmaking: Photo Processes (3)**

Prerequisites: ART 141, 370. Instruction in the photo printmaking processes for lithography, etching and silkscreen using copy camera and experimental techniques to explore photographic and non-photographic imagery. (6 hrs. lab.)

**480./580. Printmaking: Monotype (3)**

Prerequisites: ART 115B, 115C, 181, 187. Instruction in all the aspects of the monotype and monoprint form of printmaking as an expansive medium capable of diverse applications and linkages with other procedures and disciplines. Emphasis will be on the extension and refinement of individual expression. In black and white and color. Traditional grading only. (6 hrs. lab.)

**\*481. Advanced Drawing (3)**

Prerequisite: ART 381. Advanced problems and concepts in drawing designed to explore modes of representation and issues pertaining to contemporary drawing.

**\*483. Advanced Life Painting (3)**

Prerequisite: ART 383. Continued study in painting from the human figure with emphasis on pictorial structure, color and individual expression.

**\*484. Advanced Life Drawing (3)**

Prerequisite: ART 384. Continued study in drawing the human figure from observation with emphasis on structure, form and composition, as well as individual expression. Course fee required.

**\*487. Advanced Painting (3)**

Prerequisite: ART 387. Continued study in studio painting, exploring advanced modes of pictorial structure with emphasis on individual expression.

**488./688. CSU Summer Art (1-6)**

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

**\*489. Special Topics in Visual Art (1-3)**

Prerequisite: Consent of instructor. Topics of current interest in the visual arts will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes.

**\*490. Special Topics in Studio Art (1-3)**

Prerequisites: Drawing and Painting major or consent of instructor. Special topics of current interest in studio art will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes (2-9 hrs. lab.) Course fee required.

**A. Visiting Artists**

**B. Painting**

**491A. Ceramics: Senior Project (1)**

Prerequisite: ART 451A or 451B or consent of instructor. Planning, preparation, completion, and photographic slide documentation of a creative exhibition and written thesis as approved by faculty. Should be taken in last semester before graduation. Required of all BFA ceramics majors. Credit/No Credit grading only. Course may be repeated for a maximum of 2 units.

**491B. 3-D Media Fiber/Metal/Wood and Integrated Media: Senior Project (1)**

Prerequisite: 3-D Media major or consent of instructor. Organizing, completing, and photographing (35mm slides) a creative exhibition of their work. The exhibition will culminate with a written thesis with faculty approval. This class should be taken in the last semester before graduation. Required of all 3-D Fiber, Wood, Metal and Integrated Media majors. May be repeated for a maximum of 2 units.

**491C. Photography – Senior Project (1) F,S**

Planning, preparation, completion, and photographic slide documentation of a creative exhibition and written thesis as approved by faculty. This class should be taken in the last semester before graduation. Required of all Photography majors. Credit/No Credit grading only. Course may be repeated for a maximum of 2 units.

**491D. Graphic Design – Senior Project (1) F,S**

Planning, preparing, completing the senior Graphic Design exhibition as approved by faculty. Required of all Graphic Design majors. Credit/No Credit grading only.

**\*492F. Concentrated Studies in Life Drawing (3)**

Prerequisite: Drawing and Painting major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in life drawing. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.) Course fee required.

**\*492G. Concentrated Studies in Abstract Painting (3)**

Prerequisite: Drawing and Painting major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in abstract and nonobjective painting and drawing. Limited to 3 units in one semester. May be repeated for a maximum of 9 units. (6 hrs. lab.)

**\*492Z. Concentrated Studies in Life Painting (3)**

Prerequisite: Drawing and Painting major or consent of instructor. Opportunity for concentrated study in figure painting with an emphasis on individual expressive direction. Limited to 3 units in one semester. May be repeated for a maximum of 9 units. (6 hrs. lab.)

**\*493. Special Topics in Studio Art (1-3)**

Prerequisites: Drawing and Painting major or consent of instructor. Special topics of current interest in studio art will be selected for intensive study. Topics will be announced in the Schedule of Classes (2-9 hrs. lab.) Course fee required.

**\*495. Field Studies in Art (1-6)**

Independent work with an instructor of student's choice, usually outside area of specialization. Department Chair or Undergraduate Advisor/Graduate Advisor approval, restricted to undergraduate and graduate art majors. Traditional grading only. Course may be repeated to a maximum of 6 units.

**496. Special Studies in Art History (3)**

Prerequisite: ART 307 or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in art history. May be repeated for a maximum of 6 units.

**497. Special Studies in Art History (3)**

Prerequisite: ART 307 or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in art history. May be repeated for a maximum of 6 units.

**\*499A. Special Studies in Ceramics (3)**

Prerequisite: Ceramics major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in ceramics. Limited to 6 units in one semester and a total of 9 units. (9 hrs. lab.)

**\*499B. Special Studies in Wood (3)**

Prerequisite: ART 350, 354B or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems using wood as the media. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499D. Special Studies in Drawing (3)**

Prerequisite: Drawing and Painting major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in drawing. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499F. Special Studies in Illustration (3)**

Prerequisite: Illustration major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in illustration or biomedical art. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499J. Special Studies in Metalsmithing and Jewelry (3)**

Prerequisite: ART 458A or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in metalsmithing and jewelry. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499K. Special Studies in Painting (3)**

Prerequisite: Drawing and Painting major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in painting. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499M. Special Studies in Sculpture (3)**

Prerequisite: Sculpture major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in sculpture. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499N. Special Studies in Fiber (3)**

Prerequisite: 3-D Media major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in textile design. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499P. Special Studies in Art Education (3)**

Prerequisite: Art Education major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in art education. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499Q. Special Studies in Museum Studies (3)**

Prerequisites: ART 435, 445A or consent of instructor. Opportunity for extensive individual work with faculty supervision on problems in museum studies, including utilizing the resources of The Center for Southern California Studies in the Visual Arts. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499R. Special Studies in Printmaking (3)**

Prerequisite: Printmaking major or consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in printmaking. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499S. Special Studies in Visual Communications Design (3)**

Prerequisite: Visual Communications major or consent of instructor. Opportunity for extensive contract work with faculty supervision on problems in visual communications design. Limited to 6 units in one semester and a total of 9 units. (9 hrs. lab.)

**499T. Special Studies Intermedia (3)**

Prerequisite: Drawing and Painting major or consent of instructor. Opportunity for extensive work with faculty supervision on individual and group projects. Projects may be interdisciplinary and include performance, process and concept art, and the application of materials and technology to new forms of art. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

**\*499V. Special Studies in Art Photography (3)**

Prerequisite: Photography major or consent of instructor. Opportunity for extensive work, with faculty supervision, on individual problems in photography as an art form. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.)

## Graduate Division

**509A-B. Research in Art Education (2-2)**

Prerequisite: Art Education major or consent of instructor. Advanced individual graduate problems in art education with projects related to specific learning situations. Traditional grading only.

**511./411. History and Criticism of Photography (3)**

History of photography from its origins to contemporary developments in the twentieth century. Critical and philosophical approaches to the photographic medium. Traditional grading only.

**512./412. Aesthetic Theories and Art Education (3)**

Past and current philosophical writings of aestheticians, critics, artists, and art educators will be investigated with theoretical, practical, and cross-cultural implications for the arts educator. Traditional grading only.

**514./414. Documentary Photography (3)**

Prerequisites: ART 340. History, theory, practice, and production of still documentary photographic works with emphasis on the photograph as an instrument for social influence and change. (2 hrs. lec., 2 hrs. lab.) Traditional grading only.

**542. Internship in Museum Studies (3)**

Prerequisites: ART 435 or consent of instructor. Student internship experience in selected museums, college and community art centers appropriate to the student's particular academic interest. Opportunity to work under supervision of museum professionals in the field to expand student understanding of the complexities, discipline and challenges in the profession. Limited to 6 units in one semester and a total of 9 units. (6 hrs. lab.) Traditional grading only.

**545A-B. Museum-Gallery Practices (3-3)**

Prerequisites: ART 435 or consent of instructor. Pre-professional training in museum-gallery techniques: administration, exhibition, budget planning, curatorial problems, public relations, insurance, packing and shipping. The University Gallery will be the lab for practical experience; students will assist in conceiving and realizing exhibitions. Traditional grading only.

**551A. Advanced Ceramics – Graduate (3)**

Prerequisite: ART 451B. Opportunity for beginning graduate students to do research employing various ceramics materials, processes and visual solutions in preparation for a more narrow and concentrated study. (6 hrs. lab.) Traditional grading only.

**551B. Advanced Ceramics – Graduate (3)**

Prerequisite: ART 551A. Selection of a specific area of concentration in ceramics, limiting the materials and processes to develop a project which will reflect a predetermined statement. (6 hrs. lab.) Traditional grading only.

**554A-B. Handcrafted Furniture (3-3)**

Prerequisite: ART 454B or consent of instructor. Advanced concepts and skills necessary for the production of handcrafted furniture. Emphasis on the use of hand techniques as a means of understanding the philosophy and aesthetics of handcrafted furniture. (6 hrs. lab.) Traditional grading only.

**558A. Metalsmithing, Jewelry and Enameling (3)**

Prerequisite: 3-D Media major or consent of instructor. Individual graduate level studio projects involving investigation of materials, processes and visual solutions in preparation for more concentrated study in metalsmithing, jewelry, enameling, or architectural metalwork and blacksmithing. May be repeated for a maximum of 6 units. (6 hrs. lab.) Traditional grading only.

**558B. Metalsmithing, Jewelry and Enameling (3)**

Prerequisite: 3-D Media major or consent of instructor. Selection of a specific area of concentration in metalsmithing and jewelry, enameling, or architectural metalwork and blacksmithing; focus on creative objectives based on a projected theme. Course may be repeated for a maximum of 6 units. (6 hrs. lab.) Traditional grading only.

**559. Sculpture Foundry – Advanced Shell Casting (3)**

Prerequisite: ART 459. Lost-wax casting of art forms in various metals using advanced techniques of ceramic shell moldmaking. May be repeated for a maximum of 9 units. (6 hrs. lab.) Traditional grading only.

**564A-B. Advanced Wood Studio (3-3)**

Prerequisite: ART 354B and consent of instructor. Advanced craft processes, techniques, and concepts used to make utilitarian objects. In conjunction with object making, research will be required in various aspects of the crafts field. (6 hrs. lab.) Traditional grading only.

**575. Printmaking: Advanced Photo Processes (3)**

Prerequisite: Graduate Print student or consent of instructor. Graduate level work in one or more of the photo printmaking processes, with emphasis on photographic or non-photographic imagery. May be repeated for a maximum of 6 units in different topics. (6 hrs. lab.) Traditional grading only.

**580./480. Printmaking: Monotype/Monoprint (3)**

Prerequisites: ART 115B, 115C, 181, 187. Instruction in all the aspects of the monotype and monoprint form of printmaking as an expansive medium capable of diverse applications and linkages with other procedures and disciplines. Emphasis will be on the extension and refinement of individual expression. In black and white and color. Traditional grading only. (6 hrs. lab.)

583. Advanced Life Graduate Painting (3)

An intensive studio course in painting from the model for graduate students. Traditional grading only.

589. Special Problems in Visual Art (3)

Prerequisite: Graduate Art Student or consent of instructor. Topics of current interest in the visual arts will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes. Traditional grading only.

590. Special Problems in Studio Art (1-3)

Prerequisites: Consent of instructor. Special topics of current interest in studio art will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes (2-9 hrs. lab.) Course fee required. Traditional grading only.

A. Visiting Artists

592Z. Graduate Concentrated Studies in Life Painting (3)

Opportunity for extensive work with faculty supervision on individual problems in painting the human figure. A more open relationship in attitudes and processes of working from the figure in class and total self-direction on work done outside class. Traditional grading only.

598A./401. American Art (3)

A survey of American art from 1760 to 1945. Emphasis will be given to painting from Colonial portraiture to 20th century Abstract Expressionism. Traditional grading only.

598B./408. Early Christian and Byzantine Art (3)

Architecture, mosaics and sculpture of Rome, Ravenna and Constantinople from the decline of the Roman Empire to the end of the Byzantine era. Traditional grading only.

598C./409. Romanesque Art (3)

Arts of Northern Europe from Merovingian through the Romanesque periods. Traditional grading only.

598D./410. Gothic Art (3)

Stylistic analyses in the historical content of the architecture, sculpture and stained glass of the great cathedrals of Europe. Traditional grading only.

598E./416. Greek Art (3)

This survey will trace Greek Art from its first beginnings in the Aegean period and survey its development on through the late Hellenistic period. The key monuments of architecture, sculpture, painting, vase-painting, and the so-called minor arts will be discussed against the background of contemporary theories, criticism, and history. Of particular concern are the techniques and materials of the various arts. Traditional grading only.

598F./423. Early Renaissance Art in Italy (3)

Painting, sculpture and architecture in Italy from the 13th through the 15th centuries, especially in Florence and Siena. The course examines stylistic and technical aspects of the works, along with the interaction of cultural, social and religious developments with the visual arts. Special attention paid to issues such as the importance of patrons, the rise of mendicant orders, and the revival of classicism.

598G./424. High Renaissance Art in Italy (3)

Painting, sculpture and architecture in Italy from the 16th century, especially in Florence, Venice, and Rome. Provides an historical, cultural, religious and theoretical framework within which the meaning and function of the works can be better understood. Works by a handful of major artists (Leonardo da Vinci, Michelangelo, Raphael, Titian, and the Mannerists) will receive special attention.

598H./425. Northern Renaissance Painting (3)

Covers artistic developments in Northern Europe, particularly Flanders, France and Germany, from the 14th century through 16th century. The course provides an historical, cultural, and religious framework within which the style, meaning and function of the works can be better understood. Special attention to issues such as iconography, and the changing role of the artist in society.

598J./426. Baroque and Rococo Trends in Art (3)

Mainstreams of art in Italy, Holland and Germany in the 17th and 18th centuries. Emphasis on art of Bernini, Borromini, Carravaggio, Rembrandt, Vermeer, Piranesi, Guardi. Examination of representative examples of the art of the period in the Norton Simon and Getty museums. Traditional grading only.

598K./427. Baroque Art: Court and Middle Class (3)

Palace of Versailles and its influence on the court art of Germany and Austria in the 17th and 18th centuries. Paintings of Poussin, Rubens, Velasquez, Gainsborough and their followers. Influence of Carravaggio upon the bourgeois art of the period. Examination of representative examples of art of the period in the Norton Simon and Getty Museums. Traditional grading only.

598L./417. Roman Art (3)

This survey will begin with an overview of the arts of Italy before the Romans including both the indigenous art of the Italic peoples as well as the better known art of the Etruscans. The survey of Roman Art itself will begin with the early Republic and end with the Age of Constantine. The major art forms of architecture, painting, sculpture and the so-called minor arts will be discussed. Contemporary criticism, theory, and history will be part of the sub-text of the course.

598M./436. Neo-Classicism to Romanticism, 1789-1850 (3)

Examination of Neo-Classicism, Realism, Romanticism, photography and the academic tradition in art and culture of Europe from 1789-1850. Traditional grading only.

598N./437. Impressionism to Post-Impressionism, 1850-1900 (3)

Analysis of the development of Impressionism and Post-Impressionism in France from 1850-1900. Traditional grading only.

598P./438. Twentieth Century Art to 1945 (3)

Examination of Abstraction, Non-Objective art, Expressionism, Dada and Surrealism. Traditional grading only.

598Q./439. Twentieth Century Art from 1945 (3)

Examination of Pop Art, Happenings, Minimal Art, Art and Technology. Environmental, Concept, Performance and Video Art. Traditional grading only.

598R./455. Traditional Art of Africa: A Thematic Approach (3)

Prerequisite: ART 335I or consent of instructor. Exploration from a Western perspective of the conceptual, expressive and aesthetic aspects of traditional African art as related to its cultural context and to Western concepts of art. Focus on West Africa. Traditional grading only.

598S./456. American Indian Art: Western Perspectives (3)

Prerequisite: ART 335I or consent of instructor. Exploration from a Western perspective of the historically various and changing frames of reference surrounding perception, interpretation and consideration of Native American art through focus on selected traditions. Traditional grading only.

598T./457. Pre-Columbian Mexican Art (3)

A survey from the Olmec to the Aztec of the art and architecture of Mexico and adjacent areas prior to the Spanish conquest. Traditional grading only.

598U./465. Ancient Art of the Near East (3)

Prehistoric, Near Eastern, Egyptian and Aegean art. Traditional grading only.

598V./466. Buddhist Art of India and S.E. Asia (3)

The formation and development of Buddhist art in India and its subsequent metamorphoses in Cambodia, Thailand and Indonesia will be examined. Traditional grading only.

598W./467. Hindu and Islamic Art of India (3)

The formation and development of Hindu art in India and the genesis as well as transformation of Islamic art of India compared to pan-Islamic characteristics will be examined. Traditional grading only.

598X./468. Early Chinese Art (3)

The formation and development of Chinese art from the third millennium to the 10th century A.D. Traditional grading only.

598Y./469. Later Chinese Art (3)

Development of Chinese art from the 11th century A.D. through the culmination of the tradition and its transformation in the 20th century will be explored. Traditional grading only.

598Z./470. Japanese Art (3)

The characteristics of Japanese art from 10,000 B.C. to the present will be examined and the development and transformation of native styles studied in relation to influences from Buddhist, Chinese, Korean and Western art, respectively. Traditional grading only.

599. Studio Problems in Art (3)

Prerequisite: Consent of Art Department. Advanced individual graduate projects, with faculty supervision, in an area of art specialization. Limited to 6 units one semester and a total of 12 units in any one area. Areas will be designated by letter at the time of registration: (a) ceramics, (b) wood, (d) drawing, (f) illustration, (j) metal, (k) painting, (l) life drawing, (m) sculpture, (n) fiber, (q) museum studies, (r) printmaking, (s) visual communications, and (t) intermedia, (v) photography. Intermedia units will apply to the drawing and painting specialization. (6 hrs. lab.) Traditional grading only.

601A-B. Seminar in Art Education (3-3)

Prerequisite: Graduate student in Art Education or consent of instructor. Special studies, research and evaluation of the role of the art teacher. 601A is required for the M.A. in Art Education; 601B may be required by the student's M.A. committee.

611. Seminar in Art History (3)

Prerequisite: Graduate student in Art History or consent of instructor. Directed individual research and group discussion concerning a topic in art history. Limited to 6 units in one semester; may be repeated for a maximum of 9 units.

651. Seminar in Ceramic Art (3)

Prerequisite: Graduate student in Ceramics or consent of instructor. Critical analysis of work of historical and contemporary ceramic artists; the changing role of ceramic art as it becomes part of the contemporary art mainstream. May be repeated for credit with study of different artists each semester up to a maximum of 12 units.

688./488. CSU Summer Arts (1-6)

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

690A. Graduate Seminar in Studio Art (Critical Studies) (3)

Prerequisite: Graduate M.F.A. student or consent of instructor. Selected reading and writing concerning topics relevant to student's specific disciplines in the visual arts with an opportunity for interdisciplinary discussion.

690B. Graduate Seminar in Studio Art (Professional Practices) (3)

Prerequisite: Graduate M.F.A. student or consent of instructor. Professional preparation for studio artists stressing practical concerns as well as current trends in art practices, theory and criticism.

692. Public Exhibition (3)

Prerequisite: Open only to M.A. and M.F.A. candidates with project statement approval and consent of students graduate committee. Open only to those who have been assigned an exhibition date the previous semester. Planning, preparation and administration of a public exhibition of 698 or 699 creative work. Two-unit designation for all M.A. candidates. Three-unit designation for all M.F.A. candidates. The course work will result in a public exhibition by each M.A. and M.F.A. candidate. (9 hrs. or more lab.)

694. Directed Studies Studio (1-3)

Independent studies in creative studio. Department Chair or Graduate Advisor approval, restricted to graduate art majors. Traditional grading only. Course may be repeated to a maximum of 3 units.

695. Field Problems in Art (1-6)

Opportunity to study artistic monuments, objects, theories, techniques or literature at appropriate off campus locations. Department Chair or Graduate Advisor approval, restricted to graduate art majors. Traditional grading only. Course may be repeated to a maximum of 6 units.

697. Directed Studies (1-3)

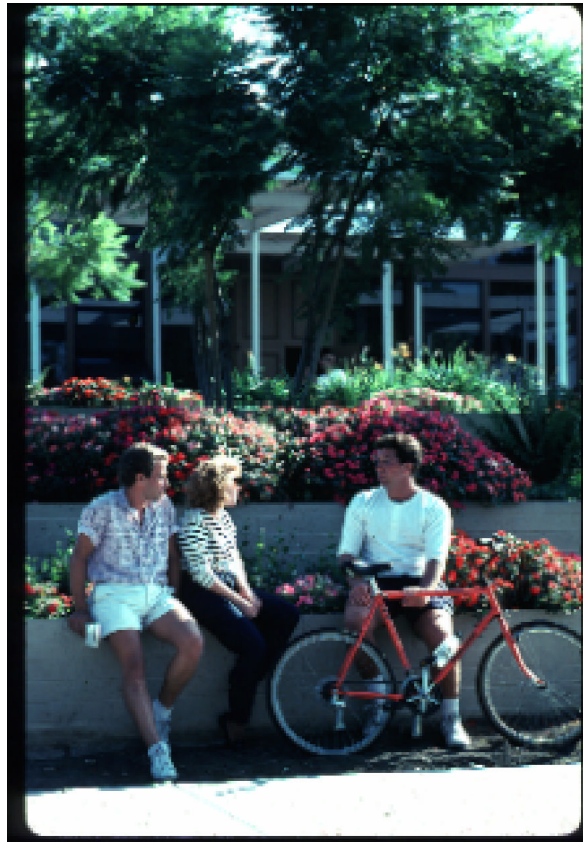
Independent studies in technical and/or historical aspects of art. Department Chair or Graduate Advisor approval, restricted to graduate art majors. Traditional grading only. Course may be repeated to a maximum of 3 units.

698. Thesis or Project (1-6)

Prerequisite: Thesis or project-thesis statement approval by and consent of students graduate committee. Planning, preparation and completion of a thesis or a project and studio-thesis. Open only to students who have been advanced to M.A. candidacy. Studio majors are required to exhibit project work and write a studio-thesis. Required of all candidates for the M.A. in art.

699. Thesis or Project (1-6)

Prerequisite: Approval of students project-thesis statement and consent of students graduate committee. Planning, preparation and completion of a creative exhibition and a studio-thesis. Open only to students who have been advanced to M.F.A. candidacy or second M.A. candidacy in art. Required of all M.F.A. candidates and all candidates seeking a second M.A. in art. (9 hrs. lab.)



# COLLEGE OF THE ARTS

Dean

Wade Hobgood

Associate Dean

Richard Birkemeier

Administrative Services Manager

Patti Meylor

Director of Special Projects

Rosalinda O'Brien

Director of Public Relations

Diana Walti

Office Manager

Kimberly Daro

Director University Art Museum

Constance Glenn

Associate Director University Art Museum

Ilee Kaplan

Executive Director of the Carpenter Performing Arts Center

Peter Lesnik

Directors of Development

Ann Allen

Diana Morrison

Director of the California Institute for the Preservation of Jazz

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Director of the Long Beach Opera

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The College of the Arts at California State University, Long Beach is one of the largest and most respected state supported arts schools in the country. With over 2,500 students studying in six departments, the College of the Arts (COTA) offers nationally recognized, fully accredited degree programs in Art, Dance, Design, Film and Electronic Arts, Music, and Theatre Arts. The COTA is located in close proximity to the Los Angeles/Hollywood area and has many ties to the arts and entertainment industries. The curriculum focuses on professional development in the applied or performance fields of study, and the goal of most students is professional employment as artists, designers or performers in their chosen disciplines.

The learning opportunities within the College of the Arts reflect its commitment to the arts in all its forms. For performers, artists and scholars, the COTA provides an environment designed for individual achievement. It offers programs to meet the needs of students who wish to:

- pursue professional careers in art, dance, design, music, electronic media, film, or theatre arts
- teach one or more of the arts
- explore creative uses of technology in the arts
- follow a degree program that provides a broad education with a focus in the arts
- Learn about the history and nature of the arts in Western and non Western culture.
- develop appreciation of art forms and their lasting value to the quality of life

The College of the Arts offers a comprehensive variety of professional degree programs, meeting the highest standards of excellence, including the Bachelor of Fine Arts Degree in Art, Dance, and Design; the Bachelor of Science Degree in Industrial Design; the Bachelor of Music Degree; the Master of Fine Arts Degree in Art, Dance, Design, and Theatre Arts; and the Master of Music Degree.

Students wishing to earn a degree or certification in arts education may choose from the Bachelor of Arts Degree in Art Education or the Bachelor of Music Degree in Instrumental or Choral/Vocal Music. Single Subject certification for the State of California is offered jointly between the COTA and the College of Education. Finally, the College offers Masters of Arts Degrees in Art Education, Dance Education and Music Education.

For those students who wish to obtain a liberal education with the arts as a focus, the departments of Art, Dance, Music, Film and Electronic Arts, and Theatre Arts offer appropriate Bachelor of Arts degree options. The Departments of Art, Design, Music and Theatre Arts also offer the Master of Arts Degree. Other special programs include certificates in Arts Management, Biomedical Illustration, and Museum Studies.

Each department in the College is an accredited institutional member of the major accrediting agency for that discipline: The National Association of Schools of Art and Design, The National Association of Schools of Dance, The National Asso-

ciation of Schools of Music and the National Association of Schools of Theatre. The faculty of the College of the Arts are themselves accomplished artists, performers and scholars, who bring their expertise and professional experience in the competitive Southern California arts market to their teaching assignments.

The COTA is also home to the University Art Museum, a nationally accredited art museum which presents exhibitions of professional stature focusing primarily on contemporary artists; the nationally renowned Long Beach Opera; The Henry Mancini Institute; the California Repertoire Theatre; and the California Institute for the Preservation of Jazz.

Major performance and exhibition facilities include the University Art Museum, the Art Department Galleries, the University Theatre, The Studio Theatre, the Cal Rep Theatre, the Gerald R. Daniel Recital Hall, the Martha Knoebel Dance Theatre, and the Richard and Karen Carpenter Performing Arts Center. The extensive performance calendar generated from this wide-ranging curriculum includes over 300 student and faculty concerts, film showcases, theatre productions, dance performances and art and design exhibitions. The COTA is a highly visible part of the campus community, as well as an important cultural and economic resource in the Long Beach/Los Angeles and Orange County areas.

## Graduate Certificate in Arts Management (code 1-5000)

The graduate Certificate Program in Arts Management is designed to train students to hold administrative positions in visual and performing arts organizations as well as with presenters, booking managements, arts support groups, and arts umbrella organizations.

### Admissions Criteria

1. Compliance with all University admissions requirements for graduate standing.
2. Baccalaureate degree or Graduate degree from an accredited institution in Art, Dance, Design, Music, or Theatre Arts with a minimum of 24 semester units of upper-division coursework comparable to those required of an Art, Dance, Design, Music, or Theatre Arts major at this University. Under some circumstances, students with other baccalaureate degrees and a background in the arts may be considered for admission.
3. An undergraduate GPA of 3.0 in the major and/or 2.5 in the most recently completed 60 semester units.
4. Proof of completion of at least one course in Journalism, JOUR 270.
5. Three letters of recommendation.
6. Interview with a faculty committee.
7. Successful completion of COTA 510. Students will be tentatively admitted to the program prior to enrolling in COTA 510. Final acceptance will be granted upon successful completion of this course.
8. Preference will be given to students who have completed at least one course in three different arts fields (a total of three courses) other than the discipline in which the undergraduate degree was earned. The following courses are recommended: ART 345; DANC 441; MUS 390; THEA 324.

Students interested in the Certificate program may contact Associate Dean Richard Birkemeier, College of the Arts, (562) 985-7885

### Requirements for the Certificate

1. Twenty-seven units are required, as follows: ACCT 500, PPA 540, COTA 510, 520, 545, 580, 585, 610, and 630.
2. The following elective courses are optional: ECON 500, HRM 500, MGMT 500, PPA 565, PPA 590, REC 593, and COTA 599.

The Certificate will be awarded upon completion of all required courses with a GPA of at least 3.0 and successful completion of the CSULB Writing Proficiency Examination. The program must be completed within five calendar years from the completion of the initial coursework.

### Courses (COTA)

#### 404. Arts and Values (3)

Prerequisite: Limited to students in the Liberal Studies Major, Track 1, who have completed all Area V Core requirements with a C or better grade, or consent of Program Director. In a question-based format requiring integration of previous experience in the arts and humanities, students will explore the relationship between arts criticism and various broader values (historical, social, aesthetic, ethical). Typical questions to be addressed are: What establishes the parameters of arts criticism? How does a critic distinguish art from non-art, good art from bad? Who should criticize? What is the relationship between criticism and censorship? What shapes people's values in the arts? Competency in the arts will be assessed as the impact of religion, Enlightenment philosophy, modernism and multiculturalism on the arts and values and their relation to arts education are explored. Traditional grading only.

#### 450. Arts of the 20th Century (3)

Course involves all six departments of the College of the Arts and is designed to familiarize COTA students with art forms outside their major. Students will examine the role and function of the arts in society in terms of both philosophy and ideology. Traditional grading only.

#### 488./688. CSU Summer Arts (1-6)

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

#### 510. Arts Management: Scope and Sources I (3)

Introduction to the scope of the arts management field and to sources of information, including but not limited to Dance, Music, Theatre Arts, Visual Arts, Umbrella Organizations, Arts Service Organizations and Presenters. Traditional grading only.

#### 520. Arts Management: Scope and Sources II (2)

Prerequisite: COTA 510. Resources for the arts manager: computer applications, sources for fundraising, approaches to boardmanship and nonpartisan political diplomacy and advocacy. Traditional grading only.

#### 545. Arts Marketing/Development (3)

Prerequisite: COTA 520. Identification of target populations and strategies for marketing the arts. Long-range and short-term goal setting and approaches to development in arts organizations. Traditional grading only.

#### 580. Arts Management Internship (2)

Prerequisite: COTA 510. Corequisite: COTA 520. On-campus work experience under faculty supervision in one of the programs in the College of the Arts to be individually selected for each student. May be repeated once for credit with permission of instructor. Traditional grading only.



585. Arts Management Internship (6)

Prerequisites: HRM 362 and completion of, or concurrent enrollment in all courses required for the Arts Management Certificate Program. Off-campus work experience under faculty supervision in a professional arts organization to be individually selected for each student. (Must be taken concurrently with COTA 630.) Traditional grading only.

599. Special Studies in Arts Management (1-3)

Prerequisite: Consent of instructor. Individual research or project under the guidance of a faculty member. May be repeated once for credit. Traditional grading only.

610. Arts and the Law (3)

Prerequisite: COTA 545. Legal aspects of managing arts organizations including but not limited to: Incorporation, IRS, Liability, Copyright, Contracts. Traditional grading only.

630. Seminar in Arts Management: Scope and Sources III (2)

Prerequisites: Completion of, or concurrent enrollment in all courses required for the Arts Management Certificate Program. Must be taken concurrently with COTA 585. Student discourse on internship experience.

688./488. CSU Summer Arts (1-6)

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

# ASIAN AND ASIAN AMERICAN STUDIES

*College of Liberal Arts*

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Vice Chair

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Department Secretary

Freda Thompson

Students desiring information should contact the department office for referral to one of the faculty advisors.

The Department of Asian and Asian American Studies (AAAS), through its multiple offerings and those in related departments, fosters multi-ethnic and cross-cultural understanding within a global, multi-disciplinary perspective; facilitates a greater understanding of Asians in America to enhance multi-cultural education and appreciation of ethnic diversity in California and the United States; and pursues an active language education program to promote cross-cultural awareness and intercultural understanding.

In the broad context, the department's major responsibilities revolve around international/area studies, ethnic studies and language studies. Asian Studies enables students to explore Asian civilizations from an interdisciplinary perspective; Asian American Studies investigate the nature of Asian immigration and the Asian American experience in the United States; and Chinese and Japanese language studies provide linguistic and cultural training in Asian languages and language related areas. Asian language courses are also appropriate electives to support several of the majors offered by the University.

Students in all programs are encouraged to integrate the study of Asian cultures and societies across the Pacific with that of Asian American communities in the United States and to support the study of culture and society with appropriate language training.

The department curricula provide students with knowledge and training necessary for (1) various occupations and careers including teaching, school administration, social work, public service, urban planning, communications and the media, foreign business and trade, (2) professional work in the Asian American community, (3) exploring an educational dimension by emphasizing and focusing on ethnic minorities.

Through courses of its own and those of cooperating departments, the Department of Asian and Asian American Studies offers the B.A. and M.A. in Asian Studies, a Single Subject Teaching Credential in Japanese, the B.A. in Japanese, a Minor in Asian American Studies, a Certificate in Asian Studies, a Certificate in Asian American Studies, and a Certificate in Japanese. The department also offers a Concentration in Japanese and a Concentration in Asian American Studies under Track II of the Bachelor of Arts in Liberal Studies. (See University Programs in this Catalog.) Additional information and advice relative to the programs are available through the department office, FO3-340.

## Bachelor of Arts in Asian Studies (code 2-8508) (124 units)

Students choosing an Asian Studies major select one of two tracks for the degree. The student may choose an area of study, concentrating on one or more specific Asian societies, such as China, Japan, India, or Southeast Asia. Or, the student may choose to focus on Asian American Studies and combine the study of Asian Americans as ethnic minorities with supporting investigation of the countries of their historical origin.

## Requirements

Required of all students:

1. ASAM 200 or 220;
2. A/ST 300I, 301I and 492;
3. Three semesters (or the equivalent) of a single Asian language, chosen from courses in Chinese, Japanese, or an Asian language approved by the undergraduate advisor.

Upper Division: A minimum of 21 units; students should select one of the following two emphases:

### I. Area Studies Track

21 units of upper division work, including A/ST 492 (Proseminar in Asian Studies), and additional courses selected from the list of approved electives with the following provisions: (1) no more than nine units shall be counted in a single discipline such as art or history, (2) no more than 9 units shall be credited that concentrate upon any one area of Asia, chosen from among the following: China, India, Japan, or Southeast Asia. No more than 6 units of courses on the Americas can be applied toward this requirement (N.B. In the case of seminar, thematic, or variable topic courses, the assignment of a disciplinary and/or geographic category will be made by the undergraduate advisor in consultation with the appropriate faculty member).

### II. Asian American Studies Track:

21 units of upper division work, selected from the list of approved electives with the following provisions: (1) A/ST 492 (Proseminar in Asian Studies [3 units]); (2) 12 units of upper division Asian American Studies including ASAM 310 and 345; (3) the remaining upper division units focusing on one geographical area of Asia, chosen from among the following: China, India, Japan, or Southeast Asia.

## Minor in Asian American Studies (code 0-8430)

### Requirements

A minimum of 22 units which must include: (a) ASAM 200 or 319, 220, 260 or 310, and 345; and (b) nine units selected from among the following: ASAM 330, 331, 332, 333, 334, 335I, 340, 346, 347, 352, 360, 370, 380, 381, 490, 499.

## Certificate in Asian Studies (code 1-8508)

A student may earn a Certificate in Asian Studies with a concentration on either China, Japan, India, or Southeast Asia. Where applicable, courses used to meet the certificate requirements also may be used to satisfy the General Education requirement and the major and teaching minor requirements of the cooperating departments.

### Requirements

1. A bachelor's degree, with a major in a discipline other than Asian Studies. May be completed concurrently;
2. A minimum of two semesters or its equivalent of an approved Asian language which is to be selected in accordance with the area of concentration;
3. A/ST 300I, 301I and 12 units of upper division work divided among two or more disciplines. These are to be selected in accordance with the area of concentration and in consultation with the student's advisor. No more than 6 units in any one discipline shall apply towards the Certificate.

## Certificate in Asian American Studies (code 1-8010)

Students pursuing any approved degree or credential program of the University may at the same time earn a Certificate in Asian American Studies. Courses taken to meet the requirements may simultaneously be used, where applicable, to meet General Education requirements or the degree or credential requirements of cooperating departments. Certification of successful completion of requirements will be issued upon the recommendation of the Department Chair.

### Requirements

1. A bachelor's degree with a major other than Asian Studies. May be completed concurrently;
2. A minimum of 30 units distributed as follows:
  - a. ASAM 200 or 319, 220, 345, 370, plus
  - b. additional courses selected from: ASAM 310, 330, 331, 332, 333, 334, 335I, 340, 347, 352, 360, 380, 381, 490, 499. (See approved list of courses below).Interested students should apply to the Department Office.

## Bachelor of Arts Degree in Japanese (code 2-8507) (124 units)

The Bachelor of Arts program in Japanese at CSULB is designed to provide students with linguistic and cultural preparation supported by international perspectives and understanding of humanities for personal, social, intellectual and cognitive development as well as development of skills for economic self-sufficiency in the ever-intertwining world of global economy. The degree is intended to produce graduates who will have the communicative proficiency, critical thinking skills, and a sociocultural understanding for effective intercultural communication. The program will provide students with an opportunity and preparation to pursue a career involving the Pacific Rim nations, to go on to post-baccalaureate programs in the fields such as international affairs, business, law, journalism, public administration, or education, and/or to obtain a single subject teaching credential in Japanese.

The program is different from a traditional literature-oriented language program. It emphasizes pragmatic language studies aiming for acquisition of communication skills through communication based instruction, and providing knowledge of language and culture to develop appropriate understanding and attitudes for intercultural communication. The program will be supported by a variety of discipline-specific courses as well as interdisciplinary courses in Anthropology, Art, Asian Studies, Asian American Studies, Business, Comparative Literature, Economics, Education, Geography, History, International Studies, Linguistics, Philosophy, Political Sciences, Religious Studies, Speech Communication, and other programs offering Japan-related topics.

### Planning a Program of Study

The student and undergraduate advisor should plan a coherent program that both fulfills the requirements of the major and covers the student's areas of interest in allied fields outside the Japanese language.

Students are placed in Japanese courses according to their years of previous study. In general, one year of high school Japanese taken in the United States is equated with one semester of CSULB work. Thus, students with one, two, three,

and four years of high school work will most often enroll in JAPN 102, 201, 202, and 301 respectively.

Students with background in Japanese gained through primary or secondary school work taken in a country where Japanese is spoken must consult with faculty to determine proper placement level. Those who have gained substantial knowledge of Japanese either through secondary school work or through college-level language courses may not repeat those courses for credit.

Students are encouraged to study in Japan, either through the CSU Study Abroad Program or independently, after completing at least two years of study (or its equivalent) of Japanese at CSULB.

### Residence Requirement for the Majors

At least five upper division courses required for the major must be completed successfully at CSULB. Students are encouraged, however, to complete up to a year of their language study in approved programs of study abroad.

### Requirements

A minimum of 44 units is required, including at least 15 units earned in residence at CSULB. JAPN 101 and 102 are prerequisite to the major and may be satisfied by appropriate high school preparation or by examination. Required courses include 23 units core courses and 21 units electives from the following three areas: 1. language and language-related courses (12 units), 2. Japanese civilization courses (6 units), and 3. Japan-related or intercultural communication courses (3 units).

Lower Division Required Courses:

8 units Core Courses: JAPN 201, 202

Upper Division Required Courses (36 units)

1. Core Courses (23 units): JAPN 201, 202, 301, 302, 311, 312, 451 (in Japanese);
2. Electives (21 units):
  - A. Language and Language Related Courses - 12 units selected from: JAPN 321, 350, 370, 421, 422, 461, 462, 471, 481, 490, 492, 497;
  - B. Japanese Civilization (taught in English): 6 units selected from: ANTH 335, A/ST 393I, ART 470, HIST 383A, 383B, 384, 407I, POSC 363 (3), R/ST 344 (3);
  - C. Japan-Related or Intercultural Communication Courses - 3 units selected from: ANTH 307I, 412I, 413, 490\*, ASAM 330, 345, A/ST 300I, 301I, 310, 320, 406, 424, 490\*, 492, 495I, ECON 370, 471, EDSS 450F, GEOG 307I, 312I, H SC 420I, HIST 307I, 382B, 406, 478, 495\*, I/ST 317I, 318I, 319I, JOUR 312, PHIL 306, POSC 362, 363, 371, 378, 469\*, 485\*, 485, 489, 497\*, PSY 439, FEA 392, 341I, SOC 350, SPCH 309, 451, W/ST 401I, 406.

\* Special topics courses in departments which regularly offer topical courses pertinent to the program.

### Certificate in Japanese (code 1-8080)

The Certificate Program in Japanese offers students an opportunity to develop spoken and written competency in modern Japanese, and to acquire a broad introduction to various aspects of traditional and modern Japan.

The program is designed for students who intend to pursue a career in the private or public sectors, for which knowledge of Japan and the command of the language is useful or nec-

essary, and also for students who intend to pursue a graduate program in which such knowledge and competency are required.

### Requirements

1. A bachelor's degree (may be earned concurrently with the certificate);
2. 15 units of upper division level Japanese language courses;
3. 12 units of Japan-related upper division work from at least two disciplines. These units must be selected with the approval by a member of the advisory committee.

### Approved Courses

For Major in Asian Studies, Minor in Asian American Studies, Certificate in Asian Studies and Certificate in Asian American Studies:

A/ST 190, 290, 299, 300I, 301I, 310, 320, 393I, 406, 424, 441, 442, 443, 444, 490, 492, 495I, 499; ANTH 331, 332, 333, 335, \*416, \*417, \*419, \*490; ART 113A-B, 330I, 466, 467, 468, 469, 470, \*497; ASAM 200, 220, 260, 290, 299, 310, 319, 330, 335I, 340, 345, 347, 352, 370, 380, 381, 490, 495, 499; C/LT 234, 235, 236, 403, 415I, 416, \*448, \*499; CHIN 101, 102, 201, 202, 301, 302, 370, 490, 499; ECON 365, 370, \*471, \*472, \*490; GEOG 120, 312I, \*326, \*494, \*497; HIST 381, 382A- B, 383A-B, 384, 385, 386, 401I, 406, 407, 488, \*495, \*498; H SC 424; JAPN 101, 102, 201, 202, 311, 312, 321, 350, 370, 421, 422, 451, 461, 462, 471, 481, 490, 492, 497; LING 329, PHIL 306, 307, \*499; POSC 362, 363, 364, 366, 469\*, 485\*, \*489, \*497, \*499; PSY \*439; R/ST 103B, 331I, 341I, 343, 344, 351, 353I, \*490, \*499; W/ST 318I, 319, 381, 401I, 406, \*490, \*499.

(\* ) on an approved Asia-related topic.

### Single Subject Credential in Japanese

The Japanese subject matter credential program at CSU Long Beach is designed to provide students with linguistic and cultural preparation and understanding of humanities for personal, social, intellectual and cognitive development as well as development of skills for economic self-sufficiency in the ever-intertwining world of global economy. It is intended to produce educators prepared in teaching Japanese with the communication proficiency, critical thinking skills, and sociocultural understanding essential for effective intercultural communication as well as pedagogical knowledge and training in teaching Japanese to diverse populations in our society.

The program requires a minimum of 30 semester units of upper division courses in Japanese as listed below under the four subject categories: Language, Linguistics, Culture, and Literature. Students should take 21 units of core courses and 9 units of electives. All upper division courses are conducted in the target language and require completion or equivalent of the four semesters of lower division Japanese language courses.

All upper division language courses are designed to develop competency in four skills and content. However, JAPN 311 and 312 emphasize spoken Japanese at advanced level, while JAPN 301 and 302 emphasize reading and writing at advanced level. The content courses represent three areas of study - Japanese culture, linguistics, and literature. The culture courses provide an overview of Japanese history from the prehistoric times to contemporary Japan, and an insight into Japanese culture and society. The linguistics courses introduce the sound, meaning, syntactic and discourse structure of language, and

offer a comparison of Japanese and English as well as other languages. The literature course introduces selected major literary works, which will provide sources to cultivate literary appreciation and to develop cultural understanding of Japan.

A grade of "C" or better is required in all courses accepted for the Japanese program. The exit requirement is "Advanced" level Japanese language proficiency.

#### Core Requirements

24 upper division units selected from the following four areas:

1. Language: JAPN 301, 302, 311, 312;
2. Linguistics: JAPN 461;
3. Literature: JAPN 471 plus 421 or JAPN 370;
4. Culture: JAPN 451.

Electives: a total of 6 units selected from at least two different areas in consultation with a program advisor based on the student's background, interest, and teaching plans.

Language: JAPN 421, 422;

Linguistics: JAPN 462, 481;

Literature: JAPN 370;

Culture: JAPN 321; 350; 492;

Variable Subjects: JAPN 490; 497.

#### Master of Arts in Asian Studies (code 5-8508)

The master of arts degree in Asian studies is an interdisciplinary degree offered by the Asian Studies faculty of its cooperating departments. It is especially aimed at those intending to go into teaching, foreign service, or foreign trade.

#### Prerequisites

1. A Bachelor's degree with a major in Asian Studies; or
2. A Certificate in Asian Studies, awarded at CSULB, or its equivalent as evaluated by the Chair of the Department of Asian and Asian American Studies. Equivalency will, normally, be granted for work in Asia-related studies at CSULB and/or at other academic institutions, including a minimum of 18 units in no more than four disciplines with a minimum of six units in each of two disciplines of concentration plus two semesters of an approved Asian language. Only courses with a substantive Asia-related content are acceptable; or
3. A bachelor's degree in one of the fields in social science, humanities, or fine arts with 24 units of upper division Asia-related courses. These courses must be comparable to those required of a major in Asian Studies at this University. Deficiencies will be determined by the graduate advisor after consultation with the student and after study of transcript records. Students whose undergraduate prerequisites are inadequate will be required to fulfill these deficiencies before advancement to candidacy and will receive unclassified graduate status until all deficiencies are removed.

#### Advancement to Candidacy

1. Satisfaction of the general University requirements for advancement to candidacy;
2. Completion of 6 or more of the required units (not including language) with a minimum 3.0 overall GPA;
3. Approval of proposed program of study;
4. Satisfactory completion of the Writing Proficiency Examination.

#### Requirements

1. A minimum of 30 units of approved upper division and graduate courses including A/ST 592 and A/ST 610. At least 18 units must be in the 500-600 series composed of units earned at this University in graduate courses, graduate seminars, Directed Studies/Research or Thesis. All seminars and independent study courses may be repeated for a total of six (6) units, provided the topic is different. Directed Studies, Readings and Research, in any combination, may not exceed a total of six (6) units: A/ST 698 (thesis) must be taken for a minimum of four and a maximum of six units for those taking the thesis option.
2. A minimum of three upper division units in each of two disciplines of concentration must be taken preparatory to seminar work. Students should take at least six units of 500/600 level work in each of the two disciplines or concentrations; (N.B. Determination of the disciplinary status of any Asian Studies or any other courses taken at CSULB or other academic institutions shall be at the discretion of the Graduate Advisor in consultation with faculty, review of syllabi and reading lists, assessment of transcripts, etc.)
3. Comprehensive written examination in each of the two disciplines of concentration or a thesis. Students must have received permission of the Graduate Advisor, faculty advisor and prospective committee members before being allowed to file for the thesis option. Once selected, a student may not change his/her option.
4. Six units (beyond the B.A. level) in Chinese or Japanese or an Asian language approved by the Graduate Advisor. Waiver of this requirement, either by transfer of credits from another institution or by assessment of proficiency by resident faculty, is at the discretion of the Graduate Advisor of the Department of Asian and Asian American Studies.

#### Upper Division Courses Acceptable

A/ST 320, 406, 424, 490, 492, 499; ANTH 331, 332, 333, 335, \*416, \*417, \*419, \*490; \*ART 466, 467, 468, 469, 470, \*497, \*498; ASAM 330, 331, 332, 333, 334, 335, 340, 345, 346, 347, 352, 370, 381, 490, 495, 499; C/LT 403, \*448, \*499; CHIN 302, 370, 490, 499; ECON \*471, \*472; GEOG 326, \*494, \*497; HIST 381, 384, 385, 386, 406, 488, \*495, \*498; H SC 424; JAPN 302, 311, 312, 350, 422, 451, 461, 462, 471, 481, 490, 492, 497; \*LING 329; \*PHIL 499; POSC 362, 363, 364, 366, 469\*, 485\*, \*489, \*497, \*499; \*PSY 439; R/ST \*490, \*499; \*W/ST 381, 406, 490, \*499.

\* course must be on an approved Asia-related topic.

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#### Asian Studies (A/ST)

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##### Lower Division

##### 190. The Tao Primer of Basic Reasoning (3)

Focuses on the natural language of Tao aphorisms used for informal and formal types of reasoning; learning the Yin and Yang basic analytic steps of clear, critical, and creative thinking; and applying the Tao principles and processes of reasoning to contemporary, commonplace, and intercultural issues and problems logically and practically.

##### 290. Special Topics in Asian Studies (1-3)

Prerequisite: Consent of instructor. Topics of special interest in Asian Studies selected for intensive study. Topics will be announced in the Schedule of Classes. Courses may be repeated for a maximum of six units with different topics.

### 299. Directed Studies (1-3)

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special research interest. May be repeated for a maximum of six units. Traditional grading only.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

### 300I. Traditional Asia (3)

Prerequisites: ENGL 100 and upper division status. Introduction to traditional civilizations of China and India with some reference to Japan and Southeast Asia. Cultural aspects will be emphasized to illustrate the richness and diversity of Asia.

### 301I. Modern Asia (3)

Prerequisites: ENGL 100 and upper division status. Emphasis on the development of Asia since the 18th century and its role in the modern world, with some attention to the experience of Asians in the U.S. Continuity and change, reform and revolution in culture, politics and the economy will be included.

### 310. United States and Asia (3)

This is a course designed to answer the basic question: How is Asia important to the United States and vice versa? Focusing on the post-1945 period and addressing the question of dependence vs. interdependence, four main areas will be examined: (1) key religious, social and political patterns in Asia; (2) cross-cultural images of Asia and America; (3) Asian-U.S. global economic relations; (4) Asian-U.S. strategic and political relationships in both the regional and global context.

### 320. Asia in Fiction and Film (3)

This course focuses on Asian-Western interactions and particularly on Asian-Western perspectives of this interaction as manifested in film and works of fiction. The focus will be on China, Japan and/or India; consideration will also be given to the Asian experience in America.

### 393I. Japan's Heritage (3)

Prerequisites: ENGL 100 and upper division status. Cultural heritage of Japanese civilization emphasizing history, philosophy, religion, literature and fine arts from prehistory to the present. Traditional grading only.

### 406. Asian Women (3)

Historical experience of women in Asia, with emphasis on Chinese and Japanese societies; links with the experience of Asian-American women. Same course as HIST 406 and W/ST 406.

### 424./524. Principles of Asian Health Sciences (3)

Prerequisite: Upper division standing. Presents the philosophical, historical, clinical and scholarly qualities of Asian health sciences to promote health, prevent disease and treat illness. Comparisons are made with selected Asian and western health care systems and individual health practices. Traditional grading only. (Same course as H SC 424./524.)

### 441. Khmer Literacy for Khmer Speakers: Introduction (3)

Prerequisite: Fluent oral skills in Khmer. First of a 4 course sequence. Introduction to Khmer writing system. Practice in reading, decipherment, vowels, consonants and syllable combinations. Oral practice, honorifics, culturally appropriate interaction. Traditional grading only. Same course as LING 441.

### 442. Khmer Literacy for Khmer Speakers: Intermediate A (3)

Prerequisite: A/ST 441 or consent of instructor. Second of a 4 course sequence. Continued practice in Khmer writing system. Vocabulary development, reading and writing long sentences and simple text. Appropriate social and educational discourse. Traditional grading only. Same course as LING 442.

### 443. Khmer Literacy for Khmer Speakers: Intermediate B (3)

Prerequisite: A/ST 442 or consent of instructor. Third of a 4 course sequence. Contextual reading for comprehension, culture and grammatical knowledge. Development of oral skills, through discussion of content, role play and verbal critique. Traditional grading only. Same course as LING 443.

### 444. Khmer Literacy for Khmer Speakers: Advanced (3)

Prerequisite: A/ST 443 or consent of instructor. Fourth of a 4 course sequence. Composition and written translation. Preparation for BCLAD tests 5 & 6: Culture and Language of Emphasis. Reading authentic texts. Traditional grading only. Same course as LING 444.

### \*490. Special Topics in Asian Studies (1-3)

Topics of special interest in Asian Studies selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

A. Modern Chinese Literature

B. China in Transition

C. Modern Vietnam

D. Filipino Language, Literature and Culture

### 492./592. Proseminar in Asian Studies (3)

Prerequisites: Consent of the instructor. Introduction to research methods; intensive study of selected conceptual and theoretical issues in Asian or Asian American Studies. Area and discipline of emphasis will vary from year to year. May be repeated for a maximum of six units.

### 495I. China Heritage (3)

Prerequisites: ENGL 100 and upper division status. Cultural heritage explored through history, philosophy, religion and science, side by side with the fine arts; seen as the totality of a people's humanistic experience. (Lecture, discussion and film.)

### 499. Directed Studies (1-3)

Prerequisite: Consent of Instructor. Directed studies to permit individual students to pursue topics of special research interest. May be repeated for a maximum of six units. Traditional grading only.

### Graduate Division

Graduate course descriptions are found in the departmental listings in which they are offered. Graduate courses applicable for the degree (only when the focus is on Asia) are A/ST 524, 543, 544, 551, 592, 610, 695, 697, 698; ANTH 516, 517, 519, 522, 570, 597, 697; ART 598V, 598W, 598X, 598Y, 598Z, 611; ASAM 595; C/LT 548, 550; ECON 571, 572, 690; GEOG 650, 697; HIST 510 (B), 682, 695, 697; H SC 524; JAPN 522, 551, 561, 562, 571, 581, 592, 695, 697; LING 580; PHIL 697; POSC 590, 599, 600, 610, 670, 697; PSY 539.

### 524./424. Principles of Asian Health Sciences (3)

Prerequisite: Upper division standing. Presents the philosophical, historical, clinical and scholarly qualities of Asian health sciences to promote health, prevent disease and treat illness. Comparisons are made with selected Asian and western health care systems and individual health practices. Traditional grading only. (Same course as HSC 524./424.)

### 543. Religions of China (3)

Ancient Chinese religious thought; penetration of Indian Buddhism and Ch'an (Zen); popular religion and the religion of the scholar-official. Emphasis will be on original texts in translations. Not open to students with credit in R/ST 343.

### 544. Religions of Japan (3)

The transmission of continental civilization to Japan; Shinto, Buddhism and Tokugawa Neo-Confucianism; Genroku culture; and the New Religions. Emphasis on original texts in translations. Not open to students with credit in R/ST 344.

### 551. Hinduism (3)

Survey of ancient, classical and medieval Hinduism. Emphasis on analysis of Upanishads, Bhagavad Gita and the various paths of Yoga. Not open to students with credit in R/ST 351.

### 592./492. Proseminar in Asian Studies (3)

Prerequisites: Consent of the instructor. Introduction to research methods; intensive study of selected conceptual and theoretical problems in Asian or Asian American Studies. Area and discipline of emphasis will vary from year to year. May be repeated for a maximum of six units.

610. Seminar in Asian Studies (3)  
Selected topics in Asian studies. Area and discipline of emphasis will vary from year to year. Open to graduate students of Asian studies. Graduate students in other disciplines may enroll with consent of instructor. May be repeated for a maximum of six units.

695. Directed Readings (1-3)  
Prerequisites: Consent of Graduate Advisor. Readings in Asian Studies on an individual basis.

697. Directed Research (1-3)  
Prerequisites: Consent of Graduate Advisor. Research in Asian Studies on an individual basis.

698. Thesis (2-6)  
Prerequisite: Consent of the Graduate Advisor. Planning, preparation, and completion of a thesis in Asian studies.

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## Asian American Studies (ASAM)

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### Lower Division

001. Language Skills (3)  
Focuses on intensive development of grammatical skills and expository writing. Primarily for Asian American students. Credit/no credit only. Counts as part of student course load but does not carry graduation credit.

100. Language Skills (3)  
Prerequisite: A recorded total score of 151 or above on the English Placement Test, or credit in ASAM 001 (or its equivalent) and consent of the instructor. Focuses on organizational methods and techniques for writing compositional and expository prose, advanced grammar, and some critical reading techniques for term papers. Primarily for Asian American students.

200. Asian American Inter-Ethnic Relations (3)  
Intercultural and inter-ethnic behavior and orientation of Asian Americans; emphasis on the nature of their relations and their patterns of interaction with other diverse groups as well as the majority culture. Not open to students with credit in AIS 319, AMST 319, ASAM 319, B/ST 319, CHLS 319, C/LA 319, and W/ST 319. Traditional grading only.

220. Asian American History (3)  
History of arrival, settlement and experiences of Asians in America from the 1840's to the present.

260. Introduction to Asian American Literature (3)  
A general survey course that includes critical readings of representative works in English by Chinese, Hawaiian, Japanese, Korean, and Filipino American authors, and any other writers of Asian descent who have made the United States their home. Emphasis will be placed on how they interpret their Asian American experiences in the various literary genres represented. Traditional grading only.

290. Special Topics in Asian American Studies (1-3)  
Prerequisite: Consent of instructor. Topics of current interest in Asian American Studies selected for intensive development. Topics will be announced in the Schedule of Classes. Course may be repeated for a maximum of six units with different topics.

299. Directed Studies (1-3)  
Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special research interest. May be repeated for a maximum of six units. Traditional grading only.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

310. Education and the Asian American (3)  
Examining problems and potentials of a multi-racial classroom for the understanding of, and relating to students of, diverse cultural backgrounds, with an emphasis on the Asian American. Small group interaction and counseling of individual students.

319. The Ethnic Experience in the U.S. (3)  
An examination of the dynamics of the development of our multi-cultural society, emphasizing study of the four distinct ethnic strands of American society (Asian American, Black American, Mexican American, and American Indian) and their role in the maintenance of cultural diversity in the United States. Same course as AIS 319, B/ST 319, CHLS 319, W/ST 319. (Lecture/Discussion.)

330. Japanese American Experience (3)  
A study of the culture, history, and literature of Japanese in America; emphasizing immigrant experience, agricultural contributions, World War II, generational issues, women in transition and family.

331. Chinese American Experience (3)  
A study of the culture, history, and literature of Chinese in America, emphasizing immigrant experience, generational issues, women in transition and family.

332. Korean American Experience (3)  
A study of the culture, history, and literature of Koreans in America, emphasizing immigrant experience, generational issues, women in transition and family.

333. Vietnamese American Experience (3)  
A study of the culture, history, and literature of Vietnamese in America, emphasizing immigrant experience, generational issues, women in transition and family.

334. Cambodian American Experience (3)  
A study of the culture, history, and literature of C in America, emphasizing immigrant experience, generational issues, women in transition and family.

335I. Asian and Latino Immigration since World War II (3)  
Prerequisite: Upper-division standing, G.E. Category A. Analyzes the causes of a dramatic post-World War II shift in immigration from Europe to Asia and Latin America, immigrants' settlement and adaptation patterns, and the Asian and Latino communities' social, racial, political and economic impact on American society. Same course as CHLS 335I. (Lecture and discussion, 3 hours)

340. Asian American Family (3)  
Study of the Asian American family as a social institution; emphasis on the influence and consequences of the traditional Asian values and the impact of Western culture in the formation of a distinct family life style.

345. Asian American Community Analysis (4)  
Socioeconomic, political and cultural profile of Asian American communities; role and function of community organizations. Training in community surveys and service. (Lecture, activity)

346. Asian Americans and the Law (3)  
A survey of the legal system and its impact on Asian American immigrants from the 19th century to the present.

347. Asian Americans and Public Policy Issues (3)  
The Asian Americans are the fastest growing ethnic population in the United States. This seminar will examine a range of public policy issues impacting Asian Americans. These will include issues affecting all Americans, such as adequate health care, attention to the elderly, and the education of our youth. Other issues to be addressed will focus on the particular situation of Asian Americans and other minority groups, including access to employment opportunities, political, cultural and media representation, and the increase in racial bias and violations of civil rights. An examination of these issues, and the development of policy perspectives, will serve as the basis for this seminar. (Lecture 3 hours.)

352. Filipino American Experience (3)  
A study of the culture, history and literature of Filipinos in America; emphasizing immigrant experience, generational issues, women in transition and family. (Lecture 3 hours.)

360. Studies in Asian American Literature (3)  
Key literary texts will be discussed in light of their contributions to an understanding of the lived experience of Asian Americans, especially as such creative work interethnic, class, gender, and generational conflict. Contemporary research in cultural studies, literary theory, and Asian American studies will provide the theoretical foundation for the analysis of Asian American literature.

### 370. Asian Man and Woman in America (3)

Roles as individuals, as sexual counterparts and their relationship to each other and to the majority culture. Small group interaction and counseling of individual students.

### 380. Asian Philosophies and Religions in America (3)

Influence of and changes in Asian philosophies and religions in the American environment. Emphasis on Confucianism, Taoism, Hinduism, Buddhism and Shintoism in relation to individual and social values in America.

### 381. Asian American Women (3)

Will explore the largely unwritten history of Asian American women. Using an interdisciplinary perspective, will look at not only secondary sources but also autobiographical, literary, and journalistic writings; oral histories, diaries, anthropological studies, psychological/clinical reports, and film to reconstruct the lives of Asian American women. Will examine how having been burdened by the triple oppression of gender, race, and class, Asian American women have been actively pursuing equality and dignity. Same course as HIST 381 and W/ST 381. Lecture.

### 490. Special Topics in Asian American Studies (1-3)

Prerequisite: Consent of instructor. Topics of current interest in Asian American Studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

### 495/595. Seminar in Asian American Studies (3)

Selected topics in Asian American Studies. Area and topics of emphasis will vary from year to year. Traditional grading only. Course may be repeated to a maximum of 6 units.

### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special research interest. May be repeated to a maximum of six units.

### Graduate Division

### 595/495. Seminar in Asian American Studies (3)

Selected topics in Asian American Studies. Area and topics of emphasis will vary from year to year. Traditional grading only. Course may be repeated to a maximum of 6 units.

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## Chinese (CHIN)

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### Lower Division

#### 101. Fundamentals of Chinese (4)

Introduction to pronunciation, reading, writing, conversation, and grammar. Students with previous training or native speakers of Chinese may not enroll.

#### 102. Fundamentals of Chinese (4)

Prerequisites: CHIN 101 or its equivalent. Introduction to pronunciation, reading, writing, conversation, and grammar. Students with previous training or native speakers of Chinese may not enroll.

#### 201. Intermediate Chinese (4)

Prerequisites: CHIN 102 or its equivalent. Continuation of first year Chinese. Further development of syntax, grammar and sentence patterns, reading, writing and conversation. Students with previous training or native speakers of Chinese may not enroll.

#### 202. Intermediate Chinese (4)

Prerequisites: CHIN 201 or its equivalent. Continuation of first year Chinese. Further development of syntax, grammar and sentence patterns, reading, writing and conversation. Students with previous training or native speakers of Chinese may not enroll.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

### 301. Advanced Chinese (3)

Prerequisites: CHIN 202 or its equivalent, or consent of the instructor. Study of modern spoken and written Chinese involving advanced patterns and expressions. Emphasis on reading, comprehension, vocabulary building and idiomatic usage.

### 302. Advanced Chinese (3)

Prerequisites: CHIN 301 or its equivalent, or consent of the instructor. Study of modern spoken and written Chinese involving advanced patterns and expressions. Emphasis on reading, comprehension, vocabulary building and idiomatic usage.

### 370. Chinese Literature in English Translation (3)

Readings in translation of representative works of the major literary genres in China covering both the classical and the modern period. Previous knowledge of the language is highly desirable, but not necessary.

### 490. Special Topics in Chinese (1-3)

Prerequisite: consent of instructor. Independent study under supervision of a faculty member. May be repeated for a maximum of 6 units.

### 499. Directed Studies in Chinese (1-3)

Prerequisite: Consent of instructor. Independent study under supervision of a faculty member. May be repeated for a maximum of 6 units.

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## Japanese (JAPN)

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### Lower Division

#### 101. Fundamentals of Japanese (4)

Introduction to pronunciation, reading, writing, conversation, and structure of the language. Native speakers of Japanese may not enroll.

#### 102. Fundamentals of Japanese (4)

Prerequisites: JAPN 101 or its equivalent. Introduction to pronunciation, reading, writing, conversation, and structure of the language. Native speakers of Japanese may not enroll.

#### 201. Intermediate Japanese (4)

Prerequisites: JAPN 102 or its equivalent. Continuation of first year Japanese. Further development of listening, speaking, reading, writing, communication, and structure of the language. Continuation of first year Japanese. Progressive drill on syntax and grammar and sentence patterns: reading, translation and composition. Native speakers of Japanese may not enroll.

#### 202. Intermediate Japanese (4)

Prerequisites: JAPN 201 or its equivalent. Continuation of first year Japanese. Further development of listening, speaking, reading, writing, communication, and structure of the language. Continuation of first year Japanese. Progressive drill on syntax and grammar and sentence patterns: reading, translation and composition. Native speakers of Japanese may not enroll.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 301. Advanced Japanese (3)

Prerequisites: JAPN 202 or its equivalent as determined by the instructor. Study of modern spoken and written Japanese involving advanced patterns and expressions. Emphasis on reading comprehension, vocabulary building and idiomatic usage.

#### 302. Advanced Japanese (3)

Prerequisites: JAPN 301 or its equivalent as determined by the instructor. Study of modern spoken and written Japanese involving advanced patterns and expressions. Emphasis on reading comprehension, vocabulary building and idiomatic usage.

#### 311. Advanced Spoken Japanese (3)

Prerequisites: JAPN 202 or its equivalent as determined by the instructor. Advanced study in modern spoken Japanese and Japanese communication.



312. **Advanced Spoken Japanese (3)**  
Prerequisites: JAPN 311 or its equivalent as determined by the instructor. Advanced study in modern spoken Japanese and Japanese communication.
321. **Calligraphy (3)**  
History and Theory of Shodo (Japanese calligraphy). Practice in actual writing with a brush to develop skills in kanji and kana. Pursuit of simplified yet multi-dimensional beauty by means of one color which is sumi ink. Previous knowledge of Japanese is helpful, but not required. (Lecture 1 hour, laboratory 4 hours.)
350. **Japanese Language, Culture, and Communication (3)**  
Study of Japanese language and culture through sociolinguistic perspectives. Exploration of the interrelationship between the language and culture by focusing on verbal and nonverbal communicative behaviors. Traditional grading only.
370. **Japanese Literature in English Translation (3)**  
Readings in translation of representative works of the major literary genres in Japan covering both the classical and modern period. Previous knowledge of the language is highly desirable, but not necessary. (Lecture-discussion 3 hours.)
- 421./521. **Selected Readings/ Writing in Japanese (3)**  
Prerequisites: JAPN 302 or consent of instructor. Undergraduates register in JAPN 421; graduates register in JAPN 521. Lecture. Readings from a selection of contemporary written materials including literary works, poetry, magazines, newspapers, reports, instructional and technical explanatory materials. May be repeated under different topics to a total of 9 units.
- 422./522. **Technical Japanese (3)**  
Prerequisites: JAPN 421 or equivalent. Undergraduates register in JAPN 422; graduates register in JAPN 522. Lecture. Development of receptive and productive skills using a variety of authentic materials drawn from business, humanities, sciences, and others. The course materials will be selected according to particular areas of students' interest. Traditional grading only.
- 451./551. **Japanese Civilization (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 451; graduates register in JAPN 551. Lecture. Introduction and exploration of characteristic features of Japanese civilization and culture through studying selected topics and themes in fields such as arts, humanities, sciences, and social sciences.
- 461./561. **The Structure of the Japanese Language (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 461; graduates register in JAPN 561. Lecture. Introduction to phonology, morphology, syntax, semantics and discourse of modern Japanese. Traditional grading only.
- 462./562. **Contrastive Analysis of English and Japanese (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 462; graduates register in JAPN 562. Lecture. Contrastive analysis of phonological, morphological, syntactic and discourse aspects of English and Japanese. Traditional grading only.
- 471./571. **Readings in Modern and Contemporary Japanese Literature (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 471; graduates register in JAPN 571. Lecture. Readings of representative works of modern and contemporary Japanese literature including short stories, novellas, diaries, memoirs, poetry, and excerpts from novels and plays. Traditional grading only.
- 481./581. **Principles and Practice of Teaching Japanese (3)**  
Prerequisites: JAPN 302, 312, 350, and at least one 400 level course, or equivalents. The course will introduce Japanese language teaching and learning in the U.S., focusing on application of principles of second language acquisition and exploration of linguistic, pedagogical, sociocultural issues relevant to teaching Japanese. Traditional grading only. Undergraduates register in JAPN 481; graduates register in JAPN 581.490.
490. **Special Topics in Japanese (1-3)**  
Prerequisite: Consent of instructor. Select topics related to advanced Japanese study.
- 492./592. **Japanese Internship (3-6)**  
Prerequisites: Consent of instructor; completion of a minimum of 15 upper division units required for the major in Japanese. Undergraduates register in JAPN 492; graduates register in JAPN 592. Internship with community agencies, business firms, nonprofit organizations, and government agencies which utilize communication skills in Japanese. Work done under joint direction of activity sponsor and faculty. Project report and internship conferences required. Credit/No Credit grading only.
497. **Directed Studies (1-6)**  
Prerequisite: Consent of instructor. Independent study under supervision of a faculty member.

## Graduate Division

- 521./421. **Selected Readings/ Writing in Japanese (3)**  
Prerequisites: JAPN 302 or consent of instructor. Undergraduates register in JAPN 421; graduates register in JAPN 521. Lecture. Readings from a selection of contemporary written materials including literary works, poetry, magazines, newspapers, reports, instructional and technical explanatory materials. May be repeated under different topics to a total of 9 units.
- 522./422. **Technical Japanese (3)**  
Prerequisites: JAPN 421 or equivalent. Undergraduates register in JAPN 422; graduates register in JAPN 522. Lecture. Development of receptive and productive skills using a variety of authentic materials drawn from business, humanities, sciences, and others. The course materials will be selected according to particular areas of students' interest. Traditional grading only.
- 551./451. **Japanese Civilization (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 451; graduates register in JAPN 551. Lecture. Introduction and exploration of characteristic features of Japanese civilization and culture through studying selected topics and themes in fields such as arts, humanities, sciences, and social sciences.
- 561./461. **The Structure of the Japanese Language (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 461; graduates register in JAPN 561. Lecture. Introduction to phonology, morphology, syntax, semantics and discourse of modern Japanese. Traditional grading only.
- 562./462. **Contrastive Analysis of English and Japanese (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 462; graduates register in JAPN 562. Lecture. Contrastive analysis of phonological, morphological, syntactic and discourse aspects of English and Japanese. Traditional grading only.
- 571./471. **Readings in Modern and Contemporary Japanese Literature (3)**  
Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 471; graduates register in JAPN 571. Lecture. Readings of representative works of modern and contemporary Japanese literature including short stories, novellas, diaries, memoirs, poetry, and excerpts from novels and plays. Traditional grading only.
- 581./481. **Principles and Practice of Teaching Japanese (3)**  
Prerequisites: JAPN 302, 312, 350, and at least one 400 level course, or equivalents. The course will introduce Japanese language teaching and learning in the U.S., focusing on application of principles of second language acquisition and exploration of linguistic, pedagogical, sociocultural issues relevant to teaching Japanese. Traditional grading only. Undergraduates register in JAPN 481; graduates register in JAPN 581.
- 592./492. **Japanese Internship (3-6)**  
Prerequisites: Consent of instructor; completion of a minimum of 15 upper division units required for the major in Japanese. Undergraduates register in JAPN 492; graduates register in JAPN 592. Credit/No Credit grading only.
695. **Directed Readings (1-3)**  
Prerequisites: Consent of Graduate Advisor. Readings in Japanese on an individual basis. Traditional grading only.
697. **Directed Research (1-3)**  
Prerequisites: Consent of Graduate Advisor. Research in Japanese on an individual basis. Traditional grading only.



# BACCALAUREATE DEGREES AND OTHER UNDERGRADUATE PROGRAMS

## Degrees

The Bachelor of Arts and the Bachelor of Science degree programs are constructed of three interrelated areas: the breadth component, called the General Education Program, which provides the basis for the baccalaureate degree because it offers training in general skills, methodologies, and habits of thought; the depth component, or major, which establishes an understanding of the breadth of a body of knowledge, competence in the fundamental skills and methodologies of the discipline, and understanding and skill at an appropriate depth in one or more facets of the discipline; and the elective component that provides the possibility for personal enhancement and development that can complement the rest of the degree program.

California State University, Long Beach offers the following Baccalaureate Degree Programs:

### Bachelor of Arts Degree in:

- American Studies
- Anthropology
- Art
- Asian Studies
- Black Studies
- Chemistry
- Chicano and Latino Studies
- Communicative Disorders
- Comparative Literature
- Dance
- Economics
- English
- Family and Consumer Sciences
- Film and Electronic Arts
- French
- Geography
- German
- History
- Human Development
- Interdisciplinary Studies
- International Studies
- Japanese
- Journalism
- Kinesiology
- Liberal Studies
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Recreation
- Religious Studies

- Social Work
- Sociology
- Spanish
- Speech Communication
- Theatre Arts
- Women's Studies

### Bachelor of Fine Arts Degree in:

- Art
- Dance

### Bachelor of Music Degree

### Bachelor of Science Degree in:

- Aerospace Engineering
- Biochemistry
- Biology
- Business Administration
- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science
- Construction Engineering Management
- Criminal Justice
- Dietetics and Food Administration
- Earth Science
- Electrical Engineering
- Engineering
- Engineering Technology
- Geology
- Health Care Administration
- Health Science
- Industrial Design
- Kinesiology
- Manufacturing Engineering
- Marine Biology
- Mathematics
- Mechanical Engineering
- Microbiology
- Nursing
- Occupational Studies
- Physics

### Bachelor of Vocational Education Degree

Refer to specific departments in the section on Courses of Study for detailed descriptions of each program.

## Double Major

You may complete two baccalaureate programs concurrently. Only one degree will be conferred and only one diploma issued. Therefore, you must designate which baccalaureate program is your primary major. Your degree will then take on the designation, i.e., Bachelor of Arts or Bachelor of Science, associated with that primary major. The fact that the requirements of two majors have been completed will be noted on both the diploma and the transcript. A course, or courses, may be used to satisfy the individual requirements of both majors, without limit, as long as the required pattern of coursework is completed for each major.

## Additional Baccalaureate Degree

A graduated student who wishes to pursue an additional baccalaureate degree and maintain undergraduate status may do so by completing a minimum of 30 units after graduation, of which 24 units must be upper-division courses and 12 units must be in the major.

A senior, with advance approval of the Academic Appeals Committee, may earn a maximum of twelve units toward the additional degree while in residence for the first degree. Any courses to be applied to the additional degree must be specified and taken in addition to those needed to satisfy the requirements of the first degree.

Students applying for and accepted to a second baccalaureate degree program who have received their first baccalaureate degree or equivalent from an institution outside of the U.S. will be required to complete any deficiencies in the General Education pattern and will be evaluated for General Education on the same basis as undergraduates.

## Certificate Programs

California State University, Long Beach offers 40 academic programs leading to the award of a Certificate. Certificate programs normally require completion of 24 to 27 units of course work. Certificate programs differ from baccalaureate minors and degree programs in the special overall emphasis given in them to practical and applied uses of knowledge in a specific area of human enterprise. Certificates may be earned only concurrently or following award of the baccalaureate degree. Courses taken to fulfill the requirements for the baccalaureate may also be applied to Certificate requirements; only fifteen units may be so applied from graduate degree programs.

If you wish to pursue a Certificate program you should review the course requirements given in the departmental course listing of this catalog. The department of each certificate is shown in parentheses. You are to notify the relevant department of your intention to pursue the course of study as soon as possible so as to receive early advisement on the program.

## Certificates

- Administration of Outdoor Recreation Resources (Recreation and Leisure Studies)
- Administration of Travel and Tourism (Recreation and Leisure Studies)
- Administration of Volunteer Services (Recreation and Leisure Studies)
- American Indian Studies (American Indian Studies)

- Asian American Studies (Asian and Asian American Studies)
- Asian Studies (Asian and Asian American Studies)
- Biomedical Art (Art)
- Biotechnology (Biological Sciences)
- Black Studies (Black Studies)
- Cartography and Geographic Information Systems (Geography)
- Chicano and Latino Studies (Chicano and Latino Studies)
- Child Development (Family and Consumer Sciences)
- Community Physical Fitness (Kinesiology and Physical Education)
- Computer Applications in the Liberal Arts (Computer Studies)
- Corrective Therapy (Kinesiology and Physical Education)
- Energy Conversion and Power Systems Engineering (Electrical Engineering, Mechanical Engineering)
- Environmental Studies (Environmental Studies)
- Facilities Operations (Engineering Technology)
- Foodservice Systems Administration (Family and Consumer Sciences)
- Gerontology (Gerontology)
- Health Care Administration (Health Care Administration)
- International Business (International Business)
- Japanese (Asian and Asian American Studies)
- Latin American Studies (Latin American Studies)
- Legal Studies in the Liberal Arts (Legal Studies)
- Medieval and Renaissance Studies (Comparative Literature and Classics)
- Nurse Practitioner (Nursing)
- Peace Studies (Peace Studies)
- Pre-Athletic Training (Kinesiology and Physical Education)
- Religious Studies (Religious Studies)
- Russian and East European Studies (Russian and East European Studies)
- Safety Operations (Engineering Technology)
- Teaching English as a Second Language (English)
- Technical and Professional Writing (English)
- Therapeutic Recreation (Recreation and Leisure Studies)
- Transportation (Marketing)
- Urban and Regional Studies (Geography)
- Waste Engineering and Management (Civil Engineering)
- Wilderness Studies (Kinesiology and Physical Education)

## Minors

A minor consists of a minimum of 18 units, as specified by the department or program, at least nine of which must be upper-division. The minor may be in a single subject or interdisciplinary. No courses in the major department may be counted toward the minor. Courses outside the major department may count both toward the minor and toward requirements for the major. The minimum overall GPA in courses toward the minor is 2.0. A minimum of six units of coursework toward the minor must be taken at CSULB.

Students should refer to the requirements of the department and college of their major, to see whether a minor is required for that major. Even if a minor is not required, students may elect to complete one or more minors from those available and have that so noted on their transcripts.

## Minors

American Indian Studies  
American Studies  
Anthropology  
Applied Mathematics  
Asian American Studies  
Biology  
Black Studies  
Business Economics  
Chemistry  
Chicano and Latino Studies  
Classical Studies  
Comparative Literature  
Computer Science  
Criminal Justice  
Cross-Cultural Language and Academic Development Studies  
Dance  
Economics  
English  
Environmental Engineering  
French  
Geography  
Geology  
German  
Greek  
Health Science  
History  
Human Resources Management  
International Economics  
Italian  
Journalism  
Latin  
Linguistics  
Management Information Systems  
Marketing  
Mathematics  
Microbiology  
Music  
Philosophy  
Physical Education  
Physiology  
Physics  
Political Science  
Psychology  
Public Administration  
Public Policy  
Recreation  
Religious Studies  
Russian  
Sociology  
Spanish  
Speech Communication  
Women's Studies

## Credential Programs for Public School Service

Candidates for public school service credentials at the University are advised to familiarize themselves with the requirements for these programs. Descriptions of credential programs appear in a separate section of this Catalog. Specific information and applications to individual programs are available in program offices of the College of Education and departmental offices through which they are offered. Applications for student teaching and for field work in credential programs must be filed by October 1 for spring semester and March 1 for summer session and fall semester.

## Requirements for the Baccalaureate Degree

1. Completion of a minimum of 124 units for the Bachelor of Arts or Bachelor of Vocational Education degree. Completion of the minimum number of units (124-136) required by the major program for the Bachelor of Science degree. See the description of the requirements for your major for the specific number of units required.
2. Completion of at least 40 upper-division units (courses numbered 300-499).
3. Completion of at least 30 units in residence at CSULB, of which at least 24 must be upper-division and at least 12 must be in the major. Units earned in Extended Education cannot be counted toward fulfillment of the residence requirement.
4. Completion of the General Education program, as described in a separate section of this Catalog, including at least 9 units in upper-division courses completed at CSULB.
5. For students who entered with less than 56 units, completion of University 100.
6. For timely completion of graduation requirements, all students should declare a major before completing 60 units. Students who have completed 75 or more units shall not be permitted to register for classes until they have officially declared a major. Entering transfer students who have completed 75 or more transferable units will have one semester in residence to declare a major.
7. Completion of the specific course and unit requirements for your academic major, as shown in the alphabetic listing for the major department. If the requirements are changed during your continuous attendance at CSULB, you have the right to meet either the requirements in effect when you entered the major or the requirements in effect at the time you graduate.

Effective 1996, all upper-division courses required for a major must be completed within the ten-year period preceding award of the baccalaureate degree. Courses completed prior to this ten-year period can be revalidated by such demonstrations of competence or knowledge of the subject as may be prescribed by the department offering the course.
8. Satisfactory performance on the Writing Proficiency Examination (see the Admissions section and later in this section of the Catalog).
9. Achievement of a minimum 2.0 ("C") grade-point average in each of the following:
  - A. The entire college record.
  - B. All units attempted at CSULB.

- C. All courses in the major.
- D. All upper-division courses in the major completed at CSULB.

10. Formal approval by the faculty of the university.

#### Procedural Information

- Request to graduate — You must file a Request to Graduate form with the Office of Enrollment Services prior to the announced deadline, which will be at least one semester prior to the expected graduation date.
- If you change your degree or major or expected graduation date, you must file a new request to graduate, and will be subject to a re-filing fee.
- If you have received an Incomplete grade, you must complete the course prior to the expected graduation date, or no later than the deadline for completion of the course, whichever comes first. Any Incomplete remaining on your record as of the graduation date will be counted as if it were an "F," with units attempted but no grade points earned, unless the instructor has specified on the Incomplete form that some other grade be recorded. You cannot make up an Incomplete after you have graduated.

#### Systemwide Tests Required of Most New Students

The CSU requires new students to be tested in English and mathematics as soon as possible after they are admitted and before enrollment. These are not admission tests, but a way to determine whether you are prepared for college work and, if not, to counsel you how to strengthen your preparation. You might be exempted from one or both of the tests if you have scored well on other specified tests or completed appropriate courses.

#### English Placement Test (EPT)

So that information will be available to help in the selection of appropriate course work in writing skills and to prepare for meeting the upper-division requirement, all undergraduate students who will graduate from a CSU campus under the degree requirements of 1978-79 or a subsequent catalog are required to take the English Placement Test (EPT), unless they have scored well on other specified tests or completed appropriate college courses.

You must take the test at the first possible administration available after admission. Failure to take the English Placement Test no later than the first semester of attendance will result in a loss of future registration privileges. It may also lead to administrative probation and possible disqualification from future attendance (Section 41300.1 of Title 5, California Administrative Code and CSU Executive Order 186). The results of the EPT will not affect admission eligibility. Information regarding the EPT can be obtained from the Department of English, McIntosh Humanities Office Building, Room 419 or the Office of Testing and Evaluation Services SS/AD 216, (562) 985-4007. EPT registration does not require a fee.

#### Writing Proficiency Examination (WPE)

All candidates for degrees and certificates must demonstrate competency in writing skills as a requirement for graduation. Every student under the 1977-78 or subsequent catalog must pass the Writing Proficiency Examination (WPE) to be certified proficient in written composition in English. Students

under catalog regulations earlier than 1977-78 are exempt from this requirement if they have maintained continuous attendance. The Writing Proficiency Examination is a junior-year requirement. The test must be taken by the end of the semester in which undergraduates earn 75 or more units. Undergraduates who do not attempt both portions of the test by the time they attain 75 units will have a hold placed on their Voice Response Registration. Registration for the test does not release this hold. The VRR hold will not be released until two weeks after the test date. A request for deferment, for compelling reasons, can be filed at Testing and Evaluation Services. In certain circumstances, a contract can be submitted to temporarily release a VRR hold. Students must attempt the WPE prior to filing a Request to Graduate. The responsibility for acquiring the skills necessary to pass the examination is the student's. Regular courses in writing are available in the University or through Extended Education. (Please see Supplemental Instruction, below.) Counseling and other assistance are available through the Learning Assistance Center, LIB E-012, and Academic Advisors within the major department. The examination may be retaken as many times as necessary. A WPE Workbook is available for purchase at the CSULB Copy Center. A WPE Tutorial is available on a 3 1/2" disk for both MAC and IBM in the Computer Store area of the bookstore. Two 3-hour workshops are offered just prior to each test administration. Information regarding the administration of this examination may be obtained from the Office of Testing and Evaluation Services, SS/AD 216, (562) 985-4007. To cover the costs of administration and scoring, a fee will be charged each time the examination is taken.

#### Supplemental Instruction (S/I)

The University offers supplemental instruction for students who have experienced difficulty with the Writing Proficiency Examination or with certain courses which require intensive writing as a part of the course requirements.

#### S/I 050A,C. Preparation for the WPE (1) F,S

Non-baccalaureate-level course designed to prepare students for the Writing Proficiency Examination (WPE). S/I 050A is open to students who have not yet attempted the WPE. S/I 050C helps students to develop writing skills and to prepare for the ESSAY portion of the WPE. Credit/No Credit grading only. Each course is repeatable until the WPE is successfully passed. (Activity)

#### S/I 060. Supplemental Instruction (1) F,S

Non-baccalaureate credit course. This course is attached to specified sections of certain courses to provide directed group study. Each class is designed to teach learning strategies and techniques which will assist students in mastering course concepts. Emphasis is on skill development in reading comprehension, critical analysis of material, notetaking, essay-writing, and test review. Students must enroll concurrently in the associated course. (Lecture-Discussion) Credit/No Credit only. May be repeated for a maximum of 12 units with different associated courses.

#### Educational Opportunity Program (EOP)

The Educational Opportunity Program identifies potential candidates, guides them through the admissions and financial aid process, and provides academic and personal support. EOP provides orientation, academic and personal advisement, and study skills instruction to all students admitted into the program to insure the maximum opportunity for success in the University.

All EOP participants are expected to enroll in EOP 100 during their first semester of enrollment.

### EOP 100. EOP Orientation (2) F,S

An introduction and orientation to college life for students from backgrounds traditionally underrepresented within higher education. A review of campus and community resources available to support students participating in the Educational Opportunity Program. Instruction in various academic survival skills that are necessary for college success. Areas of review include: time management, research methodology and term paper development, test-taking strategies, and decision-making. Traditional grading only.

### Entry-Level Mathematics (ELM) Examination

All undergraduate students admitted to CSU in the Fall 1983 and after must take the Entry-Level Mathematics (ELM) test for placement in appropriate courses, unless they are otherwise exempt. First-time freshmen may qualify for an exemption on the basis of satisfactory performance on specified examinations (see the Admissions section of this catalog). Transfer students may be granted an exemption based upon satisfactory examination scores (see the Admissions section) or by the successful completion (with a grade of "C" or above) of a mathematics course that satisfies the General Education quantitative reasoning requirement.

Students who are not exempt must take this test during the first semester of attendance. The results of this test do not affect admission eligibility. Failure to comply with this requirement will result in a loss of future registration privileges and may lead to administrative probation and possible disqualification from future attendance (Section 41300.1 of Title 5, California Administrative Code, and CSU Executive Order 393).

Information Bulletins and registration materials for the ELM Test will be mailed to all who are subject to the requirement, or they may be obtained from the Office of Admissions and Records. Further information regarding the test may be obtained from the Office of Testing and Evaluation Services, SS/AD 216, (562) 985-4007. There is a \$16.00 registration fee for the ELM.

### Special Course Requirement

#### University (UNIV) 100. The University and Your Future (1)

All undergraduate students who enter this university with fewer than 56 transferable semester units shall complete a one-unit (15 hour) course which includes instruction on the following topic: (A) History and Mission of the University. This course must be completed during the first or second semester on campus. Credit/No Credit grading only.

University 100 includes an introduction to university traditions; to current issues in higher education (e.g., the role of general education, global interconnectedness, ethics); to academic freedom, tenure, and students' rights and responsibilities; and to services available at the university throughout the student's academic career (e.g., Career Development Center, Learning Assistance Center). It also includes a self-instructed component on the use of the University Library and campus information technologies.

University 100 is offered during the week before each regular semester, during the first five weeks of the semester, or as a two-day intensive class. Please consult the Schedule of Classes under "University 100" for information on class scheduling. Students who do not complete the requirement in their first two semesters of enrollment on campus will be disenrolled from the university for their third regular semester.

### University Courses (UNIV)

#### UNIV 300I. Odyssey (3) F

Prerequisites: General Education A requirements in composition, speech, and critical thinking. Upper-division status. Drawing upon departments from across the University, this course will investigate topics of great importance to our lives. The topics, or themes, will vary year by year. Students will learn how the methodologies of different disciplines approach a common problem. Course may be repeated for a maximum of 6 units. Traditional grading only.

#### University (UNIV) 301I. Odyssey (3) S

Prerequisites: General Education A requirements in composition, speech, and critical thinking. Upper-division status. Drawing upon departments from across the University, this course will investigate topics of great importance to our lives. The topics, or themes, will vary year by year. Students will learn how the methodologies of different disciplines approach a common problem. Course may be repeated for a maximum of 6 units. Traditional grading only.

#### University (UNIV) 400. The University in Your Future Student Leadership (1)

Prerequisites: Selected by University 100 Director. Students assist University 100 faculty in presentation of course. May be repeated for a maximum of 3 units. Credit/No Credit grading only.

# BIOLOGICAL SCIENCES

*College of Natural Sciences and Mathematics*

## Department Chair

Laura Kingsford

## Department Office

PH1-109

## Telephone/FAX

(562) 985-4806/(562) 985-8878

## Faculty

### Professors

Rajen S. Anand

James Archie

David M. Carlberg

Charles T. Collins

L.K. (Vern) Eveland

Henry C. Fung

Charles P. Galt

Kenneth M. Gregory

Ju-Shey Ho

Carol A. Itatani

Ira Jones

Balwant S. Khatra

Laura Kingsford

Lisa Klig

Steven L. Manley

Andrew Z. Mason

Donald L. Maurer

Alan C. Miller

Brenda M. Sanders

Terrence A. Shuster

Toni L. Stanton

### Associate Professors

Philip C. Baker

Editte Gharakhanian

David G. Huckaby

Edward Tjioe

### Assistant Professors

Judith Brusslan

Kevin Kelley

Niles Lehman

Antonia Wijte

### Department Secretary

Michelle Weber

Students desiring information should contact the Department Office for referral to one of the faculty advisors.

### Credential Advisor

William C. Ritz

### Undergraduate Advisors

Biology — David G. Huckaby

Marine Biology — Donald L. Maurer

Microbiology — Carol A. Itatani

Physiology — Toni L. Stanton

### Health Professions Advisors

L.K. (Vern) Eveland

Carol A. Itatani

Ira Jones

### Clinical Laboratory Scientist/Medical Technology Advisor

Carol Itatani

The Biological Sciences Department Advisory Council consists of individuals prominent in the community who represent a wide variety of biological disciplines, including professionals from industry and the health-related fields. They advise the Department regarding its instructional program and provide information concerning opportunities for interaction between the Department and the community and about employment opportunities.

### *The Biological Sciences*

The biological sciences include all of the areas of scientific endeavor centered around the general question of the nature of life. Such diverse areas as biochemistry, ecology, paleontology, and animal behavior are all part of the biological sciences. On this campus the biological sciences is distributed among three separate Departments in the College of Natural Sciences and Mathematics. The discipline of biochemistry is located in Chemistry and Biochemistry and the disciplines of invertebrate and plant paleontology are located in Geological Sciences. For information about the programs in these disciplines, consult the appropriate section of this Catalog. The remaining disciplines of the biological sciences represented in the College of Natural Sciences and Mathematics are located in the Department of Biological Sciences, which offers six degrees: a Bachelor of Science in Biology, a Bachelor of Science in Marine Biology, a Bachelor of Science in Microbiology, a Master of Science in Biology, and a Master of Science in Microbiology. The B.S. in Biology has, in addition to a general option, five specialized options in Botany, Cellular and Molecular Biology and Genetics, Ecology and Environmental Biology, Physiology, and Zoology. The B.S. in Microbiology has, in addition to a general option, a more specialized option in Medical Microbiology. See below for the specific requirements for each of these degrees and options.

The Department occupies facilities in four science buildings. Courses and student research in organismal biology and ecology are enhanced by a marine biology laboratory with an extensive seawater system, greenhouses, and research and teaching collections of algae, vascular plants, invertebrates (including insects), and vertebrates. Because the campus is near the ocean, mountains, and deserts, the Department is able to offer a number of field and laboratory courses in botany, ecology, entomology, marine biology, and vertebrate zoology. Courses and student research opportunities are available in biotechnology, experimental biology, and clinical laboratory scientist (medical technology). State-of-the-art facilities are available for graduate and undergraduate research in the W. M. Keck Cellular and Molecular Biology Laboratory, and electron microscope facility.

The Department of Biological Sciences also participates in the Desert Studies Consortium and the Ocean Studies Institute. Information on the latter program is listed in this Catalog under University Programs.

### *The Richard B. Loomis Research Award*

This annual departmental award provides supply and travel support for thesis research projects. Graduate students submit research proposals to the Department's Graduate Studies Committee, which grants funding to the more meritorious proposals.



### *Linda Warren Graham Medical Technology Scholarship*

The Linda Warren Graham Medical Technology Scholarship is available to senior microbiology majors who have been accepted into a Clinical Laboratory Scientist (or a Medical Technology) Internship program. Scholarship applications can be obtained from the Biological Sciences Department Office during the month of March prior to graduation.

### *Financial Support, Assistantships*

The Department of Biological Sciences offers a limited number of teaching associate and graduate assistant appointments. Forms requesting consideration for these appointments are available in the Department Graduate Office. Duties consist of approximately 20 hours per week devoted to preparation and/or instruction in general undergraduate laboratory classes. These appointments are limited to a maximum of six semesters per individual.

The Department also has a limited number of technical assistant positions as well as some hourly employment.

Several members of the faculty have grants which provide for research assistantships.

A number of scholarships are available through the University.

### *Graduate and Health Professional Preparation*

In addition to preparing students for careers in teaching, industry, and government, the undergraduate programs in this Department provide preparation for advanced study at the graduate level and for entry into various health professional schools. Students should consider the degree requirements listed in the Catalog as minimal; some graduate schools, professional schools, or careers may require additional coursework in mathematics, physics, chemistry, or biological sciences.

Students desiring entrance into a graduate school to obtain a master's or doctoral degree in some area of the biological sciences should determine the entrance requirements for the school(s) of interest early in their undergraduate years. Specifically, students contemplating graduate work in mathematically oriented areas of the biological sciences should consider taking more calculus (MATH 122, 123, 224, and 364A or 370A will substitute for MATH 119A and 119B) and those contemplating graduate work in chemically oriented areas should consider taking additional chemistry (CHEM 251; 320A,B; 377A,B; 441A,B).

Students desiring entrance into one of the various health-related professional schools including chiropractic, dentistry, medicine, optometry, osteopathy, pharmacy, podiatry, and veterinary, or to a graduate program in physical therapy should consult with the Pre-Health Professions Office of the College of Natural Sciences and Mathematics (FO5-104) for more information. Most of these schools do not require students to major in any particular discipline and many do not even require a bachelor's degree; rather, they want students who have done well in their major and who also took the prerequisite courses required by that particular school.

### *Facilitated Enrollment into Classes*

All entering students who declare a major in a degree program offered by this Department must participate in the College of Natural Sciences and Mathematics' Science Safari to

Success (for first time freshmen) or EONS (Enrollment and Orientation in the Natural Sciences and Mathematics for transfer students) Program. These programs are held in June-July for those starting in the Fall Semester and in January for those starting in the Spring Semester. Department advisors will be available to provide an overview of the students' chosen baccalaureate degree program, to assist with academic advisement, to provide information on the many career opportunities available, and to aid students in enrolling in classes. Contact the Student Access to Science Center (FO5-109) or Department Office for additional information.

## Bachelor of Science in Biology

This degree includes a general option in biology and five additional options for those desiring a more specialized program.

### Option in Biology Education (code 3-7620) (124 units)

This program is designed solely for students pursuing the Single Subject Teaching Credential in Science, Biological Sciences Concentration. Although designed to provide the required coursework in science to enter this credential program, students should keep themselves informed about any changes in the credential by referring to the section in this Catalog under Single Subject Teacher Education Program and contacting the Science Education Department. This option requires approximately 79-91 units in the major, of which 50-54 are in lower division and 29-37 are in upper division.

Lower Division: ASTR 100; BIOL 211A, B, 260; CHEM 111A, B; GEOL 102, 104, 160; MATH 119A or 122; MICR 200 or 211; NSCI 200; and PHYS 100A or 101A, 100B or 101B.

Upper Division: CHEM 327 or both 320A and B; and eight additional courses totaling 26-29 units in the biological sciences including BIOL 312, 340, 350, 370; one of these three plant biology courses: BIOL 328, 439, 447; one of these three animal biology courses: BIOL 313, 324, 332. The remaining two biological sciences courses should be chosen in consultation with an advisor; BIOL 495/MICR 495 is highly recommended. Either CHEM 441A, B or 448 will count but A/P 305, 306, 308I, 401; BIOL 303I; MICR 300I, 302I, 303; NSCI 492 will not count toward these two additional required courses.

Although PHYS 400I, EDSS 300C, SCED 403, and BIOL 303I or MICR 300I or 302I are not required in the major, the credential does require these courses. Students may want to take some or all of them prior to graduation.

### Option in Biology (code 3-7621) (124-132 units)

This option is designed for students pursuing careers that involve the study of life; it is especially appropriate for those contemplating graduate work in the biological sciences. This option gives the student a broad background involving coursework in most of the major areas of biology, without requiring specialization in any one particular field. Students in this option have more elective courses in their major than in the other, more specialized, options, which enables them to partially concentrate their studies in a particular area if they so choose. This option requires approximately 81-85 units in the major, of which 39-43 are in lower division and 42 are in upper division.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B; MATH 119A or 122, 119B or 123; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: CHEM 320A, B; at least 34 units in biological science including BIOL 340, 350, 370; A/P 340 & 340L or BIOL 447 & 447L; BIOL 313 or 324; one of BIOL 425, 427, 439; and 12-13 additional units selected from upper division courses in the Department of Biological Sciences. At least two of the courses selected to fulfill these additional units must have numbers between 410-499. Either CHEM 441A, B or 448 will count but A/P 305, 306, 308I, 401; BIOL 303I; MICR 300I, 302I, 303; NSCI 492 will not count toward these additional 12-13 units. Up to six of these additional units may be substituted from courses in other departments in the College of Natural Sciences and Mathematics upon approval by the undergraduate advisor. Students contemplating graduate work should consider taking 1-3 units of BIOL 496.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

### Option in Botany (code 3-7622) (124-132 units)

This option is designed primarily for those interested in careers involving the biology of plants and is particularly appropriate for those contemplating graduate work in this field. This option requires approximately 83-87 units in the major, of which 39-43 are in lower division and 44 are in upper division.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B; MATH 119A or 122, 119B or 123; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: 44 units including CHEM 320A, B, 441A, B; BIOL 340, 350 or 450, 370, 427, 439, 447, 447L. Remaining eight units selected in consultation with appropriate faculty advisor. ENGL 317 is acceptable but A/P 305, 306, 308I, 401; BIOL 303I; MICR 300I, 302I, 303; NSCI 492 are not acceptable toward these eight units. Students contemplating graduate work should consider taking 1-3 units of BIOL 496.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

### Option in Ecology and Environmental Biology (code 3-7623) (124-132 units)

This option is designed for students interested in careers involving the study of organisms in relation to their environment, either in private industry or government service, as well as those students contemplating graduate work in this field. This option requires approximately 90-99 units in the major, of which 43-47 are in lower division and 47-52 are in upper division.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B; GEOL 102, 104 or 105; MATH 119A or 122, 119B or 123; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: CHEM 320A, B; BIOL 312, 340, 350, 370, 427; A/P 340 & 340L or BIOL 447 & 447L; either BIOL 313 or 324; five additional courses including one of these 11 in organic diversity: BIOL 314, 315, 316, 413, 417, 419, 421, 423, 424, 425, 439; two of these 11 in ecology and environmental sci-

ence: BIOL 414, 450, 453, 454, 455, 457, 458, 460, 464, GEOG 440, 442; one of these four in quantitative biology: BIOL 456, 463, 465, 467; and another course from any of the preceding three lists or BIOL 351 or 353. With permission of the appropriate faculty advisor, three units of BIOL 496 is acceptable as this fifth additional course.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

### Option in Physiology (code 3-7624) (124-132 units)

This option is designed primarily for those interested in careers involving the study of function in animals, especially humans, and is particularly appropriate for those contemplating graduate work in this field or entering one of the health professions, such as medicine and physical therapy. This option requires approximately 80-84 units in the major, of which 39-43 are in lower division and 41 are in upper division.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B; MATH 119A or 122, 119B or 123; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: CHEM 320A, B, 441A, B; BIOL 340, 350, 370, one course in morphology and development from BIOL 332 or 433, either A/P 340 & 340L or 341 or 342 & 342L, nine additional units selected from A/P 340, 340L, 342, 342L, 441, 442, 443, 445, 446, 447, BIOL 473, MICR 330. Students contemplating graduate school should consider taking an additional 1-3 units of BIOL 496.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

### Option in Zoology (code 3-7625) (124-132 units)

This option is designed primarily for those interested in careers that involve the biology of animals and is particularly appropriate for those contemplating graduate work in this field. This option requires approximately 84-90 units in the major, of which 43-47 are in lower division and 41-43 are in upper division.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B; GEOL 102, 104 or 105; MATH 119A or 122, 119B or 123; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: CHEM 320A, B; A/P 340, 340L; BIOL 312, 332, 340, 350, 370, 313 or 316; at least one course selected from BIOL 324, 419, 421, 423, 424; and at least two additional courses in biological science totaling at least six units chosen in consultation with a faculty advisor. Either CHEM 441A, B or 448 will count but A/P 305, 306, 308I, 401; BIOL 303I; MICR 300I, 302I, 303; NSCI 492 will not count toward these six units. Students contemplating graduate work should consider taking 1-3 units of BIOL 496.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

## Option in Cellular and Molecular Biology and Genetics (code 3-7627) (124-132 units)

This option is designed primarily for those interested in careers that involve biology at the cellular and molecular levels and/or genetics and is particularly appropriate for those contemplating graduate work in these fields. This option requires approximately 83-90 units in the major, of which 44-48 are in lower division and 39-42 are in upper division. Students in this option might also want to pursue the Certificate in Biotechnology described elsewhere in this Catalog.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B; MATH 119A or 122, 119B or 123; MICR 211; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: Chem 320A, B, 441A, B; BIOL 340, 350, 370, 433, 473; one course selected from BIOL 468, 477L, MICR 452, both MICR 450 and 451, CHEM 443; one course selected from A/P 445, CHEM 547, BIOL 312, both 447 and 447L, 464, 465, 467, 477; and 2-3 units of BIOL 496.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

## Bachelor of Science in Marine Biology (code 3-7626) (124-132 units)

Rocky shores, sandy beaches, tidal wetlands, kelp forests, and the open ocean coupled with the anthropogenic activities of a major urban area provide the seascape for our Bachelor of Science in Marine Biology. This degree is designed for students seeking positions in private industry and governmental agencies and is also appropriate for those considering graduate work in marine biology and ecology. The program takes ready advantage of the region's diverse habitats with a strong field orientation, supported by the R. V. Yellowfin, an 80' teaching and research vessel. Coincidental with this environmental emphasis, faculty expertise in cellular and molecular biology applied to environmental problems in the Southern California Bight provide another area for student interests.

This degree requires approximately 87-97 units in the major, of which 42-46 are in lower division and 45-51 are in upper division. The number of units and particular blend of science and mathematics makes this a very challenging learning experience. However, the depth and strength of this degree provides a strong and flexible base to pursue a variety of careers. Obtaining a minor in another discipline, such as chemistry, microbiology, engineering, business, or computer science, may enhance one's marketability.

Lower Division: BIOL 201, 211A, B, 260; CHEM 111A, B; MATH 119A or 122, 119B or 123; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: CHEM 320A, B; A/P 340, 340L or BIOL 447, 447L; BIOL 313 or 413 or 417, 340, 350, 353, 370, 419, 425, GEOL 364 and 364L or 465 and 466; two courses selected from the following twelve in marine science: BIOL 313, 413, 414, 417, 422, 428, 454, 455, 458, 464, MICR 441, and, with permission of marine biology advisor, BIOL 490; one course selected from the following eight in methodology and techniques: BIOL 457, 463, 465, 467, 468, and, with permission of marine biology advisor, BIOL 496; GEOL 364 and 364L or 465 and 466.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

## Bachelor of Science in Microbiology

Microbiology is the study of microorganisms and their interactions with people and the environment. This degree includes a general option in microbiology and one additional option for those desiring a more specialized program in medical microbiology. Either option, with the inclusion of appropriate classes, may be utilized by pre-professional students who are preparing for medical, dental, pharmacy and veterinary school. A major in microbiology prepares students for a wide range of employment opportunities in clinical and public health fields, genetic engineering, environmentally related fields, and industries concerning food, pharmaceuticals and hospital supplies. There is a common core of courses for these varied educational and employment opportunities and specific programs can be arranged by counseling with advisors in this department. These baccalaureate degree programs are recognized by the American Society for Microbiology as meeting their core curriculum for the baccalaureate degree programs in microbiology.

### Microbiology (code 3-7654) (124-132 units)

This option has a broad nature that emphasizes the genetics and biochemistry of microorganisms and prepares students for graduate school and/or careers in industrial microbiology, molecular biology, and related areas. This option requires a total of 91-94 units in the major, of which 46-49 are in lower division and 45 are in upper division.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B, 251; MATH 119A or 122; MICR 211; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: BIOL 340; CHEM 320A, B, 441A, B; MICR 320, 330, 331, 452, 453, 471, 450 and 451 or BIOL 370, and 6 units from: MICR 322, 323, 425, 429, 432, 441, 473, 480, 490, 495, 496, BIOL 473, 477. The following courses are not acceptable toward these 6 units: MICR 300I, 302I, 303.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

### Option in Medical Microbiology (code 3-7655) (124-132 units)

This option emphasizes the host-parasite relationships of humans and microbes and prepares students for careers in clinical laboratory science (medical technology), medical research, and related areas. This option requires a total of 89-97 units in the major, of which 46-49 are in lower division and 43-48 are in upper division.

Lower Division: BIOL 211A, B, 260; CHEM 111A, B, 251; MATH 112 or 119A or 122; MICR 211; NSCI 200; PHYS 100A or 101A, 100B or 101B.

Upper Division: BIOL 340; CHEM 320A, B, 441A, B, 447; MICR 320, 322, 323, 330, 331, 452, and 6 units from: MICR 425, 429, 432, 441, 450, 451, 453, 471, 473, 480, 490, 495, or 496. The following courses are not acceptable towards these 6 units: MICR 300I, 302I, 303.

CSULB requires a "C" average in all upper division courses in the major taken at CSULB. For students who do not meet this requirement, the Department of Biological Sciences will allow graduation if they earn at least a "C" the last time they complete each upper division course in their major at CSULB.

### Minor in Biology (code 0-7621)

A minimum of 19 units is required for the minor.

Lower Division: BIOL 211A, B. (211A requires CHEM 111A; 211B requires CHEM 111B.)

Upper Division: A minimum of nine units selected from upper division biology courses with at least one course selected from the 400 series. The following courses are not acceptable toward these nine units: A/P 305, 307, 308I, 401; BIOL 301, 302, 305; MICR 300I, 302I, 303, 429.

### Minor in Microbiology (code 0-7654)

A minimum of 21 units which must include:

Lower Division: MICR 211.

Upper Division: MICR 320, 330, and 452; plus a minimum of five units from the following: MICR 322, 441, 450, 471, and 473.

### Minor in Physiology (code 0-7624)

A minimum of 18 upper division units. Twelve of these 18 units must be selected from the following courses: A/P 307, 340, 340L, 342, 342L, 442, 443, 445, 446, 447, 490. The other six of these eighteen units must be selected from other courses in the above list or from BIOL 473; CHEM 441A,B, 443, or 448. At least one of the upper division courses taken for this minor must have a laboratory. Most of these upper division courses require CHEM 111A, B and BIOL 211A, B as prerequisites; some have other prerequisites in addition.

### Certificate Program in Biomedical Art (code 1-5010)

The Certificate Program in Biomedical Art is an interdisciplinary program sponsored by the Art and Biological Sciences Departments. Requirements for the certificate are listed in the Art section of this Catalog. Co-directors of the CSULB biomedical art program are in Art, Mr. Peter Mendez; and in Biological Sciences, Dr. Kenneth Gregory. Questions may be addressed to them during office hours, which are listed in the respective departmental offices.

### Certificate in Biotechnology (code 1-7060)

Biotechnology is a rapidly growing field which encompasses many domains of science. Specifically, biotechnology refers to a process which ultimately yields a product. The products can be loosely subdivided into five categories; biological organisms with novel traits, DNAs, RNAs, proteins, and compounds. The Undergraduate Certificate in Biotechnology is the integrated use of specific offerings of the College of Natural Sciences and Mathematics, including the departments of Biological Sciences and Chemistry and Biochemistry. Laboratory facilities and selected courses will serve to provide a fun-

damental background in the theory and techniques of biotechnology. The certificate may be earned in conjunction with or subsequent to a baccalaureate degree. Courses offered for the certificate may be used to satisfy, as appropriate, major or minor requirements.

### Prerequisites for Admission

1. Completion of the following courses with a grade of "C" or better (or permission of the biotechnology certificate program director): CHEM 111A, B; CHEM 320A, B; CHEM 441A, B; BIOL 340; BIOL 370; MICR 211.

### Requirements

1. A baccalaureate degree (can be concurrent);
2. Completion of the program's prerequisite course requirements;
3. Approval by the program director;
4. Completion of the Core Curriculum: BIOL 477/577 (3); BIOL 477L/577L (4) or NSCI 492 (3); BIOL 473/573 (3); MICR 480/580 (1); Additional 3 units to be selected in consultation with the program director;
5. Completion of 3 units consisting of an approved research project in biotechnology to be taken from one or more of the following: BIOL 496; CHEM 496; or MICR 496 (undergraduate students); BIOL 697; CHEM 697; or MICR 697 (graduate students);
6. Total Units Required for Certificate: 16-17 units

### Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the College of Natural Sciences and Mathematics must petition the appropriate department for prior approval to enroll in specific courses. This policy applies to concurrent enrollment or summer enrollment. University policy must also be met. See 'Concurrent Enrollment' and 'Transfer of Undergraduate Credit' in this Catalog. Courses not receiving prior approval will not be accepted for credit by the department.

### Master of Science in Biology (code 6-7621)

The available programs in this degree cover a wide spectrum of biology and include both laboratory and field study. This degree requires a thesis based on original scientific research; a list of research areas with the names of faculty specializing in these areas can be obtained from the Department's Graduate Office.

### Admission to the Department

### Prerequisites

In addition to the prerequisites for entrance into CSULB as a graduate student stated previously in this Catalog under Graduate Degrees and Post Baccalaureate Studies, the Department of Biological Sciences requires:

1. A bachelor's degree in the biological or related sciences with minimum course work similar to the lower division requirements of a degree program in the Department of Biological Sciences, CSULB, including cell biology and statistics, ecology, and genetics (other undergraduate degrees will be considered by the Graduate Studies Committee);

2. An undergraduate grade point average in all completed science and mathematics courses of at least 2.70, or a grade point average of at least 3.00 in the last 40 semester (60 quarter) units of science and mathematics courses completed; and
3. The Graduate Record Examination Subject Test in Biology or the Subject Test in Biochemistry, Cell, and Molecular Biology, which must have been taken prior to applying to the Department. Most students who apply with a score less than the 50th percentile on this test will be denied admittance to the Department. The GRE Subject Test must have been taken within five years prior to the intended admission date.

A student who does not meet these minimum entrance prerequisites must obtain a faculty sponsor in order to be considered for admittance.

### Application

Prospective graduate students in M.S. in Biology, including CSULB graduates, must formally apply for admission to CSULB as described previously in this Catalog and must also apply directly to the Department of Biological Sciences. All applicants must submit the following documents directly to the Department no later than 15 March for the fall semester or 15 October for the spring semester to receive consideration for admission:

1. Departmental Application Form, available from the Department's Graduate Office;
2. Official transcripts of all college level academic work including that done at CSULB (these are in addition to those transcripts required for general graduate admission to CSULB);
3. Three letters of recommendation from persons familiar with the applicant's academic performance and research potential (if applying for a teaching associate position, the letters must refer to the applicant's potential to teach laboratory sections in the biological sciences); and
4. Official report of scores on the Graduate Record Examination Subject Test in Biology or the Subject Test in Biochemistry, Cell, and Molecular Biology. The applicant should have taken this examination well prior to applying to the Department, because the official score must reach the Department by the deadlines above.

These materials must be submitted to the Department's Graduate Office.

### Review by the Graduate Studies Committee

The Graduate Studies Committee will review all folders completed by the deadlines and either accept the applicant as a Classified or Conditionally Classified graduate student or deny admission. Acceptance is competitive and the GPA, the GRE Subject Test score, and the letters of recommendation will be weighed in the decision to accept or reject an applicant. All accepted students must contact the Departmental Graduate Advisor prior to their initial semester for counsel and orientation.

### Admission to the Department of Biological Sciences as a Classified Graduate Student (7621-052)

The Department of Biological Sciences will admit as a Classified graduate student any applicant who:

1. has met all prerequisites,
2. has a complete folder of all required documents, and

3. has obtained acceptance by a faculty member as the Chair of the student's Thesis Committee. The student should then set up a program (see "The Program of Study", below).

### Admission to the Department of Biological Sciences as a Conditionally Classified Graduate Student (7621-051)

An applicant who fails to meet the criteria above for Classified admission to the Department and who falls into one of the following four categories may be considered by the Graduate Studies Committee for admission as Conditionally Classified graduate student:

1. An applicant with course and/or unit deficiencies. The Graduate Studies Committee will determine what deficiencies each applicant has and indicate on the back of the Department Application Form which course(s) the applicant must take to make up those deficiencies. These courses are in addition to the minimum 30 units on the student's Program of Study (see below). The applicant must make up all such deficiencies before attaining Classified status;
2. An applicant with GPA deficiencies. An applicant with an undergraduate GPA in science and math courses between 2.50 and 2.75 and a GPA in the last 40 semester (60 quarter) units of science and math courses between 2.75 and 3.00 may secure admission as a Conditionally Classified graduate student. The applicant must first obtain sponsorship from a Department of Biological Sciences faculty member; this faculty member must indicate in writing to the Graduate Studies Committee willingness to serve as the Chair of the applicant's thesis committee and the reasons why the Graduate Studies Committee should admit the applicant. Thus, an applicant with low GPA must contact potential thesis advisors before the Graduate Studies Committee can consider the application. In addition, an applicant receiving the Conditionally Classified status must complete, with a grade of "A" or "B", three approved courses totaling at least nine units acceptable to the Graduate Studies Committee and the Department Chair before attaining Classified status. These approved courses may appear on the student's Graduate Program of Study. If the applicant receives less than a "B" in any of the three courses, the applicant will be dropped from the M.S. in Biology program. An applicant who fails to meet the GPA criteria for normal, Classified admission and has either an undergraduate GPA in science and mathematics courses of less than 2.50 or a GPA in the last 40 semester (60 quarter) units of science and mathematics courses of less than 2.75 is not eligible for admission to the M.S. in Biology degree program;
3. An applicant who has scored below the 50th percentile on the GRE Subject Test; and
4. An applicant who meets all prerequisites but who does not yet have a Chair for the Thesis Committee. It is the responsibility of the student to obtain a Chair and set up a graduate program by the end of the second semester in residence following admission to the Master of Science program or they will be dropped from the program.

### The Program of Study

After admission to the Department as a Classified or Conditionally Classified graduate student, the student in consultation with the Thesis Chair, must establish a Program of Study

that includes a program of classes and a thesis proposal. The student and Thesis Committee Chair will select at least two additional members to serve on the student's Thesis Committee. The Departmental Graduate Advisor serves as an ex-officio member of all thesis committees. Each student must prepare a written thesis proposal for approval by the student's Thesis Committee. The Thesis Committee will meet with the student to determine what courses the student must take and indicate them on the M.S. in Biology Graduate Program Form.

The program of classes must include six units of Thesis (BIOL 698), one to three units of Directed Research (BIOL 697), one unit of Seminar (MICRO 580 or BIOL 580), and two units from: BIOL 661, 662, 663, 664, 665, A/P 661, CHEM 595A; these may be repeated if the topic covered is different. Of the minimum 30 units, no more than three may come from BIOL 661-665, A/P 661, and CHEM 595A; no more than six may come from transfer credit; and no more than one 300-level course may be included.

The Program of Study must be established before the end of the second semester after admission to the Department; in addition, the University Writing Proficiency Examination must be passed and a score at, or above, the 50th percentile on the Graduate Record Examination Subject Test in Biology or in Biochemistry, Cell, and Molecular Biology must be achieved by this time. Failure to meet these requirements will result in dismissal from the Department's M.S. in Biology program.

#### Advancement to Candidacy

In addition to the general University requirements stated previously under Post-Baccalaureate and Graduate Degrees in this Catalog, the student must complete the following steps before receiving Candidate status (7621-053) in the Department of Biological Sciences:

1. Admission to the Department of Biological Sciences Master's Degree program as a Classified graduate student (see above);
2. Achievement of a score at, or above, the 50th percentile on the Graduate Record Examination Subject Test in Biology or the Subject Test in Biochemistry, Cell, and Molecular Biology. This requirement must be met by the end of the second semester in residence. Normally, students not meeting this requirement will be dropped from the program. Only in cases where English is not the student's native language or if a disability impedes the student's performance, may an alternative be petitioned. In these cases, the Chair of her/his Thesis Committee must petition, in writing, the Graduate Studies Committee to provide an alternate method for meeting this requirement. This petition must provide full documentation of the student's progress to date, professional promise, and a schedule for meeting all degree requirements. If granted, the alternate method will consist of an exam, oral and/or written, in which the student must demonstrate extensive knowledge of the major areas of biology. The exam committee will consist of the Department Graduate Advisor and three faculty members selected by the Graduate Studies Committee. No member of the student's Thesis Committee may serve on this committee; and
3. Establishment of a Thesis Committee and Program of Study (see above). Upon evidence of satisfactory academic progress and passing of the University Writing

Proficiency Examination, the Thesis Committee will recommend the student for advancement to candidacy by forwarding its recommendation to the Department Graduate Advisor. This should occur at least one year before graduation. Upon approval by the Associate Dean, the student will attain the status of Classified graduate standing.

#### Requirements for the Master of Science in Biology (code 6-7621)

In addition to the general University requirements stated previously in this Catalog, the student must meet the following requirements before receiving the degree of Master of Science in Biology. The requirements are:

1. Advancement to candidacy (see above);
2. Maintenance of a 3.00 ("B" average), or better, overall graduate grade-point average (includes all upper-division and graduate level courses taken since admission to this University and after completion of the baccalaureate degree) and graduate program GPA. If either GPA falls below 3.00, it must be elevated to a 3.00 at the end of the following semester or the student will be dropped from the M.S. in Biology program;
3. Completion of a written thesis and an oral defense of this thesis, followed by a public presentation of the thesis research. The members of the candidate's Thesis Committee must have approved the thesis and the defense before a student may schedule the public presentation. The student may not defend the thesis or give a public presentation during the summer session); and
4. Serve as a teaching associate or graduate assistant. Under some circumstances, this requirement may be waived.

Requests to graduate must be received by Enrollment Services approximately 6 months in advance of the expected graduation date (Check the Schedule of Classes for the date).

These requirements must be completed within 6 years from when the first course on the Program of Study was completed, including academic leaves, or the student's degree program will be terminated.

#### Master of Science in Microbiology (code 6-7654)

This degree is available to qualified students preparing for professional careers in industry and government and for further studies at the doctoral level. In addition, a Master's degree in Microbiology, combined with appropriate courses in education, can be utilized for a community college teaching credential.

#### Admission to the Department

##### Prerequisites

In addition to the prerequisites for entrance into CSULB as a graduate student stated previously in this Catalog under Graduate Degrees and Post Baccalaureate Studies, the Department of Biological Sciences requires:

1. A bachelor's degree with a major in microbiology or related fields from an accredited institution that includes the following courses (or their equivalents):  
General Microbiology (with laboratory)\*,  
Statistics,  
Cell or Molecular Biology\*,  
Biochemistry (1 year)\*, and

Two upper division Microbiology Laboratory courses equivalent to courses in the Department of Biological Sciences, CSULB.

The previous courses marked with \* must be completed with a grade of "A" or "B". Applicants shall have completed 24 semester units or their equivalent of upper division courses appropriate for a baccalaureate degree in microbiology or related fields.

2. An undergraduate grade point average in all completed science and mathematics courses of at least 2.70, or a grade point average of at least 3.00 in the last 40 semester (60 quarter) units of science and mathematics courses completed; and
3. The Graduate Record Examination Subject Test in Biology or the Subject Test in Biochemistry, Cell, and Molecular Biology, which must have been taken prior to applying to the department. Most students who apply with a score less than the 50th percentile on this test will be denied admittance to the Department. The GRE Subject Test must have been taken within 5 years prior to the intended admission date.

A student who does not meet these minimum entrance prerequisites must obtain a faculty sponsor in order to be considered for admittance.

#### Application

Prospective graduate students in M.S. in Microbiology, including CSULB graduates, must formally apply for admission to CSULB as described previously in this Catalog and must also apply directly to the Department of Biological Sciences. All applicants must submit the following documents directly to the Department no later than 15 March for the fall semester or 15 October for the spring semester to receive consideration for admission:

1. Departmental Application Form, available from the Department's Graduate Office;
2. Official transcripts of all college level academic work including that done at CSULB; these are in addition to those transcripts required for general graduate admission to CSULB;
3. Three letters of recommendation from persons familiar with the applicant's academic performance and research potential (if applying for a teaching associate position, the letters must refer to the applicant's potential to teach laboratory sections in the biological sciences); and
4. Official report of scores on the Graduate Record Examination Subject Test in Biology or the Subject Test in Biochemistry, Cell, and Molecular Biology. The applicant should have taken this examination well prior to applying to the Department, because the official score must reach the Department by the deadlines above.

These materials must be submitted to the Department's Graduate Office.

#### Review by the Graduate Studies Committee

The Graduate Studies Committee will review all folders completed by the deadlines and either accept the applicant as a Classified or Conditionally Classified graduate student or deny admission. Acceptance is competitive and the GPA, the GRE Subject Test score, and the letters of recommendation will

be weighed in the decision to accept or reject an applicant. All accepted students must contact the Graduate Advisor prior to their initial semester for counsel and orientation.

#### Admission to the Department of Biological Sciences as a Classified Graduate Student (7654-052)

The Department of Biological Sciences will admit as a Classified graduate student any applicant who:

1. has met all prerequisites;
2. has a complete folder of all required documents; and
3. has obtained acceptance by a faculty member as the Chair of the student's Thesis Committee. The student should then set up a program (see "The Program of Study", below).

#### Admission to the Department of Biological Sciences as a Conditionally Classified Graduate Student (7654-051)

An applicant who fails to meet the criteria above for Classified admission to the Department and who falls into one of the following three categories may be considered by the Graduate Studies Committee for admission as Conditionally Classified graduate student:

1. An applicant with course and/or unit deficiencies. The Graduate Studies Committee will determine what deficiencies each applicant has and indicate on the back of the Department Application Form which course(s) the applicant must take to make up those deficiencies. These courses are in addition to the minimum 30 units on the student's Program of Study (see below). The applicant must make up all such deficiencies before attaining Classified status;
2. An applicant with GPA deficiencies. An applicant with an undergraduate GPA in science and mathematics courses between 2.50 and 2.75 and a GPA in the last 40 semester (60 quarter) units of science and mathematics courses between 2.75 and 3.00 may secure admission as a Conditionally Classified graduate student. The applicant must first obtain sponsorship from a Department of Biological Sciences faculty member; this faculty member must indicate in writing to the Graduate Studies Committee willingness to serve as the Chair of the applicant's thesis committee and the reasons why the Graduate Studies Committee should admit the applicant. Thus, applicants with a low GPA must contact potential thesis advisors before the Graduate Studies Committee can consider the application. In addition, an applicant receiving the Conditionally Classified status must complete, with a grade of "A" or "B", three approved courses totaling at least nine units acceptable to the Graduate Studies Committee and the Department Chair before attaining Classified status. These approved courses may appear on the student's Graduate Program of Study. If the applicant receives less than a "B" in any of the three courses, the applicant will be dropped from the M.S. in Microbiology program. An applicant who fails to meet the GPA criteria for normal, Classified admission and has either an undergraduate GPA in science and mathematics courses of less than 2.50 or a GPA in the last 40 semester (60 quarter) units of science and mathematics courses of less than 2.75 is not eligible for admission to the M.S. in Microbiology degree program.
3. An applicant who has scored below the 50th percentile on the GRE Subject Test; and

- An applicant who meets all prerequisites but who does not yet have a Chair for the Thesis Committee. It is the responsibility of the student to obtain a Chair and set up a graduate program by the end of the second semester in residence following admission to the Master of Science program or they will be dropped from the program.

#### The Program of Study

After admission to the Department as a Classified or Conditionally Classified graduate student, the student, in consultation with the Thesis Chair, must establish a Program of Study that includes the program of classes and a thesis proposal. The student and Thesis Committee Chair will select at least two additional members to serve on the student's Thesis Committee. The Departmental Graduate Advisor serves as an ex-officio member of all thesis committees. Each student must prepare a written thesis proposal for approval by the student's Thesis Committee. The Thesis Committee will meet with the student to determine what courses the student must take and indicate them on the M.S. in Microbiology Graduate Program Form.

The program of classes will include the completion of a minimum of 30 semester units. At least 20 of these units must be in the 500-600 level courses of which a minimum of 18 units must be in the Microbiology 500-600 series including 2 courses in the Microbiology 550 series; Biology 568 may be substituted for one of the Microbiology 550 courses. Required courses, if not taken previously, include: MICR 450 or an upper division/graduate course in genetics; MICR 471 or an upper division/graduate course in cell physiology; MICR 550A-F courses (minimum: any two of the MICR 550 courses); MICR 695 (minimum of one and a maximum of two enrollments in different topic areas); MICR 697 (maximum of 3 units); and MICR 698 (maximum of 6 units). Other elective units included in the graduate program must be 400-600 level courses acceptable to the University and microbiology degree program. No 300-level courses may be included.

The Program of Study must be established before the end of the second semester after admission to the Department; in addition, the University Writing Proficiency Examination must be passed and a score at, or above, the 50th percentile on the Graduate Record Examination Subject Test in Biology or in Biochemistry, Cell, and Molecular Biology must be achieved by this time. Failure to meet these requirements will result in dismissal from the Department's M.S. in Microbiology program.

#### Advancement to Candidacy

In addition to the general University requirements stated previously under Post-Baccalaureate and Graduate Degrees in this Catalog, the student must complete the following steps before receiving Candidate status (7654-053) in the Department of Biological Sciences:

- Admission to the Department of Biological Sciences Master's Degree program as a Classified graduate student (see above);
- Achievement of a score at, or above, the 50th percentile on the Graduate Record Examination Subject Test in Biology or the Subject Test in Biochemistry, Cell, and Molecular Biology. This requirement must be met by the end of the second semester in residence. Normally, students not meeting this requirement will be dropped from the program. Only in cases where English is not the student's native

language or if a disability impedes the student's performance may an alternative be petitioned. In these cases, the Chair of her/his Thesis Committee must petition, in writing, the Graduate Studies Committee to provide an alternate method for meeting this requirement. This petition must provide full documentation of the student's progress to date, professional promise, and a schedule for meeting all degree requirements. If granted, the alternate method will consist of an exam, oral and/or written, in which the student must demonstrate extensive knowledge of the subject areas covered in the appropriate GRE Subject Test. The exam committee will consist of the Department Graduate Advisor and three faculty members selected by the Graduate Studies Committee. No member of the student's Thesis Committee may serve on this committee; and

- Establishment of a Thesis Committee and Program of Study (see above). Upon evidence of satisfactory progress and passing of the University Writing Proficiency Examination, the Thesis Committee may recommend the student for advancement to candidacy by forwarding its recommendation to the Department Graduate Advisor, Department Chair, and Associate Dean for Graduate Accountability in the College of Natural Sciences and Mathematics. This should occur at least one year before graduation. Upon approval by the Associate Dean, the student will attain the status of Classified graduate standing.

#### Requirements for the Master of Science in Microbiology (code 6-7654)

In addition to the general University requirements stated previously in this Catalog, the student must meet the following requirements before receiving the degree of Master of Science in Microbiology. The requirements are:

- Advancement to candidacy (see above);
- Maintenance of a 3.00 ("B" average), or better, overall graduate grade point average (includes all upper-division and graduate level courses taken since admission to this University and after completion of the baccalaureate degree) and graduate program GPA. If either GPA falls below 3.00, it must be elevated to a 3.00 at the end of the following semester or the student will be dropped from the M.S. in Microbiology program;
- Completion of a written thesis and an oral defense of this thesis, followed by a Public presentation of the thesis research. The members of the candidate's Thesis Committee must have approved the thesis and the defense before a student may schedule the public presentation. The student may not defend the thesis or give a public presentation during the summer session; and
- Serve as a teaching associate or graduate assistant. Under some circumstances, this requirement may be waived.

Requests to graduate must be received by Enrollment Services approximately 6 months in advance of the expected graduation date (Check the Schedule of Classes for the date).

These requirements must be completed within 6 years from when the first course on the Program of Study was completed, including academic leaves, or the student's degree program will be terminated.



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## Anatomy and Physiology Courses (A/P)

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Students pursuing a major and/or a minor in this Department may receive unit credit for courses marked with the symbol '##' as a general elective but may not apply the units toward the specific or elective requirements for any degree or option in this Department. Majors in this Department may, however, take, for general education purposes, interdisciplinary courses offered by this Department. All other courses in this Department are open to majors and minors but by traditional grading only. Courses with an asterisk may be used in graduate programs.

### Lower Division

#### 107. ## Human Biology (4) F,S

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010); four years of high school English (or ENGL 001). A brief survey of human biology focusing on anatomy, physiology, and development of cells, tissues, organs, and organ systems; including molecular biology, genetics, ecology, evolution, and diversity. Specifically designed for non-science majors. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

#### 206. ## Essentials of Pharmacology (2) F,S

Prerequisites: A/P 207. A systematic study of drugs, their classification, methods and routes of administration, therapeutic and toxic effects with emphasis on nursing implications. Not designed for majors in the College of Natural Sciences and Mathematics. Not open to students with credit in A/P 246. (Lecture 2 hrs.)

#### 207. ## Human Physiology (4) F,S

Prerequisites: Four years of high school English (or ENGL 001); three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010). General introduction to the functional integration of human body systems. Designed for majors in biomedical engineering, physical education, and the allied health fields. Not open to students with a "C" or better in A/P 209. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

#### 208. ## Human Anatomy (4) F,S

Prerequisites: Four years of high school English (or ENGL 001); three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010). The gross anatomy, histology, and neuroanatomy of the human body. Designed for majors in physical education and the allied health fields. Not open to students with a "C" or better in A/P 202. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

### Upper Division

#### 305. ## Pathophysiology (3) F,S

Prerequisites: A/P 207, 208; CHEM 302; MICR 200. Pathogenesis and pathophysiology of common disorders of human nervous, musculoskeletal, endocrine, cardiovascular, respiratory, excretory, digestive and reproductive systems with emphasis on the physiological basis of the disease process and clinical correlations. Not designed for majors in the College of Natural Sciences and Mathematics. Not open to students with credit in A/P 345. (Lecture 3 hrs.)

#### 306.## Human Prosection (3) F, odd years

Prerequisites: A/P 208 or BIOL 332 and consent of instructor. Detailed regional dissection of the human body with emphasis on dissection techniques. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required. Traditional grading only.

#### 308I. ## Human Body and Mind (3) F,S

Prerequisites: ENGL 100 and upper division status. A course designed to facilitate understanding of the human being as an integrated physiological and psychological entity. It presents clear and simple explanations of various aspects of the human body's function, development and care, and explores the interaction between body and mind in physiological, medical and psychological terms. (Lecture 3 hrs.)

#### \*340. Comparative Animal Physiology (3) F,S

Prerequisites: BIOL 211A,B with a grade of "C" or better. Comparison of the fundamental physiological processes of the major animal phyla. (Lecture 3 hrs.)

#### \*340L. Laboratory in Comparative Animal Physiology (1) F,S

Prerequisite: A/P 340 (may be taken concurrently). Laboratory course designed to acquaint students with direct observation and measurement of physiological processes in various animal groups, both invertebrate and vertebrate. (Laboratory 3 hrs.) A course fee may be required.

#### 341. Physiology for Therapists I (4) F,S

Prerequisites: BIOL 211A, B; CHEM 111A, B; PHYS 100A or 101A, 100B or 101B; 100 hours of documented exposure to the practice of physical therapy in a variety of settings; and permission of instructor. Mechanisms of action and interaction of the physiological body systems with emphasis on the nervous and endocrine systems and skeletal and smooth muscle. Pathological and clinical considerations will also be presented. Traditional grading only for majors/minors. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

#### \*342. Mammalian Physiology (3) F,S

Prerequisites: BIOL 211A,B with a grade of "C" or better. Recommended: PHYS 100A-B. A course dealing with the function of the various mammalian body systems, especially of humans. Emphasis will be placed on the integration of homeostatic mechanisms of the nervous, muscular, endocrine, cardiovascular, respiratory, renal, digestive and reproductive systems. (Lecture 3 hrs.)

#### \*342L. Laboratory in Physiology (1) F,S

Prerequisite: A/P 342 (may be taken concurrently.) Experiments and exercises designed to provide laboratory experience in, and illustration of, physiological principles and mechanisms of interaction among the various body systems. (Laboratory 3 hrs.) A course fee may be required.

#### 401. ## Biology of Human Aging (3)

Prerequisites: A/P 107 or 207 or BIOL 200. Biological processes associated with aging in humans. Emphasis on both cellular and organ aging. Not designed for majors in the College of Natural Sciences and Mathematics. (Lecture 3 hrs.)

#### 441. Physiology for Therapists II (3) F,S

Prerequisites: A/P 341; and permission of instructor. Mechanisms of action and interaction of the physiological body systems with emphasis on the cardiovascular, renal, and respiratory systems. Pathological and clinical considerations will also be presented. Traditional grading only for majors/minors. (Lecture 3 hrs.)

#### 442./542. Neurophysiology (3) F

Prerequisites: PHYS 100A, B; six units selected from A/P 340, 342, or 440. (Undergraduates register in A/P 442; graduates register in A/P 542.) Study of the mechanisms by which excitable cells function and of the sensory, motor, and integrative systems in which they participate. Representative examples will be selected from vertebrate and invertebrate phyla. (Lecture 3 hrs.)

#### 443./543. Endocrinology (3) S

Prerequisites: CHEM 327 or 320A; six units selected from BIOL 340, A/P 340, 342, 442/542, 447/547, CHEM 441A, or 448. (Undergraduates enroll in A/P 443; graduates enroll in A/P 543.) Role of the endocrines in vertebrate and invertebrate adjustment to changes in the internal and external environment. (Lecture 3 hrs.)

#### 445./545. Metabolic Regulation (3) F

Prerequisites: CHEM 441B or A/P 443/543. (Undergraduates register in A/P 445; graduates register in A/P 545.) Study of molecular mechanisms by which intermediary metabolism is regulated in various mammalian tissues with emphasis on mechanisms of hormone action and their role in the regulation of some key enzymes of carbohydrate, fat and protein metabolism. (Lecture 3 hrs.)

#### 446./546. Respiratory and Renal Physiology (3) F

Prerequisites: A/P 340 or 342; PHYS 100A, B. (Undergraduates enroll in A/P 446; graduates enroll in A/P 546.) Functions of and interactions between the respiratory and renal systems of mammals. (Lecture 3 hrs.)

447./547. Cell and Molecular Neurobiology (3) S  
Prerequisites: Six units selected from BIOL 340; A/P 340, 442, 443; CHEM 441A, B. (Undergraduates register in A/P 447; graduates register in A/P 547.) Study of the molecular, cellular, and developmental principles that underlie the functioning of the nervous system in the control of physiological and behavioral processes. Focus on mechanisms of electrical signaling and principles of synaptic biochemistry, development, and plasticity. (Lecture 3 hrs.)

490./590. Special Topics in Physiology (1-3)  
Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in A/P 490; graduates register in A/P 590.) Topics from selected areas of physiology. Course content will vary from section to section. May be repeated for credit for a maximum of six units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Lecture 1-3 hrs.)

490L./590L. Special Topics Laboratory in Physiology (1-2)  
Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in A/P 490L; graduates register in A/P 590L.) Topics from selected areas of physiology. Course content will vary from section to section. May be repeated for credit for a maximum of four units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Laboratory 3 or 6 hrs.) A course fee may be required.

## Graduate Division

542./442. Neurophysiology (3) F  
Prerequisites: PHYS 100A, B; six units selected from A/P 340, 342, or 440. (Undergraduates register in A/P 442; graduates register in A/P 542.) Study of the mechanisms by which excitable cells function and of the sensory, motor, and integrative systems in which they participate. Representative examples will be selected from vertebrate and invertebrate phyla. (Lecture 3 hrs.)

543./443. Endocrinology (3) S  
Prerequisites: CHEM 327 or 320A; six units selected from BIOL 340, A/P 340, 342, 442/542, 447/547, CHEM 441A, or CHEM 448. (Undergraduates enroll in A/P 443; graduates enroll in A/P 543.) Role of the endocrines in vertebrate and invertebrate adjustment to changes in the internal and external environment. (Lecture 3 hrs.)

545./445. Metabolic Regulation (3) F  
Prerequisites: CHEM 441B or A/P 443/543. (Undergraduates register in A/P 445; graduates register in A/P 545.) Study of molecular mechanisms by which intermediary metabolism is regulated in various mammalian tissues with emphasis on mechanisms of hormone action and their role in the regulation of some key enzymes of carbohydrate, fat and protein metabolism. (Lecture 3 hrs.)

546./446. Respiratory and Renal Physiology (3) F  
Prerequisites: A/P 340 or 342; PHYS 100A, B. (Undergraduates enroll in A/P 446; graduates enroll in A/P 546.) Functions of and interactions between the respiratory and renal systems of mammals. (Lecture 3 hrs.)

547./447. Cell and Molecular Neurobiology (3) S  
Prerequisites: Six units selected from BIOL 340; A/P 340, 542, 543; CHEM 441A, B. (Undergraduates register in A/P 447; graduates register in A/P 547.) Study of the molecular, cellular, and developmental principles that underlie the functioning of the nervous system in the control of physiological and behavioral processes. Focus on mechanisms of electrical signaling and principles of synaptic biochemistry, development, and plasticity. (Lecture 3 hrs.)

590./490. Special Topics in Physiology (1-3)  
Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in A/P 490; graduates register in A/P 590.) Topics from selected areas of physiology. Course content will vary from section to section. May be repeated for credit for a maximum of six units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Lecture 1-3 hrs.)

590L./490L. Special Topics Laboratory in Physiology (1-2)  
Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in A/P 490L; graduates reg-

ister in A/P 590L.) Topics from selected areas of physiology. Course content will vary from section to section. May be repeated for credit for a maximum of four units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Laboratory 3 or 6 hrs.) A course fee may be required.

661. Seminar in Anatomy and Physiology (1)  
Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques. (Seminar 1 hr.)

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## Biology Courses (BIOL)

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Students pursuing a major and/or a minor in this Department may receive unit credit for courses marked with the symbol '# #' as a general elective but may not apply the units toward the specific or elective requirements for any degree or option in this Department. Majors in this department may, however, take, for general education purposes, interdisciplinary courses offered by this Department. All other courses in this Department are open to majors and minors but by traditional grading only. Courses with an asterisk may be used in graduate programs.

### Lower Division

100. ## Biology of the Human Environment (3) F,S  
Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Biological perspective on the interaction between humans and their environment. Specifically designed for non-science majors. (Lecture 3 hrs.)

200. ## General Biology (4) F,S  
Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. A brief survey of the major areas of biology including cell biology, genetics, evolution, phylogeny, plant and animal anatomy and physiology, ecology, and behavior. Specifically designed for non-science majors. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

201. ## Marine Natural History (3) F,S  
Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Scientific approach to the study of marine organisms and their relationships to the environment. Emphasis on human interaction with marine ecosystems. Specifically designed for non-science majors. (Lecture 2 hrs., laboratory and field 3 hrs.) Field trips may be required outside of scheduled class time. A course fee may be required.

211A. Biological Sciences I (5) F,S  
Prerequisite: CHEM 111A with a grade of "C" or better. Prerequisite or corequisite: CHEM 111B. The first of a two-semester introductory sequence designed for biological science majors. An introduction to cellular and molecular principles common to all life forms including biological macromolecules, cell structure, metabolism, genetics, and molecular biology. Also includes microbiology of prokaryotes and the origin of life. (Lecture 3 hrs., laboratory 6 hrs.) A course fee may be required. (BIOL 221A+221B, CAN BIOL SEQ A.)

211B. Biological Sciences II (5) F,S  
Prerequisites: BIOL 211A, CHEM 111B with a grade of "C" or better. The second of a two-semester introductory sequence designed for biological science majors. An introduction to organismal biology, including the diversity, structure, and function of protists, fungi, plants, and animals. Also includes the principles of evolution, ecology, and animal behavior. (Lecture 3 hrs, laboratory 6 hrs.) A course fee may be required. (BIOL 221A+221B, CAN BIOL SEQ A.)

260. Biostatistics (3) F,S  
Prerequisites: BIOL 211A or A/P 207 or MICR 200; MATH 112 or 117 or 119A or 122. Use of probability and statistics in the description and analysis of biological data. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

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## Biology Courses (BIOL)

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### Upper Division

#### 303I. ## Coastal Systems and Human Impacts (3)

Prerequisites: ENGL 100 and upper division status; BIOL 200 or 201 or 211B; GEOL 102 or 160. Defines and describes natural processes impacting human activities in the coastal zone and how human practices influence natural processes. Topics include global warming, sea level rise, El Nino, port development, ocean outfalls and water quality, fisheries, and coastal erosion. Same course as GEOL 303I. (Lecture 3 hrs.)

#### \*312. Evolutionary Biology (3)

Prerequisites: BIOL 211A,B, 260; NSCI 200. A general survey of the various areas of evolutionary biology including but not limited to population genetics, speciation, origin of life, and phylogenetic analysis. Main emphasis is on evolutionary mechanisms and methods of analysis with some emphasis on specific details of the evolutionary history of life. Traditional grading only. (Lecture 3 hrs.)

#### \*313. Invertebrate Zoology (4) F,S

Prerequisite: BIOL 211A,B with grade of "C" or better. Basic taxonomy, morphology, ecology, and distribution of the invertebrates. Protozoa through Arthropoda, excluding Insecta, but including Protochordates; emphasis on local marine forms. (Lecture 2 hrs., laboratory and field 6 hrs.) A course fee may be required.

#### \*314. Biology of the Protozoa (4)

Prerequisites: BIOL 211A,B with grade of "C" or better. A comparative study of certain morphological, physiological and life history features of representative protozoan species. Emphasis in the laboratory on optical, cytochemical, nutritional and other experimental techniques. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

#### \*315. General Animal Parasitology (4)

Prerequisites: BIOL 211A,B with grade of "C" or better. The comparative morphology, systematics, and life history of protozoan and invertebrate parasites of animals, including but not restricted to those of humans. Emphasis on life cycles, the host-parasite interaction, and host examination and staining. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

#### \*316. General Entomology (3)

Prerequisites: BIOL 211A,B with grade of "C" or better. Characteristics, structure, habits, and life cycles of insects; the importance of insects to humans and other organisms. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

#### \*324. Vertebrate Zoology (4) F,S

Prerequisite: BIOL 211A,B with grade of "C" or better. An evolutionary and systematic survey of the living vertebrates. Emphasis on the phylogenetic origin and the morphological and physiological adaptations of the major groups. Not open for major credit if more than one of the following courses has been previously taken; BIOL 419, 421 or 423. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

#### 328. Plants and Human Affairs (3)

Prerequisites: BIOL 211A,B with grade of "C" or better. Economic and social role of plants and plant products in our civilization from a botanical perspective. Emphasis on the origins, methods of processing and uses of plants. (Lecture 3 hrs.)

#### \*332. Comparative Vertebrate Morphology (4) S

Prerequisites: BIOL 211A, B with grade of "C" or better. Evolutionary history of vertebrate structure. Lecture emphasizes primarily gross adult structure and secondarily embryonic origin and microanatomy. Laboratory focuses on comparative anatomy of shark, salamander, and mammal. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

#### \*333. Vertebrate Embryology (4)

Prerequisite: BIOL 211A,B with grade of "C" or better. A comparative study of gametogenesis, fertilization, cleavage, blastulation, gastrulation, neurulation, primary embryonic induction, and the development of organs and systems. Emphasis on frog, chick, and human development. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

#### \*340. Molecular Cell Biology (3) F,S

Prerequisites: BIOL 211A, B; CHEM 320A or 327. Detailed study of the organization and functioning of cells and cellular organelles at the molecular level; emphasis on experimental approaches and structural/functional relationships. Individual research paper on a current aspect of cellular/molecular biology required. (Lecture 3 hrs.)

#### \*350. General Ecology (3) F,S

Prerequisites: BIOL 211A,B with grade of "C" or better, 260; MATH 112 or 119A. Chemistry and physics recommended. Relationships of plants and animals to their physical and biological environment; structure and function of populations, communities and ecosystems. (Lecture 3 hrs., and two required Saturday field trips.)

#### \*351. Animal Behavior (4)

Prerequisite: BIOL 211A,B with grade of "C" or better. Introduction to vertebrate and invertebrate ethology; innate and learned behavior, sensory adaptation and communication, activity rhythms, navigation and migration, predator-prey interactions, and social behaviors including aggression, courtship and mating. Emphasis on ecological and evolutionary aspects. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

#### \*353. Marine Biology (3)

Prerequisites: BIOL 201, both 211A,B with grade of "C" or better, and 260. Study of pelagic and benthic marine ecosystems, including topics of food resources, mariculture, and pollution. Weekend field trips may be required. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

#### 370. General Genetics (4) F,S

Prerequisites: Either both BIOL 211B with grade of "C" or better and BIOL 260 or CHEM 441B. Detailed study of classical transmission genetics and an introduction to modern molecular genetics. Included will be current observations and concepts of the nature, organization, function and regulation of the expression of genetic material. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

#### 413./513. Marine Zooplankton (4) S, even years

Prerequisites: BIOL 353. (Undergraduates register in BIOL 413; graduates register in BIOL 513.) Diversity, natural history, taxonomy, and identification of marine zooplankton, including ichthyoplankton. Emphasis on fauna of the California coast. (Lecture 2 hrs., laboratory and field 6 hrs.) A course fee may be required.

#### 414./514. Marine Ornithology (3) F

Prerequisites: BIOL 353 (may be taken concurrently) or permission of instructor. (Undergraduates register in BIOL 414; graduates register in BIOL 514.) Designed to familiarize marine biology students with the role of birds in the marine environment. Topics include ecology, distribution, behavior, and identification of marine birds. Library report, independent field project, and attendance on field trips required. (Lecture 1 hr., laboratory and field 6 hrs.) A course fee may be required.

#### 417./517. Biology of Marine Benthic Invertebrates (3) S, odd years

Prerequisites: BIOL 353. (Undergraduates register in BIOL 417; graduates register in BIOL 517.) Topics include benthic community structure and function, benthic-pelagic coupling, animal sediment relationships, animal interactions, and marine pollution ecology. Laboratory emphasis will be on identification of local forms. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

#### \*419. Ichthyology (3) F

Prerequisites: BIOL 211A,B with grade of "C" or better; BIOL 260; and eight units of upper division biology. Taxonomy, morphology, physiology and ecology of fishes. Emphasis on local marine forms. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

#### 420./520. Advanced Ichthyology (2)

Prerequisite: BIOL 260, 419. (Undergraduates enroll in BIOL 420; graduates enroll in BIOL 520.) Selected subjects on distribution, classification, physiology, adaptations, and life histories of fishes; emphasis on recent studies and new concepts. (Lecture 1 hr., laboratory and field 3 hrs.) A course fee may be required.

\*421. Herpetology (3) S, odd years

Prerequisites: BIOL 211A, B, 260, with grades of "C" or better, and eight units of upper division biology. Taxonomy, natural history, ecology and distribution of amphibians and reptiles, emphasis on local forms. Weekend field trip required. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

422./522. Advanced Ornithology (2)

Prerequisite: BIOL 424 or consent of instructor. (Undergraduates enroll in BIOL 422; graduates enroll in BIOL 522.) Systematic survey of birds of the world with emphasis on systems of classification, morphology, evolution and distribution. Special consideration will be given to recent studies and new concepts. (Lecture 1 hr., laboratory 3 hrs.) A course fee may be required.

\*423. Mammalogy (3) F, even years

Prerequisites: BIOL 211A, B, 260, all with grade of "C" or better, and at least six units of upper division course work in biological sciences; BIOL 324 or 332 highly recommended. Phylogenetic survey of the living mammals of the world. Lecture emphasizes the radiation of the orders and families and their morphology, physiology, and behavior; laboratory emphasizes external and skeletal morphology of these same taxa and identification of California species. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

\*424. Ornithology (3) S, even years

Prerequisites: BIOL 211A,B with grade of "C" or better and eight units of upper division biology. Morphology, physiology, taxonomy, ecology and behavior of birds; emphasis on laboratory and field study of adaptations of local forms. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

\*425. Phycology (3) F

Prerequisites: BIOL 201, 211A, B with a grade of "C" or better. Taxonomy, phylogeny, and physiology of algae, including the physiological ecology of marine macroalgae; emphasis on local marine forms. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

\*427. Taxonomy of Vascular Plants (4) S

Prerequisite: BIOL 211A,B with grade of "C" or better. Principles and methods of vascular plant systematics, including history, nomenclature and phylogeny; emphasis in the laboratory is on the identification and classification of native and introduced plants of Southern California. (Lecture 2 hrs., laboratory and field 6 hrs.) A course fee may be required.

428./528. Biology of the Giant Kelp (3) S

Prerequisites: BIOL 353, 425, or 439 with a grade of "C" or better. (Undergraduates register in BIOL 428; graduates register in BIOL 528.) A study of the physiology, reproductive biology, anatomy, taxonomy, and ecology of the ecologically and economically important kelp genus *Macrocystis*. (Lecture 3 hrs.)

433./533. Developmental Biology (3)

Prerequisites: BIOL 370; CHEM 320A,B. (Undergraduates register in BIOL 433; graduates register in BIOL 533.) Presentation of current topics and experimental approaches in cell differentiation and development with emphasis on examination of these processes at the molecular level. Topics include gametogenesis, fertilization, differential gene expression, and role of oncogenes in development. (Lecture/discussion 3 hrs.) A course fee may be required.

\*439. Plant Morphology (4) F

Prerequisite: BIOL 211A,B with grade of "C" or better. Comparative structure, life history and phylogenetic relationships of plants. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

440./540. Advanced Molecular Cell Biology (3) F

Prerequisites: BIOL 340 and either BIOL 370 or CHEM 441B, each with a grade of "C" or better. (Undergraduates register in BIOL 440; graduates register in BIOL 540.) In depth discussion of cellular processes and their regulation. Topics may include intracellular targeting and transport of macromolecules, cell cycle control, and oncogenesis. The course includes critical discussion of primary journal articles on pertinent topics. Traditional grading only for majors/minors. (Lecture 3 hrs.)

447./547. Molecular Plant Physiology (3) S

Prerequisites: BIOL 340, 370, both with grade of "C" or better. (Undergraduates enroll in BIOL 447; graduates enroll in BIOL 547.) Current molecular approaches to classical topics including plant hormones, photosynthesis, resistance to plant pathogens, adaptation of plants to environmental stress, and development of plants. (Lecture 3 hrs.)

447L./547L. Molecular Plant Physiology Laboratory (1) S

Prerequisites: BIOL 447 (may be taken concurrently). (Undergraduates register in BIOL 447L; graduates register in BIOL 547L). Laboratory experiments covering classical and molecular plant physiology. (Laboratory 3 hrs.) A course fee may be required.

450./549. Plant Ecology (3) S

Prerequisites: BIOL 427 or 447, BIOL 260. (Undergraduates register in BIOL 450; graduates register in BIOL 549.) Relationship of plants to their environment and principles of plant distribution. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

\*453. Insect Ecology (3)

Prerequisite: BIOL 316. Field and experimental studies of abundance dispersal, distribution and behavior. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

454./554. Research in Tropical Marine Ecology (2) S, even years

Prerequisites: BIOL 260, either 350 or 353, and 313 or 413 or 419 or 425. (Undergraduates register in BIOL 454; graduates register in BIOL 554.) Field and laboratory studies, lectures, and individual research on tropical marine biological problems. Designed to engage students in experimental research, including: recognizing a problem, designing and carrying out a project, statistical data analysis, and oral and written report presentation. An eight-day field trip to Hawaii will be required during the spring recess at student expense. Enrollment is limited. (Lecture 1 hr., 8 day field trip.) A course fee may be required.

455./555. Ecology of Marine Communities (3) F

Prerequisites: BIOL 260, 350, 353. (Undergraduates register in BIOL 455; graduates register in BIOL 555.) Discussion of field studies on ecological principles related to marine communities. Includes an individual field research project and two class projects. (Lecture 2 hrs., field 3 hrs.) A course fee may be required.

456./556. Advanced Population Ecology (3) S, even years

Prerequisites: BIOL 350, MATH 119B or 123. (Undergraduates register in BIOL 456; graduates in BIOL 556.) Analysis of characteristics of animal and plant populations including population growth and regulation, competition, predation, parasitism, and other intraspecific and interspecific interactions; population fluctuations; spatial patterns. (Lecture 3 hrs.)

457./557. Field Methods in Ecology (3) S, odd years

Prerequisites: BIOL 260, 350. (Undergraduates register in BIOL 457; graduates in BIOL 557.) Design of field research projects, collection and analysis of data, writing and presentation of reports. Emphasis on field sampling techniques. Five weekend field trips required. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

458./558. Ecology of Marine Plankton (4) S, odd years

Prerequisites: BIOL 260, 353, CHEM 327, MATH 119A. (Undergraduates register in BIOL 458; graduates in BIOL 558.) Physiological ecology of marine phytoplankton and zooplankton as a basis for study of structure, dynamics, and modeling of plankton communities. (Lecture 3 hrs., laboratory and field 3 hrs.) Course fee may be required.

460./560. Biological Control (3)

Prerequisites: BIOL 316. (Undergraduates register in BIOL 460; graduates register in BIOL 560.) Natural and artificial control of pest species of insects, other arthropods, and weeds, through the use of predators, parasites, fungal, viral, and bacterial diseases. (Lecture 3 hrs.)

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## Biology Courses (BIOL)

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### 463./563. Computer Modelling in Biology (4) F

Prerequisites: BIOL 260, 350. (Undergraduates register in BIOL 463; graduates register in BIOL 563.) History, modelling theory, different modelling approaches, theoretical, empirical, and quantitative modelling. Laboratory will use modelling software and focus on model construction and quantitative simulation, possibly of student's own research project. Applicable to ecology, microbiology, physiology, environmental sciences, etc. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

### \*464. Environmental Toxicology (3)

Prerequisites: BIOL 211A,B with grade of "C" or better; CHEM 327. Metabolism, mode of action and detoxification mechanisms of toxic substances in organisms. Effects of pollutants, waste products, chemicals of commerce, warfare agents, drugs and narcotics on human health and the environment, their regulation and control. (Lecture 3 hrs.)

### 465./565. Experimental Design and Regression Analysis (4) F, even years

Prerequisites: BIOL 260; MATH 119B; six units of upper division biological science or consent of instructor. (Undergraduates register in BIOL 465; graduates register in BIOL 565.) Techniques in experimental design and data analysis applied to problems in biology. Topics include analysis of variance and covariance, bivariate and multiple regression, experimental design, bootstrapping and randomization tests, and nonparametric statistics. Laboratory experience in analyzing biological data with computerized statistical packages. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

### 467./567. Multivariate Data Analysis (4) F, odd years

Prerequisites: BIOL 260; MATH 119B; six units of upper division biological science or consent of instructor. (Undergraduates register in BIOL 467; graduates register in BIOL 567.) Multivariate data analysis techniques applied to biological data. Applied matrix algebra as needed for analyzing and understanding multivariate analysis methods. Topics covered include principal components analysis, factor analysis, discriminant analysis, cluster analysis as well as modern phylogenetic analysis techniques. Laboratory experience in analyzing multivariate biological data with computerized statistical packages. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required. Traditional grading only for majors and minors.

### 468./568. Principles and Applications of Electron Microscopy (4)

Prerequisites: BIOL 211A,B; PHYS 100A, B; all with grade of "C" or better. (Undergraduates in BIOL 468; graduates enroll in BIOL 568.) Basic theory of transmission, scanning and transmission electron microscopy. Theory and applications of specialized techniques such as autoradiography, immunocytochemistry, histochemistry and wavelength and energy dispersive x-ray microanalysis for elucidating cell structure and functioning. Laboratory emphasis on specimen preparation, instrument operation and photography for both scanning and transmission electron microscopy. Individual research project required. Enrollment limited. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

### 473./573. Molecular Genetics (3) S

Prerequisite: BIOL 370. CHEM 327. (Undergraduates register in BIOL 473; graduates register in BIOL 573.) Nature, replication, regulation and mode of action of the genetic material. (Lecture 3 hrs.)

### 477./577. Biotechnology: Recombinant DNA (3) F

Prerequisites: BIOL 370; CHEM 441A,B; (all with a "C" or better); consent of instructor. (Undergraduates register in BIOL 477; graduates register in BIOL 577.) Intensive study of the theory and techniques of recombinant DNA. Includes the selections for the isolation of genes, analysis of the mechanisms of regulation of gene expression, and detailed study of how genes are characterized. (Lecture 3 hrs.)

### 477L/577L. Biotechnology: Recombinant DNA Laboratory (4)

Prerequisites: Concurrent enrollment in BIOL 477 or consent of instructor. (Undergraduates register in BIOL 477L; graduates reg-

ister in BIOL 577L.) Intensive study of the laboratory techniques of recombinant DNA research. Includes the isolation, amplification, expression, and characterization of genes. (Laboratory 12 hrs.) A course fee may be required.

### 480./580. Seminars (1) F,S

Prerequisites: BIOL 211A,B with grade of "C" or better, consent of instructor. (Undergraduates register in BIOL 480; graduates register in BIOL 580.) Weekly meetings at which professional biologists present the results of their research. Requires participation in the organization and the critical evaluation of these presentations. May not be repeated for credit towards any single degree. (Seminar 1 hr.)

### 490./590. Special Topics in Biology (1-3)

Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in BIOL 490; graduates register in BIOL 590.) Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit for a maximum of six units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Lecture 1-3 hrs.)

### 490L./590L. Special Topics Laboratory in Biology (1-2)

Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in BIOL 490L; graduates register in BIOL 590L.) Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit for a maximum of four units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Laboratory 3 or 6 hrs.) A course fee may be required.

### 495. Instruction in Laboratory Teaching (1-2) F,S

Prerequisites: Consent of lecture instructor, a "B" or better in the course in which the student elects to do BIOL 495 (another course with laboratory may be substituted with consent of instructor), and an overall GPA of at least 2.75. Individual instruction in the organization and techniques of teaching a biology laboratory. May be repeated for a letter grade and degree credit to a maximum of two units for any single degree or option. Any units beyond the two taken for a letter grade in BIOL 495 or MICR 495 or any combination of the two will be taken credit/no credit. (Conference 1 hr., laboratory 3 hrs. per unit.) Same course as MICR 495. Course may be repeated to a maximum of 2 units.

### 496. Undergraduate Directed Research (1-3) F,S

Prerequisites: BIOL 211A, B, with grade of "C" or better; consent of instructor. Research in a specific topic in the biological sciences to be approved and directed by a faculty member in the Department of Biological Sciences. May be repeated for a letter grade and degree credit to a maximum of three units for any single degree or option. Any units beyond the three taken for a letter grade in BIOL 496 or MICR 496, or any combination of the two, will be taken credit/no credit. Not available to graduate students. (Conference 1 hr., laboratory 3 hrs. per unit.) A course fee may be required. Same course as MICR 496.

### 513./413. Marine Zooplankton (4) S, even years

Prerequisites: BIOL 353. (Undergraduates register in BIOL 413; graduates register in BIOL 513.) Diversity, natural history, taxonomy, and identification of marine zooplankton, including ichthyoplankton. Emphasis on fauna of the California coast. (Lecture 2 hrs., laboratory and field 6 hrs.) A course fee may be required.

### 514./414. Marine Ornithology (3) F

Prerequisites: BIOL 353 (may be taken concurrently) or permission of instructor. (Undergraduates register in BIOL 414; graduates register in BIOL 514.) Designed to familiarize marine biology students with the role of birds in the marine environment. Topics include ecology, distribution, behavior, and identification of marine birds. Library report, independent field project, and attendance on field trips required. (Lecture 1 hr., laboratory and field 6 hrs.) A course fee may be required.

### 517./417. Biology of Marine Benthic Invertebrates (3) S, odd years

Prerequisites: BIOL 353. (Undergraduates register in BIOL 417; graduates register in BIOL 517.) Topics include benthic community structure and function, benthic-pelagic coupling, animal sedi-

ment relationships, animal interactions, and marine pollution ecology. Laboratory emphasis will be on identification of local forms. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

#### 520./420. Advanced Ichthyology (2)

Prerequisite: BIOL 260, 419. (Undergraduates enroll in BIOL 420; graduates enroll in BIOL 520.) Selected subjects on distribution, classification, physiology, adaptations, and life histories of fishes; emphasis on recent studies and new concepts. (Lecture 1 hr., laboratory and field 3 hrs.) A course fee may be required.

#### 522./422. Advanced Ornithology (2)

Prerequisite: BIOL 424 or consent of instructor. (Undergraduates register in BIOL 422; graduates register in BIOL 522.) Systematic survey of birds of the world with emphasis on systems of classification, morphology, evolution and distribution. Special consideration will be given to recent studies and new concepts. (Lecture 1 hr., laboratory 3 hrs.) A course fee may be required.

#### 528./428. Biology of the Giant Kelp (3) S

Prerequisites: BIOL 353, 425, or 439 with a grade of "C" or better. (Undergraduates register in BIOL 428; graduates register in BIOL 528.) A study of the physiology, reproductive biology, anatomy, taxonomy, and ecology of the ecologically and economically important kelp genus *Macrocystis*. (Lecture 3 hrs.)

#### 533./433. Developmental Biology (3)

Prerequisites: BIOL 370; CHEM 320A,B. (Undergraduates register in BIOL 433; graduates register in BIOL 533.) Presentation of current topics and experimental approaches in cell differentiation and development with emphasis on examination of these processes at the molecular level. Topics include gametogenesis, fertilization, differential gene expression, and role of oncogenes in development. (Lecture/discussion 3 hrs.) A course fee may be required.

#### 540./440. Advanced Molecular Cell Biology (3) F

Prerequisites: BIOL 340 and either BIOL 370 or CHEM 441B, each with a grade of "C" or better. (Undergraduates register in BIOL 440; graduates register in BIOL 540.) In depth discussion of cellular processes and their regulation. Topics may include intracellular targeting and transport of macromolecules, cell cycle control, and oncogenesis. The course includes critical discussion of primary journal articles on pertinent topics. Traditional grading only for majors/minors. (Lecture 3 hrs.)

#### 547./447. Molecular Plant Physiology (3) S

Prerequisites: BIOL 340, 370, both with grade of "C" or better. (Undergraduates enroll in BIOL 447; graduates enroll in BIOL 547.) Current molecular approaches to classical topics including plant hormones, photosynthesis, resistance to plant pathogens, adaptation of plants to environmental stress, and development of plants. (Lecture 3 hrs.)

#### 547L./447L. Molecular Plant Physiology Laboratory (1) S

Prerequisites: BIOL 547 (may be taken concurrently). (Undergraduates register in BIOL 447L; graduates register in BIOL 547L.) Laboratory experiments covering classical and molecular plant physiology. (Laboratory 3 hrs.) A course fee may be required.

#### 549./450. Plant Ecology (3) S

Prerequisites: BIOL 427 or 447, BIOL 260. (Undergraduates register in BIOL 450; graduates register in BIOL 549.) Relationship of plants to their environment and principles of plant distribution. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

#### 554./454. Research in Tropical Marine Ecology (2) S, even years

Prerequisites: BIOL 260, either 350 or 353, and 313 or 413 or 419 or 425. (Undergraduates register in BIOL 454; graduates register in BIOL 554.) Field and laboratory studies, lectures, and individual research on tropical marine biological problems. Designed to engage students in experimental research, including: recognizing a problem, designing and carrying out a project, statistical data analysis, and oral and written report presentation. An eight-day field trip to Hawaii will be required during the spring recess at student expense. Enrollment is limited. (Lecture 1 hr., 8 day field trip.) A course fee may be required.

#### 555./455. Ecology of Marine Communities (3) F

Prerequisites: BIOL 260, 350, 353. (Undergraduates register in BIOL 455; graduates register in BIOL 555.) Discussion of field studies on ecological principles related to marine communities. Includes an individual field research project and two class projects. (Lecture 2 hrs., field 3 hrs.) A course fee may be required.

#### 556./456. Advanced Population Ecology (3) S, even years

Prerequisites: BIOL 350, MATH 119B or 123. (Undergraduates register in BIOL 456; graduates register in BIOL 556.) Analysis of characteristics of animal and plant populations including population growth and regulation, competition, predation, parasitism, and other intraspecific and interspecific interactions; population fluctuations; spatial patterns. (Lecture 3 hrs.)

#### 557./457. Field Methods in Ecology (3) S, odd years

Prerequisites: BIOL 260, 350. (Undergraduates register in BIOL 457; graduates register in BIOL 557.) Design of field research projects, collection and analysis of data, writing and presentation of reports. Emphasis on field sampling techniques. Five weekend field trips required. (Lecture 2 hrs., laboratory and field 3 hrs.) A course fee may be required.

#### 558./458. Ecology of Marine Plankton (4) S, odd years

Prerequisites: BIOL 260, 353, CHEM 327, MATH 119A. (Undergraduates register in BIOL 458; graduates register in BIOL 558.) Physiological ecology of marine phytoplankton and zooplankton as a basis for study of structure, dynamics, and modeling of plankton communities. (Lecture 3 hrs., laboratory and field 3 hrs.) A course fee may be required.

#### 560./460. Biological Control (3)

Prerequisites: BIOL 316. (Undergraduates register in BIOL 460; graduates in BIOL 560.) Natural and artificial control of pest species of insects, other arthropods, and weeds, through the use of predators, parasites, and fungal, viral, and bacterial diseases. (Lecture 3 hrs.)

#### 563./463. Computer Modelling in Biology (4) F

Prerequisites: BIOL 260, 350. (Undergraduates register in BIOL 463; graduates register in BIOL 563.) History, modelling theory, different modelling approaches, theoretical, empirical, and quantitative modelling. Laboratory will use modelling software and focus on model construction and quantitative simulation, possibly of student's own research project. Applicable to ecology, microbiology, physiology, environmental sciences, etc. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

#### 565./465. Experimental Design and Regression Analysis (4) F, even years

Prerequisites: BIOL 260; MATH 119B; six units of upper division biological science or consent of instructor. (Undergraduates register in BIOL 465; graduates register in BIOL 565.) Techniques in experimental design and data analysis applied to problems in biology. Topics include analysis of variance and covariance, bivariate and multiple regression, experimental design, bootstrapping and randomization tests, and nonparametric statistics. Laboratory experience in analyzing biological data with computerized statistical packages. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

#### 567./467. Multivariate Data Analysis (4) F, odd years

Prerequisites: BIOL 260; MATH 119B; six units of upper division biological science or consent of instructor. (Undergraduates register in BIOL 467; graduates register in BIOL 567.) Multivariate data analysis techniques applied to biological data. Applied matrix algebra as needed for analyzing and understanding multivariate analysis methods. Topics covered include principal components analysis, factor analysis, discriminant analysis, cluster analysis as well as modern phylogenetic analysis techniques. Laboratory experience in analyzing multivariate biological data with computerized statistical packages. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required. Traditional grading only for majors and minors.

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## Biology Courses (BIOL)

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### 568./468 Principles & Applications of Electron Microscopy (4)

Prerequisites: PHYS 100A, B; all with grade of "C" or better. (Undergraduates enroll in BIOL 468; graduates enroll in BIOL 568.) Basic theory of transmission, scanning and transmission electron microscopy. Theory and applications of specialized techniques such as autoradiography, immunocytochemistry, histochemistry and wavelength and energy dispersive x-ray microanalysis for elucidating cell structure and functioning. Laboratory emphasis on specimen preparation, instrument operation and photography for both scanning and transmission electron microscopy. Individual research project required. Enrollment limited. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

### 573./473. Molecular Genetics (3) S

Prerequisites: BIOL 370, CHEM 327. (Undergraduates register in BIOL 473; graduates register in BIOL 573.) Nature, replication, regulation and mode of action of the genetic material. (Lecture 3 hrs.)

### 577./477. Biotechnology: Recombinant DNA (3) F

Prerequisites: BIOL 370; CHEM 441A,B; (all with a "C" or better); consent of instructor. (Undergraduates register in BIOL 477; graduates register in BIOL 577.) Intensive study of the theory and techniques of recombinant DNA. Includes the selections for the isolation of genes, analysis of the mechanisms of regulation of gene expression, and detailed study of how genes are characterized. (Lecture 3 hrs.)

### 577L./477L. Biotechnology: Recombinant DNA Laboratory (4)

Prerequisites: Concurrent enrollment in BIOL 577 or consent of instructor. (Undergraduates register in BIOL 477L; graduates register in BIOL 577L.) Intensive study of the laboratory techniques of recombinant DNA research. Includes the isolation, amplification, expression, and characterization of genes. (Laboratory 12 hrs.) A course fee may be required.

### 580./480. Seminars (1) F,S

Prerequisites: Consent of instructor. (Undergraduates register in BIOL 480; graduates register in BIOL 580.) Weekly meetings at which professional biologists present the results of their research. Requires participation in the organization and the critical evaluation of these presentations. May not be repeated for credit towards any single degree. (Seminar 1 hr.)

### 590./490. Special Topics in Biology (1-3)

Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in BIOL 490; graduates register in BIOL 590.) Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit for a maximum of six units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Lecture 1-3 hrs.)

### 590L./490L. Special Topics Laboratory in Biology (1-2)

Prerequisites: BIOL 211A, B, with grade of "C" or better, consent of instructor. (Undergraduates register in BIOL 490L; graduates register in BIOL 590L.) Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit for a maximum of four units toward any single degree. Topics may be announced in the Schedule of Classes. Traditional grading only. (Laboratory 3 or 6 hrs.) A course fee may be required.

### 661. Seminar in Biology (1)

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques. May be repeated for credit, with different topics, for a maximum of three units towards any single degree. (Seminar 1 hr.)

### 663. Seminar in Genetics and Development (1)

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques. May be repeated for credit, with different topics, for a maximum of three units towards any single degree. (Seminar 1 hr.)

### 664. Seminar in Marine Biology (1)

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques. May be repeated for credit, with different topics, for a maximum of three units towards any single degree. (Seminar 1 hr.)

### 665. Seminar in Terrestrial Zoology (1)

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques. May be repeated for credit, with different topics, for a maximum of three units towards any single degree. (Seminar 1 hr.)

### 696. Research Methods (3) F

Prerequisites: Approved thesis proposal and graduate program on file in departmental graduate office. Development of the ancillary skills related to biological research, from initiation to presentation and publication. Topics include experimental design, computer-aided information retrieval, technical writing, data presentation, computer design of graphics, preparation of figures and slides, photography. The course culminates with formal oral, poster, and written presentations of research in progress. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

### 697. Directed Research (1-3) F,S

Prerequisite: Consent of instructor. Research on a specific topic to be approved and directed by a faculty member in the biological sciences. A written report will be required. May be repeated for a letter grade and degree credit to a maximum of three units. Any units beyond the three taken for a letter grade in BIOL 697 or MICR 697 or any combination of the two must be taken credit/no credit. A course fee may be required.

### 698. Thesis (1-6) F,S

Prerequisites: Advancement to Candidacy for the Master of Science in Biology, consent of the chair of the thesis committee and the departmental graduate advisor. Planning, preparation, writing, defense, oral presentation, and completion of a research thesis in the biological sciences. A course fee may be required.

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## Microbiology Courses (MICR)

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Students pursuing a major and/or a minor in this Department may receive unit credit for courses marked with the symbol '##' as a general elective but may not apply the units toward the specific or elective requirements for any degree or option in this Department. Majors in this Department may, however, take, for general education purposes, interdisciplinary courses offered by this department. All other courses in this Department are open to majors and minors but by traditional grading only. Courses with an asterisk may be used in graduate programs.

### Lower Division

#### 101. ## Introduction to Human Disease (3) F,S

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Introduction to the study of human disease including moral/ethical and economic issues. (Lecture 3 hrs.)

#### 200. General Microbiology for Health Professionals (4) F,S

Prerequisites: CHEM 100 or 111A or 202. General microbiology for those planning careers in nursing, health care and education, and foods and nutrition. Introduction to the microorganisms, including structure, function, metabolism, growth, genetics, diversity and applied aspects, with special emphasis on their roles in human health. Not open for majors in the biological sciences. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

#### 211. General Microbiology (5) F,S

Prerequisites: BIOL 211A with a grade of "C" or better, CHEM 111B. Introduction to the biology of the microorganisms, including structure, function, metabolism, growth, genetics, diversity, host-parasite relationships and applied aspects. (Lecture 3 hrs., laboratory 6 hrs.) A course fee may be required. Traditional grading only.

## Upper Division

### 300I. ## Human Immunology: In Self-Defense (3)

Prerequisites: ENGL 100, upper division status, one laboratory course in a life science. Introductory psychology and a laboratory course in a physical science recommended. Introduction to the mechanisms and cells responsible for protecting the human body from disease. Normal functions of the immune system, diseases involving the immune system, and psychological, endocrine and age factors affecting the immune system will be included. Impact of immunology on organ transplantation, immunotherapy and biotechnology will be discussed. Not applicable for credit towards the major in Microbiology. Traditional grading only. (Lecture 3 hrs.)

### 302I. ## Molecular Biology and Bioethics (3)

Prerequisites: ENGL 100 and upper division status. A systematic study of some of the advances in molecular biology and the main genetic and ethical issues these advances have raised. Not applicable for credit toward the major in Microbiology. (Lecture 3 hrs.) Same course as PHIL 302I.

### 303.## Public Health and Pollution (3)

Survey of public health and ecological problems in the community, control of communicable diseases; air, water and soil contamination. Recommended for non-majors interested in ecology and pollution control. Traditional grading only. (Lecture 3 hrs.)

### 320. Medical Microbiology: Bacteriology (5) F,S

Prerequisites: MICR 211; CHEM 327 or 320A (may be taken concurrently). The first of a two-semester sequence in medical microbiology designed for microbiology majors. Pathogenic bacteria of humans and animals; emphasis on bacterial ultrastructure, epidemiology, mechanisms of pathogenesis, host defense mechanisms, and antibiotic therapy; isolation and identification of microorganisms by morphological and cultural characteristics. Traditional grading only. (Lecture 3 hrs., laboratory 6 hrs.) A course fee may be required.

### 322. Medical Microbiology: Parasitology/Mycology (5) F,S

Prerequisites: BIOL 211B; MICR 320. The second of a two-semester sequence in medical microbiology designed for microbiology majors. Survey of parasitic protozoa, helminths, and fungi of humans; emphasis on identification of fresh and preserved specimens, pathogenesis, host-parasite interactions, epidemiology, prevention, and control. Traditional grading only. (Lecture 3 hrs., laboratory 6 hrs.) A course fee may be required.

### 323. Hematology (4) F,S

Prerequisites: MICR 211; BIOL 211B. Physiology and pathology of blood; preparation of blood for counts, hemoglobin determination, and related procedures. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

### 330. Immunology (3) F,S

Prerequisites: MICR 211, CHEM 327 or CHEM 320B. Microbiology majors must enroll concurrently in MICR 331. Introduction to cellular and molecular components of the immune system and normal functions of these components. Physical, chemical, and biological properties of antigens and antibodies and the role of the immune system in immune deficiencies, tolerance, transplantation, tumors, autoimmunity, and hypersensitivities. (Lecture 3 hrs.)

### 331. Immunology Laboratory (2) F,S

Prerequisite: MICR 320. Corequisite: MICR 330. Qualitative and quantitative *in vitro* and *in vivo* analyses of cellular and humoral immunity including selected clinically diagnostic immunoassays. Not available for credit to students completing MICR 330 prior to Spring, 1996. (Laboratory 6 hrs.) A course fee may be required.

### \*425. Public Health Microbiology and Diagnostic Procedures (2)

Prerequisites: MICR 320. Diagnostic procedures by bacterial, mycobacterial, spirochaetal, viral, and rickettsial agents of public health importance. Standard methods for the examination of food, water and dairy products. MICR 425 will be accepted toward fulfillment of the six upper division Microbiology electives. (Lecture 2 hrs.)

### \*429 Epidemiology of Infectious Diseases (3)

Prerequisites: BIOL 260; MICR 320, 322. Principles of epidemiology and their application to health; fundamentals of biomedical statistics; basic factors in classic epidemiological studies and the prevention and control of infectious diseases. (Lecture 3 hrs.)

### 432./532. Immunohematology (2)

Prerequisites: A final grade of "B" or better in MICR 323 and 330 or consent of instructor required. (Undergraduates register in MICR 432; graduate students register in MICR 532.) Physical and biochemical characteristics of human erythrocytes. Detailed study of isoantigens and isoantibodies associated with human red blood cells; their detection, mechanisms of cellular destruction and relationship to hematopoietic disease. (Lecture 2 hrs.) MICR 432 will be accepted toward fulfillment of the 6 units of upper division microbiology electives.

### \*441. Marine Microbiology (3)

Prerequisites: MICR 211 or consent of instructor. Survey of the interactions of microorganisms in the sea. Emphasis on the elements, cycles and metabolic conversion of environmental material. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

### \*450. Microbial Genetics (2) F,S

Prerequisites: MICR 211; CHEM 441B. Biochemical and cytological bases of microbial genetics; nature, replication, modification and transfer of genetic material. (Lecture 2 hrs.)

### \*451. Microbial Genetics Laboratory (2) F

Prerequisites: MICR 450 (may be taken concurrently), consent of instructor. Laboratory study of microbial genetics. Genetic engineering techniques. (Laboratory 6 hrs.) A course fee may be required.

### \*452. Virology (3) F,S

Prerequisites: CHEM 441A, B and either MICR 320 or BIOL 340. Virology at a molecular level including virus replication and the molecular basis for viral pathogenesis; a survey of human and animal viral diseases. Current trends for prevention and treatment of viral diseases. (Lecture 3 hrs.)

### \*453. Cell Culture and Virology Laboratory (2) S

Prerequisites: MICR 320, 452 (may be taken concurrently), consent of instructor. Laboratory study of animal viruses. Propagation, purification and titration methods, antibody neutralization, and cytopathological effects of viruses, with emphasis on cell culture techniques applicable to the study of viruses. (Laboratory 6 hrs.) A course fee may be required.

### \*471. Bacterial Physiology (3) S

Prerequisites: MICR 320, CHEM 441A, consent of instructor. Cellular physiology at the molecular level as related to bacterial growth, reproduction, nutrition, metabolism and ecology. (Lecture 3 hrs.)

### \*473. Food and Industrial Microbiology (3) F

Prerequisites: MICR 200 OR 211; CHEM 441A OR 448. Role of microorganisms in food and other industrial processes; emphasis on bacteria, yeasts and molds. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

### 480./580. Seminars in Molecular and Cellular Biology and Microbiology (1)

Prerequisites: BIOL 211A, B, with a grade of "C" or better, consent of instructor. (Undergraduates register in MICR 480; graduates register in MICR 580.) Weekly meetings at which professional biologists present the results of their research. Requires participation in the organization and critical evaluation of these presentations. May not be repeated for credit towards any single degree. (Seminar 1 hr.)

### 490./590. Special Topics in Microbiology (1-3)

Prerequisites: Senior standing in microbiology, consent of instructor. (Undergraduates register in MICR 490; graduates register in MICR 590.) Faculty and student discussions and analysis of a current topic in microbiology. This course may be repeated once for credit with different discussions and topics. (Lecture 1-3 hrs.)

### 495. Instruction in Laboratory Teaching (1-2) F,S

Prerequisites: Consent of lecture instructor, a "B" or better in the course in which the student elects to do MICR 495 (another course with laboratory may be substituted with consent of instructor), and an overall GPA of at least 2.75. Individual instruction in the organization and techniques of teaching a microbiology laboratory. May be repeated for a letter grade and degree credit to a maximum of two units for any single degree or option. Any units beyond the two taken for a letter grade in BIOL 495 or MICR 495 or any combination of the two will be taken credit/no credit. (Conference 1 hr., laboratory 3 hrs. per unit.) Same course as BIOL 495. Course may be repeated to a maximum of 2 units.



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## Microbiology Courses (MICR)

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496. Undergraduate Directed Research (1-3) F,S  
Prerequisites: BIOL 211A, B, MICR 211, all with grade of "C" or better; consent of instructor. Research in a specific topic in the biological sciences to be approved and directed by a faculty member in the Department of Biological Sciences. May be repeated for a letter grade and degree credit to a maximum of three units for any single degree or option. Any units beyond the three taken for a letter grade in BIOL 496 or MICR 496, or any combination of the two, will be taken credit/no credit. Not available to graduate students. (Conference 1 hr., laboratory 3 hrs. per unit.) A course fee may be required. Same course as BIOL 496.

### Graduate Division

532./432. Immunohematology (2)  
Prerequisites: A final grade of "B" or better in MICR 323 and 330 or consent of instructor required. (Undergraduates register in MICR 432; graduate students register in MICR 532.) Physical and biochemical characteristics of human erythrocytes. Detailed study of isoantigens and isoantibodies associated with human red blood cells; their detection, mechanisms of cellular destruction and relationship to hematopoietic disease. (Lecture 2 hrs.) MICR 432 will be accepted toward fulfillment of the 6 units of upper division microbiology electives.

550. Experimental Microbiology (3)  
Detailed study of selected topics in microbiology, with emphasis on laboratory approaches to the problem.

D. Molecular Biology of Eukaryotes  
Prerequisites: MICR 450, 451, 471, CHEM 441B and consent of instructor. Original experimental research on the molecular biology and physiology of yeasts and fungi especially as model systems for studying fundamental questions about the structure and function of cells. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

E. Molecular Virology  
Prerequisites: CHEM 441B, MICR 320, 453, consent of instructor. Experimental research problems directed to learning more about structure of viruses and function of viral components in biological system. Emphasis placed on the molecular biology of viruses and current methodology used in virus research. (Lecture 1 hr., laboratory 6 hrs.) Course fee may be required.

F. Pathoparasitology  
Prerequisites: MICR 322, 330. Pathogenesis of medically important endo- and ectoparasites; emphasis on specialized procedures and techniques. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

G. Prokaryotes  
Prerequisite: MICR 471. Detailed study of the bacteria; special emphasis on heterotrophic and autotrophic forms. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

580./480. Seminars in Molecular and Cellular Biology and Microbiology (1)  
Prerequisites: BIOL 211A,B, with a grade of "C" or better, consent of instructor. (Undergraduates register in MICR 480; graduates register in MICR 580.) Weekly meetings at which professional biologists present the results of their research. Requires participation in the organization and critical evaluation of these presentations. May not be repeated for credit towards any single degree. (Seminar 1 hr.)

590./490. Special Topics in Microbiology (1-3)  
Prerequisites: Graduate standing in microbiology, consent of instructor. (Undergraduates register in MICR 490; graduates register in MICR 590.) Faculty and student discussions and analysis of a current topic in microbiology. This course may be repeated once for credit with different discussions and topics. (Lecture 1-3 hrs.)

691. Supervised Independent Study (1-4)  
Advanced independent study in the field of the candidate's option for the master of public health degree. The subject of the study may be different from the field training in the option. Course may be repeated for a maximum of 4 units.

695. Seminar on Selected Topics in Microbiology (2)  
Prerequisites: Consent of instructor. May be repeated for a maximum of 4 units in a different topic area. (Seminar 2 hrs.)

A. Seminar in Cellular and Molecular Mechanisms  
B. Seminar in Food Microbiology  
F. Medical Microbiology  
G. Microbial Ecology  
J. Microbial Genetics  
K. Microbial Physiology  
N. Parasitology  
P. Virology

696. Field Experience in Medical Laboratory Supervision (2-4)  
Prerequisites: Field experience in hospitals and other health-related facilities is required for all candidates for the master of public health. Course may be repeated for a maximum of 4 units.

697. Directed Research (1-3) F,S  
Prerequisite: Consent of instructor. Research on a specific topic to be approved and directed by a faculty member in the biological sciences. A written report will be required. May be repeated for a letter grade and degree credit to a maximum of three units. Any units beyond the three taken for a letter grade in BIOL 697 or MICR 697 or any combination of the two must be taken credit/no credit. A course fee may be required.

698. Thesis (1-6) F,S  
Prerequisites: Advancement to Candidacy for the Master of Science in Microbiology, consent of the chair of the thesis committee and the departmental graduate advisor. Planning, preparation, writing, defense, oral presentation, and completion of a research thesis in the biological sciences. A course fee may be required.

# BLACK STUDIES

*College of Liberal Arts*

Department Chair

Maulana Karenga

Department Office

Psychology Building (PSY), Room 306

Telephone

(562) 985-4624

Faculty

Professors

Maulana Karenga

Bede M. Ssensalo

Skyne Uku-Wertimer

Associate Professors

Alosi Moloi

Amen Rahh

Jim C. Robinson

Department Secretary

TiAmani Morrison

Students desiring information should contact the department office for referral or the faculty advisor. The Black curriculum is designed to provide general knowledge of Black culture and history and to offer training for professional work in the Black community. It offers programs to serve (1) business; (2) those entering a variety of occupations including government, teaching, school administration, foreign service, law, urban planning, communications, journalism, psychology, recreation, speech and linguistics; (3) majors in other fields, such as history, literature, creative writing, anthropology, who wish to include additional dimensions to their course of study.

## Bachelor of Arts in Black Studies (code 2-8425) (124 units)

### Requirements

A minimum of 45 units is required in the major in Black Studies.

Lower Division: B/ST 110 and 9 additional units selected one course from each of the following Groups: Group A) B/ST 120, 121, 200; Group B) B/ST 140, 155, 160; and Group C) B/ST 190, 210, 240, 270A, 270B.

Upper Division: B/ST 330, 332, 335, 495, plus 15 units with one or more courses selected from each of the following Groups: Group A) B/ST 337, 325, 310, 331, 410; Group B) 343, 340, 353, 363; Group C) 304, 345, 380, 475.

Social Science Requirement: Six upper division units from American Indian Studies, American Studies, Anthropology, Asian and Asian American Studies, Chicano and Latino Studies, Computer Studies, Economics, Geography, History, Human Development, Political Science, Psychology, Social Work, Sociology, Women's Studies. These units are in addition to those used to fulfill the requirements of any General Education category.

## Certificate in Black Studies (code 1-8425)

Students majoring in other departments of the University but interested in Black Studies may at the same time pursue a program leading to a Certificate in Black Studies. Courses used to meet the certificate requirement may, where applicable, also be used simultaneously to meet General Education requirements or the major and minor requirements of cooperating departments.

### Requirements

1. A bachelor's degree with a major in a traditional discipline. (Certificate can be completed prior to or simultaneously with completion of the B.A. requirement.)
2. A minimum of 24 units of which at least 12 must be in upper-division courses, with two or more courses selected from each of the following: Group A: B/ST 110, 210, 325, 330, 332, 335, 370, 420; Group B: B/ST 160, 340, 343, 346, 363, 450; Group C: B/ST 120, 121, 200, 201, 304, 337, 400, 410.

## Minor in Black Studies (code 0-8425)

### Requirements

A minimum of 24 units of which at least 12 units must be in upper-division courses, with two or more courses selected from each of the following: Group A: B/ST 110, 210, 325, 330, 332, 335, 370, 420; Group B: B/ST 160, 340, 343, 346, 363, 450; Group C: B/ST 120, 121, 200, 201, 304, 337, 400, 410.

## Courses (B/ST)

### Lower Division

#### 001. Language Skills (3)

Not open to students with credit in Language Skills 170A. Focuses on intensive development of grammatical skills and expository writing. Primarily for Black students. Credit/no credit only. Counts as part of student's course load but does not carry graduation credit.

#### 100. Language Skills (3)

Not open to students with credit in Language Skills 170B. Prerequisite: A recorded total score of 151 or above on the English Placement Test, or credit in B/ST 001 (or its equivalent) and consent of the instructor. Focuses on organizational methods and techniques for writing compositional and expository prose, advanced grammar and some critical reading techniques for term papers. Primarily for Black students.

110. Introduction to Black Studies (3)  
Survey of major themes, issues and concepts of Black Studies. Emphasis given to major schools of thought, research materials and sources, and major scholars of the discipline. Special attention will also be given to the historical evolution and academic rationale for Black Studies.

115. Introduction to African Politics (3)  
A review of recent developments or changes in the government, parties, political ideologies, politics, leadership and political processes in selected African countries.

120. Afro-American History to 1865 (3)  
Survey course which presents a description and analysis of African civilizations shortly before the coming of the European. It will also focus on the impact, significance and role played by the African from the colonial period through the American Revolution, to the Civil War.

121. Afro-American History 1865-Present (3)  
Prerequisites: B/ST 120 or permission of instructor. Impact of social, economic and political change on Blacks in America after the Reconstruction period. Black migration, education, cultural development and business enterprises will be examined.

140. Introduction to African-American Literature (3)  
A study of selected or representative literature of the African-American writer. Special attention will be given to style, content, methodology and thematic approach.

150. Critical Thinking and the Minority Experience (3)  
Provides analytical tools for applying critical thinking to the development of academic skills and to the analysis of social issues. Includes instruction in inductive and deductive reasoning; analyzing types of meaning (denotative vs. connotative) and their relevance to social issues, e.g., racism, sexism, elitism; distinguishing fact from opinion.

155. Afro-American Music (3)  
Nontechnical survey of African-American music. Some attention given to the impact of social movements on the musician and the music produced. Gospel, jazz and well-known derivatives will be highlighted.

160. Introduction to Black Arts (3)  
A presentation of prevailing themes, methodology, concepts and meaning in African art. Equal time is given to contemporary art and art of recent history. The work of some African artists highlighted as appropriate.

167. Exploitation of the Black Athlete (3)  
Study of the socio-dynamics of amateur, professional and collegiate sports activity in the United States as it relates to the African-American community. Case studies of well-known Black athletes will also be presented.

180. Black Language in America (3)  
Historical, phonological, and sociological aspects of the language of Black Americans; traces Ebonics from early use in trading off west coast of Africa; linguistic development from lingua franca to pidgin and creole; linguistic symbols, terms, and analysis applied to Black English; difference versus deficit theories of learning.

190. Racism in the American Military (3)  
Concise review of alternate policies of exclusion, restriction, segregation and conscription of the African-American in armed services.

200. Ancient African Civilizations (3)  
Prerequisite: B/ST 120. A study of ancient African empires and kingdoms. Topics include migration, education, family structure, political institutions, cultural transmission and commercial trade.

201. History of Slavery (3)  
Historical examination of the trans-Atlantic slave trade and its impact on Africa and the Western Hemisphere, with major emphasis on the nature of slavery in Africa, Greece, Italy, the Caribbean, the Middle East, South America, and the United States. Slavery's aftermath on social integration in America and other countries.

210. African American Community (3)  
Will examine the social structure and changes in the community life of African-Americans as compared to other ethnic groups. It will also explore and analyze how institutional and stratification patterns, demographic changes, social movements, and community organizational programs affect Blacks. Several case studies will be presented to underscore the strength and resiliency of the Black community.

240. African and African American Folklore and Culture (3)  
An examination and presentation of material on folklore, folk tales, and folk heroes in the Black community. Some attention also given to Black mythology.

270A,B. Elementary Swahili (4,4)  
For those students who would like to learn the language either for its own sake or to use it as an asset for a major/minor in Black Studies or Linguistics. Emphasis will be placed on mastering the grammar and developing reading and writing skills. By the end of the course each student should be able to converse using proper pronunciation.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

304. The African Colonial Experience (3)  
A critical examination of colonialism as a world phenomenon focusing on colonialism in Africa as the paradigm and point of departure for a specific and comparative understanding.

310. Black Male and Female Relationships (3)  
A comprehensive study of male/female patterns of interaction in the Black community. Some attention given to institutional impact, role changes and projected images of relationships.

319. The Ethnic Experience in the U.S. (3)  
An examination of the dynamics of the development of our multicultural society, emphasizing study of the four distinct ethnic strands of American society (Asian American, Black American, Mexican American, and American Indian) and their role in the maintenance of cultural diversity in the United States. Same course as AIS 319, ASAM 319, CHLS 319, W/ST 319. (Lecture/Discussion.)

325. Psychology of Minorities (3)  
Prerequisite: B/ST 110 or PSY 100. This course develops the concept of a minority psychology. Using comparative techniques and guest lecturers, this course introduces the student to common psychological consequences in the experience of being a minority person.

330. Politics of the Black Community (3)  
Prerequisite: B/ST 210. Study of the perspectives, styles, problems and dynamics of political activity in the Black community.

331. Black Juvenile (3)  
Prerequisite: B/ST 210 or consent of instructor. Critical approach to the problem of juvenile justice in the black community.

332. Civil Rights and the Law (3)  
Designed to provide the student with a basic understanding of the interaction between the American legal system and civil rights of Blacks, other minorities, women, and the general citizenry.

335. Economic Development in the Black Community (3)  
Prerequisite: B/ST 121. Development of business and banking institutions in the Black community. Some attention given to the impact of external factors on development.

337. Cultures of the Pan-African Peoples (3)  
Prerequisite: B/ST 200 or consent of instructor. Presentation of a cultural map of African people emphasizing geography, migration and cultural similarities.

340. Research Topics in African- American Literature (3)  
Prerequisite: B/ST 140. In-depth presentation and analysis of selected issues and dominant personalities in African-American literature; personality and issue to be matched.

**343. African and Caribbean Literature (3)**

General survey of contemporary African, Caribbean, and Afro-American literature within the context of the political, social, economic, and cultural movements. Comparison of Pan-African literature and Western Literature.

**345. Politics of Black Power (3)**

Systematic analysis of the Black Power movement of the 1960's, including contributions and contradictions of major organizations, leadership, and ideologies.

**346. Black Theatre (3)**

Introductory survey course of Black Theatre as an historic medium, profoundly revealing in its humanistic, literary, social and cultural heritage as it relates to Africa, America and the Caribbean.

**353. Black Religion (3)**

The nature and use of religion in Africa and their manifestations in historical and contemporary African-American communities.

**363. History of African Art (3)**

Survey of African art from antiquity to the present, with principal focus on sub-Saharan art.

**370. Black Images in the Mass Media (3)**

Prerequisite: B/ST 121. Examination of the portrayal of Black people in the mass media, past and present. Primary emphasis on newspapers, radio, films and television.

**380. African Political Theory (3)**

Prerequisite: B/ST 115. Examination of theorists and theories which shape African political philosophy. Special attention given to the concepts of Pan-Africanism, African socialism, Negritude and revolution.

**381. Blacks and Party Politics (3)**

An analysis of Black participation in the U.S. political party process. Special features will include information on Black participation in the Republican, Democratic and third-party organizations. Material and discussion on independent Black political party efforts will also be included.

**400. Afro-American Social Thought (3)**

Survey of African-American intellectual history, with emphasis on social theories and opposing schools of intellectual thought.

**404. Contemporary Issues of the Third World Nations (3)**

Study of the shifting power and international status of the Black world. Geo-politics and the diplomatic policies of selected countries will be highlighted.

**410. The Black Family (3)**

Prerequisite: B/ST 325 or consent of instructor. A systematic study and a social historical analysis of the structure and function of the Black family in the United States. There will also be a sociological/theoretical analysis and review of the models of family units, roles and interpersonal relations in society. The theoretical perspective will provide a framework to compare and contrast the Black family and other family units in America.

**415. International Black Children's Literature (3)**

International Black Children's Literature: A survey of Literature suitable for Black children by authors from Africa, the United States, and the Caribbean.

**420. Black Children in Public Schools (3)**

Theories, concepts and principles relating to the intellectual growth, development and learning of Black children.

**423. Problems in Psychological Assessment of African Americans (3)**

Prerequisites: candidates must have a working knowledge of statistical concepts, upper-division standing in Black Studies or permission of instructor. Examination of issues, problems, and practices in the assessment of African American children.

**424. Advocacy for Black Child Mental Health (3)**

Prerequisites: Upper-division standing or consent of instructor. Examination of the essential mental health needs of Afro-American children, their legal and educational rights as well as preventive and remedial measures. Throughout the course, emphasis will be placed on many faces of advocacy the building of a system of delivery of human services at neighborhood levels for vital preventive and remedial needs.

**430. African Political Leadership in the Twentieth Century (3)**

The course is a critical examination of Africa's search in the 20th century for national liberation and cohesion, collectively built institutions, movement/parties, and ideological self-definition. A comparative study of traditional African leadership concepts and/or styles, and modern forms that have evolved since contact with the Europeans, will be undertaken. Focus will be on selected countries and major African leaders in Lusophone, Francophone, and Anglophone Africa. The content of the leaders' ideas will be analyzed; socio-politico-economic forces giving rise to those ideas will be studied.

**432. Advanced Studies in Afro-American Music (3)**

Prerequisite: B/ST 155. Study of the development, evolution and essence of Afro-American music in the 20th century from perspectives of Afro-American social and cultural history.

**450. Black Writers Workshop (3)**

Prerequisite: ENGL 100, B/ST 100, or equivalent. This course requires extensive writing in four major areas: poetry, drama, fiction and documentaries. It assumes that technical or grammatical problems of writing have been taken care of and focuses on themes which are Afro-centric.

**452. Ecology of Black Crime (3)**

Prerequisite: B/ST 210, 331 or 332. Study of the interrelationships between the black criminal, the minority community and the criminal justice system.

**460. African Thought (3)**

Prerequisite: Background knowledge of Africa from history, political science, anthropology or sociology is highly recommended. Analysis of philosophical and religious systems of Africa from antiquity to present.

**475. Racism and Sexism: An Analytical Approach (3)**

Prerequisite: B/ST 332. An examination of institutions and a study of legislation which has been written and implemented in consequence of racism and sexism in American society. Social theories used to support concepts of racism and sexism will also be presented.

**490. Special Topics in Black Studies (3)**

Prerequisite: Consent of instructor. Topics of current interest in black studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

**495. Research Methods in Black Studies (3)**

Prerequisites: B/ST 110, SOC 255 or equivalent statistics course, and six units upper-division work in Black Studies. This course is for the Department major. It will present information on the use of scientific methods in Black Studies, research theory, research design, sampling, measurement and science techniques. It will also focus on instrument construction as well as test reliability and validity.

**498. Ancient Egyptian Ethical Thought (3)**

A critical study of ancient Egyptian ethical thought with due attention to the theological, literary and social-historical context in which it was developed and evolved. This will include a systematic examination of the major ethical texts of ancient Egypt: a) the Sebait (The Instructions); b) the Ikeru (The Declarations of Virtue); c) the Book of Khun-Anup; and d) the Declarations of Innocence in the Pert-em-Heru (The Book of Coming Forth By Day). Also, appropriate comparisons will be made between the theological, and general religious parallels of the ancient Egyptian tradition and the Jewish, Christian and Islamic traditions.

**499. Directed Studies (1-3)**

Prerequisite: Consent of instructor. Permits individual students to pursue topics of special research interest. May be repeated to a maximum of six units.

# COLLEGE OF BUSINESS ADMINISTRATION

## Dean

C. J. (Mike) Walter

## Dean's Secretary

Diane Barbee (562) 985-5307

## Associate Dean

M. B. (Mo) Khan

## Associate Dean's Secretary

Margaret Williams (562) 985-7696

## College Office

CBA 200

## Telephone / FAX

(562) 985-5306 / 985-5742

## Administrative Services (562) 985-7690

Teri Bostic, Manager

## Development Office (562) 985-2264

Diane Apple, Director

## Student Life and Development (562) 985-8600

Stuart Farber, Director

## MBA Program (562) 985-1797

Jack Gregg, Director

## Undergraduate Admissions and Advising Center (562) 985-4514

Carol Grutzmacher, Coordinator

## Mentoring Business Program (562) 985-2265

Stephanie Teer, Director

## CBA Computing Center (562) 985-4988

Jerry Shoudt, Coordinator

## Information Processing Center (562) 985-7683

Connie McCarroll, Coordinator

## Departments

### Accountancy (562) 985-4653

David Davidson, Chair

### Finance, Real Estate and Law (562) 985-4569

L.R. Runyon, Chair

### Human Resources Management and Management (562) 985-4753

David Abramis, Chair

### Information Systems (562) 985-4993

Bruce Sun, Chair

### Marketing (562) 985-4569

Richard Celsi, Chair

### International Business Program (562) 985-4565

Wendell McCulloch, Director

The College of Business Administration seeks to prepare its students for entry into successful careers in business. As each graduate pursues a successful career, it is anticipated that personal responsibility will be accepted for maintaining and enhancing the quality of the society in which business and the individual operate.

## *The College*

The College of Business Administration has five departments: Accountancy; Finance, Real Estate and Law; Human Resources Management and Management; Information Systems and Marketing. Each is responsible for administering one or more of the degree options.

## *Overview of Programs*

### Accreditation

The College of Business Administration offers undergraduate and graduate programs of study. Both programs are nationally accredited by the American Assembly of Collegiate Schools of Business (AACSB) (American Assembly of Collegiate Schools of Business, 605 Old Ballas Road, Suite 220, St. Louis, MO 63141-7077, phone: 314-872-8481) and may lead to completion of the following:

### Bachelor of Science in Business Administration

Specialization may be made in a choice of the following areas, hereafter referred to in this Catalog as Options:

Accountancy; Finance, Real Estate and Law; Human Resources Management; International Business; Management; Management Information Systems; Marketing; Operations Management. (See following pages for more information.)

Students who complete and formally declare two options may be regarded as having completed a double major, and appropriate notation can be made on the transcript.

### Minors in Business Administration

The College of Business Administration has developed minors available to any non-business student. Significant preparation for business employment may be developed through completion of an organized program from one of the following areas: Administrative Information Systems, Human Resources Management, Marketing, Quantitative Methods. (Refer to the section on Minors for more information.)

### Master of Business Administration

Specialization may be made in one of the following areas: Business Finance, Human Resources Management, Information Systems, Management, Marketing, Engineering Systems. (Refer to the following pages for more information.)

## *Student Services*

### Admission and Advising Information

The College of Business Administration maintains an advising and admissions office in CBA Room 105 for undergraduate students. There is an office for MBA students in CBA 231. Advisors are available in these offices throughout the semester to assist students with admission, registration, and degree requirement information. A graduate and undergraduate handbook are available in the campus copy center.

### The Mentoring Business Program (MBP)

MBP is a support program within the College of Business Administration. Our focus is to assist students with their transition into college and into the business industry. Each student is paired with a mentor at each stage of their academic and professional development. Freshmen and sophomore students are mentored by upper division business students or faculty as they begin their educational journey at CSULB. Junior and senior students are connected with corporate professionals in business industry. This relationship assists our students with networking and internship opportunities as they prepare for their transition into their professional careers. The Mentoring Business Program also encourages students to become involved with a business student organization to assist them in meeting students and expanding their opportunities. We also provide business workshops, corporate tours and scholarships. Students must meet certain selection criteria in order to be eligible for the program. For details regarding our application process, please call The Mentoring Business Program at (562) 985-2265.

### Financial Assistance

Financial assistance is provided to business students through the University Financial Aid Office. That office administers funds made available through the federal and state governments and through certain private sources. Awards are made to students who demonstrate a need for assistance with educational expenses.

Selected scholarships and fellowships within the College of Business Administration are publicized. Consult the Director of Student Life and Development for information, CBA 210, (562) 985-8600.

### Achievement Awards

Beta Gamma Sigma "Outstanding Student in Business" Applications are usually due April 1. The award is presented in early May at the annual Beta Gamma Sigma Installation and Banquet.

Outstanding Graduating Senior Applications are usually due March 1. The award is presented at the May commencement ceremony, and the recipient is also honored at an Alumni Association banquet in June.

The Wall Street Journal Award (Based on GPA) Applications from graduating seniors are usually due March 1. The award is presented at the May commencement ceremony.

### Student Organizations

Numerous organizations are available for business students. They include: American Marketing Association, Beta Alpha Psi/Accounting Society, Human Resources Management Association (HRMA), Information Systems Students Association, The Society for the Advancement of Management, Beta Gamma Sigma, Black Business Students Association, Delta Sigma Pi, Hispanic Students Business Association, Long Beach Entrepreneur Society, Professional Women in Business, International Association of Students in Economics and Commerce (AIESEC), Financial Management Association, Operations Management Association and Pacific Rim.

The Associated Business Students Organization Council

(ABSOC) is a facilitating and coordinating organization for business student organizations. ABSOC is composed of elected officers from each organization. Through these student organizations each year business students are provided opportunity to meet representatives of business and industry. Prominent executives are, in addition, invited to the campus for dialogue with business students. ABSOC and the Associated Students co-sponsor the annual "Meet the Industries Night," a spring job fair which draws over 60 companies and several hundred students.

Beta Gamma Sigma: Beta Gamma Sigma, founded at the University of Wisconsin in 1907 as a business honor society, is the only honor society recognized by the American Assembly of Collegiate Schools of Business. Membership is available to business students at California State University, Long Beach only because the College of Business Administration is accredited by AACSB.

Election to membership in Beta Gamma Sigma is the highest scholastic honor that a student in business administration can attain. To be eligible for membership at CSULB students must rank in the upper three percent of their junior class or the upper seven percent of their senior class, or rank in the upper ten percent of those receiving masters degrees in business administration.

The MBA Association is established to provide a mechanism to promote contact between members, potential employers and business people in the community through guest lecturers and other functions, to promote the flow of communication between individuals pursuing an MBA, and to establish a forum for discussion of issues affecting MBA students at CSULB. Every MBA student is eligible for membership and is encouraged to take an active role to enhance personal and association growth.

### Computer and Information Technology

Students in the degree program develop basic understandings and competencies relating to information processing, the application of computers in business and government, management information systems concepts, and computer programming. A computer laboratory facility is maintained within the College to provide computer access for business students.

### General Policies and Regulations

Specific University and College requirements are detailed in various sections of this Catalog. Every student must develop complete familiarity and understanding of the regulations and requirements by which successful completion of a program will be determined. (Also see pertinent section regarding University General Regulations and Procedures).

### Special Enrollment Status

Enrollment through Open University (University College and Extension Services) is allowed only on a space available basis. Space availability is not based on the number of unoccupied chairs in a classroom. Instead, it is determined by the type of course and teaching method. The student must otherwise be qualified.

Disqualified students are not permitted to enroll in any upper division courses in the College of Business Administration.

### *Concurrent Enrollment/Transfer of Credit*

Undergraduate students who wish to take course work in a community college or other university or college to meet CSULB College of Business Administration or General Education requirements must carefully observe University and College requirements. As noted below under Requirements for the Bachelor of Science in Business Administration, some courses must be taken at CSULB and cannot be transferred from another school. Business courses taken at other schools may be transferred for credit at CSULB if a grade of "C" or better was earned. No upper division credit will be given for lower division courses. For this purpose there are two categories of schools. Courses taken at a business school which is AACSB accredited are generally acceptable for transfer credit at CSULB. Courses taken at non-accredited schools must have prior approval by the dean's designee.

### *Grading Policy*

Business majors and minors may not exercise a Credit/No-Credit grading option for courses required by the College of Business Administration in their program. No course taken for Credit/No-Credit grading will be accepted to fulfill a Business requirement. Enrollment in a business course as an auditor is not permitted.

## UNDERGRADUATE PROGRAMS

### Bachelor of Science in Business Administration

#### Requirements

In order to graduate with a business degree from CSULB, a student must complete a minimum of 30 units here. At least 24 of these units must be upper division. Twelve of the upper division units must be in business.

A minimum of 124 units will be required for all options in business with the exception of Accountancy, which requires a minimum of 128 units. At least 12 upper division units in business, including MGMT 425, must be completed at CSULB.

1. Lower Division Courses:  
ACCT 201, ECON 201, ECON 202, FIN 222, IS 240, MATH 114, MATH 115, and PHIL 160 or 170 (Accountancy majors must take PHIL 160. MIS majors must take PHIL 170.)
2. Upper Division Core Courses (33-34 units):
  - A. CBA 300, CBA 301, ACCT 310, (Accountancy majors must take ACCT 320 instead of ACCT 310), ECON 333, FIN 324, FIN 362, HRM 360, MGMT 300, MKTG 300, IS 310, IS 301).
  - B. The capstone course, MGMT 425. This course must be taken at CSULB as a senior and after the upper division prerequisite core courses have been completed.
  - C. Completion of at least one option (15-24 units); select from the options listed below.
3. Elective units to make up the total 124 units required for the degree (128 for Accountancy majors.) Each student is encouraged to select electives for expansion of knowledge and intellectual interests as well as for preparation for business employment.

## ACCOUNTANCY DEPARTMENT

### Option in Accountancy (code 3-2705) (128 units)

The Accountancy curriculum is designed to meet the general education goals of those entering the accounting profession. It satisfies the requirements established by the American Institute of Certified Public Accountants and may be used to meet educational requirements for the California CPA Certificate. The accounting program develops an understanding of an organization's management information system on a broad base of general education and business administration courses. The program is carefully planned and rigorous, building the conceptual, analytical, and communication skills necessary to succeed in the accounting profession. It prepares students for careers in all areas of accounting, including the necessary qualifications for professional examinations such as the C.P.A., C.M.A., C.I.A.

#### Requirements

ACCT 300A-B, 400, 451, 470, 480, and one course from ANTH, PSY, or SOC.

## INFORMATION SYSTEMS DEPARTMENT

The Information Systems Department administers an option in Management Information Systems.

### Option in Management Information Systems (code 3-2725) (124 units)

This option prepares students for careers in Management Information Systems in business, education, and government. Emphasis is on systems, information analysis and resources. Fundamentals of business information systems, computer hardware, system and application software, telecommunications and decision support systems are included to provide the student a solid foundation in this rapidly changing field. The curriculum is based on both the DPMA and ACM models.

Students in the Management Information Systems Option may choose one of the following two tracks within the Option: Applications Development or Business Telecommunications.

#### Applications Development Track

#### Requirements

A total of 18 units, of which 15 must include IS 340, 355, 380, 385, and 485. Three units to be selected from IS 320, 375\*, 464, or 470\* (\*recommended).

#### Telecommunications Track

#### Requirements

A total of 18 units, of which 15 must include IS 355, 380, 445, 455, and 485. Three units to be selected from IS 320\*, 375, 464\*, or 470 (\*recommended).

## FINANCE, REAL ESTATE AND LAW DEPARTMENT

### Option in Finance, Real Estate, and Law (code 3-2710) (124 units)

The objective of the finance curricula is to prepare students for a successful career in business with an understanding of the financial decision making process and its impact within the overall framework of the business enterprise. The finance curricula offers education in the management techniques and regulations applicable to financial management and investments. The curriculum draws on fundamental knowledge of statistics, computer logic and economics to develop advanced financial concepts. It explores the historical and current roles of various financial institutions and regulatory authorities; details the basic principles and techniques for valuing financial instruments on the basis of fundamentals and/or historical pricing trends; explores the methods of managing risk; and examines financial principles that govern international trade. The finance major may direct the concentration toward financial management or investments.

The financial management concentration provides an opportunity for the student to gain an understanding of the role of finance in the corporate environment. An understanding of investments at both the corporate and personal level is the objective of the investments concentration. Within these concentrations students are provided with an opportunity to gain an understanding of the role of the various aspects of law in a business context, including the development of a comprehension of business ethics.

#### Financial Management Concentration Requirements

FIN 382, 302 or 342, 464 and 6 units to be chosen from FIN 360, 424, 484, 490.

#### Investments Concentration Requirements

FIN 382, 464, 302 or 342, and 6 units to be chosen from FIN 424, 482, 484, 488, 490, 499A and 499B.

## HUMAN RESOURCES MANAGEMENT/ MANAGEMENT DEPARTMENT

The HRM/Management Department offers options in Human Resources Management, Management and Operations Management.

### Option in Human Resources Management (code 3-2740) (124 units)

The Human Resources Management Option is designed not only for those who have an interest in working in the functional areas of HRM, but also for everyone who wants to become a member of management at any level in either the private or the public sector of the economy. The faculty integrate the theoretical with the practical to produce graduates with highly marketable skills. The major objectives of this option are (1) to provide students with theoretical foundations for understanding how employees are motivated to accomplish organizational goals, (2) to develop the practical skills necessary for employment in positions designed to attract, encourage, develop and retain human resources, (3) to de-

velop an understanding of the theoretical and practical approaches to human resources management, (4) to develop aspiring leaders with a strong sense of ethics and social responsibility and an awareness of how societal changes necessitate organizational change. The curriculum emphasizes critical thinking, creative problem solving, and personal development to enhance managers' performance in a dynamic, changing, culturally diverse and globally expanding work environment.

#### Requirements

1. HRM 361
2. 12 units selected from HRM 440, 445, 446, 458, 460, 462, 463, 465, 495

### Option in Management (code 3-2745) (124 units)

The objective of the management curricula is to prepare students for a successful career in management of the business enterprise. Attention is given to the need to create and maintain a desirable internal environment. Interface of that environment with the external environment in relation to success of the enterprise is considered. Philosophical basis for the practice of management, ethical considerations and human values are stressed. The student's exposure to theory and concepts leads to the acquiring of knowledge and skills to assume first professional positions and progress through middle and upper management careers.

#### Requirements

MGMT 426 and 12 units selected from MGMT 326, 405, 410, 411, 412, 413, 414, 421, 430, 451, 453, 454, 455.

### Option in Operations Management (code 3-2758) (124 units)

The objective of the operations management curriculum is to prepare and stimulate student competence in the conceptual, systematic and analytical tools prerequisite for entry level and advanced positions in goods-producing and service-orientated industries. Emphasis is placed on the systems approach which stresses the concepts, techniques and policies essential for the economical and effective design, operations and control of manpower, facilities, materials, capital and informational inputs of organizations. Students are introduced to productivity tools such as Total Quality Control, Manufacturing Resource Planning, Just-In-Time Techniques, Simulation and Animation of Production Operations, Optimized Production Techniques, Kanban Systems, Japanese Productivity Techniques. Decision Support Systems.

#### Requirements

15 units to be taken as follows:

1. 6 units from MGMT 410, 411
2. 3 to 9 units from MGMT 412, 413, 414
3. Up to 6 units from MGMT 426, 430, 451, 453, 454, 455.



## THE MARKETING DEPARTMENT

### Option in Marketing (code 3-2750) (124 units)

The discipline of Marketing, which is fundamental to all business enterprises, is largely a social process. The justification of any enterprise, be it involved in service or in the production or delivery of goods, is that it meets the needs of individuals or segments of society. The function of marketing is to determine those needs, to provide the most effective means of informing actual and potential customers of the availability of the services and goods they require, and to deliver such services and goods.

#### Requirements

1. Nine units selected from MKTG 310, 330, 410, 420, 430, 465, 480, 492
2. MKTG 470
3. MKTG 490
4. MKTG 494

### Certificate of Honors in Business (code 1-2005)

California State University, Long Beach, offers the opportunity for a selected group of outstanding students to earn an Honors in Business Certificate.

This enriched, more demanding program gives students an opportunity to participate in discussions with noted individuals in the community. In addition, students carry out a research project and prepare a research thesis. It is thus intended to be intellectually rewarding, and to provide valuable experience that can enhance the students' future careers.

#### Admission

Admission to the program is limited to 40 students a year. Applicants will be selected for their promise as interesting, creative students, not simply on the basis of grades.

#### Requirements for Admission

1. Admission to the Business major.
2. A minimum 3.5 cumulative GPA in all college and university courses and a minimum of 3.5 GPA in the major. Students with a GPA of 3.0-3.49 may be admitted if they are nominated by two tenured faculty members of the College of Business Administration. A maximum of 10% of the students in the program will be admitted by nomination.
3. A one-page essay describing yourself and your goals.

Applications should be addressed to the Marketing Department, College of Business Administration, CSULB, 1250 Bellflower Blvd., Long Beach, CA 90840.

Applications are due no later than May 10 for the Fall semester, or December 10 for the Spring semester. Essays will be judged by a committee of professors. Applicants will be notified of admission decisions within 10 days.

#### Requirements

1. Completion of the requirements for the major, with a minimum overall GPA of 3.5 and a minimum GPA in the major of 3.5.

2. Completion of the Honors in Business Colloquium. This class normally meets TTH 1100-1230, and requires participation and an original paper rather than formal examinations. The colloquium brings together scholars and addresses some broad field of study, usually led by a different lecturer at each meeting. Each semester, one or more distinguished guest lecturer is invited to the University to participate.
3. Completion of 3 units of Independent Study, leading to the required Honors Thesis; and completion of an Honors Thesis (3 units).
4. Completion of an additional 6 units of Business courses for which Honors credit has been designated, including Management 425, the capstone course for the major.
5. Completion of the 3-unit capstone colloquium USP 499, Synthesis, as partial fulfillment of the University's requirement of 6 upper-division interdisciplinary units.
6. Students who have failed to enroll in courses for Honors credit for two consecutive semesters will normally be withdrawn from the program.

### Certificate in Transportation (code 1-2030)

#### Requirements

1. A bachelor of science degree in Business Administration which may be completed concurrently with the certificate requirements;
2. A minimum of 15 units of transportation and transportation-related course work at California State University, Long Beach to be selected with the approval of the Program Director.
3. A grade of "C" or higher will be required for every course;
4. The certificate program does not permit the use of the Credit/No Credit option.

### Minor in Management Information Systems (code 0-2720)

Eighteen units including:

1. ACCT 201
2. IS 240, 301, 333
3. 6 units to be chosen from - IS 380, 385, 425, 450, or 485

### Minor in Human Resources Management (code 0-2740)

1. HRM 360, 361, and
2. Twelve units selected from HRM 440, 445, 446, 460, 462, 463, 465, 495.

### Minor in Marketing (code 0-2750)

Eighteen units including: MKTG 300; 15 units selected from MKTG 310, 330, 420, 430, 465, 470, 480, 490, 492, 495 or CBA 300 as approved by the Marketing Department. It is the student's responsibility to adhere to all prerequisite requirements listed below:

1. IS 310 is a prerequisite for MKTG 470;
2. MKTG 480 is a prerequisite for MKTG 481;
3. MKTG 300 is a prerequisite for MKTG 420, 430, 465, 470, 480, 481, 490, and 492.

## Graduate Programs

The College of Business Administration offers graduate study leading to the Master of Business Administration (MBA). The degree offered by the College of Business Administration is accredited by the American Assembly of Collegiate Schools of Business.

The MBA is designed to serve the community by providing graduate business education to persons who show promise of leadership and success in business or related fields. For this reason, the faculty of the College of Business Administration has established rigorous standards of admission and completion for the program.

### *Admission to Graduate Study*

In addition to admission by the University Office of Admissions and Records, an applicant for graduate study in business must apply to and be admitted by the College of Business Administration. It is the responsibility of the student to purchase a current CSULB Catalog or Handbook which sets forth the policies of the University and the College of Business Administration graduate program.

### *Admission Procedures*

1. Students interested in applying to the MBA program at CSULB should request a University application and an MBA Application Packet from the MBA office. Students must complete and submit both applications in order to be considered for admission into the graduate program in business. Students should submit Part A and B of the University Common Admissions form to the University Admissions Office. Students applying for the MBA should mark "other masters" as the degree objective, and 05011 as the major code. Students should submit the MBA application with two letters of recommendation directly to the MBA office.
2. Two complete sets of official transcripts of all college work attempted are required. One set must be sent to:  
California State University, Long Beach, Office of Admissions and Records, 1250 Bellflower Blvd., Long Beach, CA 90840  
The other set of official transcripts must be sent directly to the MBA Office at the following address:  
California State University, Long Beach, College of Business Administration, MBA Office, 1250 Bellflower Blvd., Long Beach, CA 90840
3. Graduate Management Admission Test (GMAT) scores must be forwarded directly from the Educational Testing Service to the College of Business Administration MBA Office. Test scores over 5 years old will not be considered.
4. Foreign students should first contact the Center for International Education on campus for special deadlines. Foreign students are required to take the TOEFL test and achieve a score of 550, in addition to the steps above required of all applicants to the MBA program.

Deadlines for International applications are:

- November for Fall Semester
- August for Spring Semester

All transcripts, the MBA Application Packet, GMAT score and TOEFL score (if applicable), must be filed in the MBA Office by:

December 1 for Spring Semester

July 1 for Fall Semester (except for GMAT scores which must be received by August 1)

Because of high demand for admission to the MBA program, it is advisable that students make their application to the program early. No action can be taken on applications until all required documents are received. Application materials submitted after these dates will be reviewed and students will be admitted as time and space permits.

### *Criteria*

Admission will be granted to students showing high promise of success in post-baccalaureate business study. Each applicant's potential for graduate management education is evaluated on the basis of five major criteria:

1. Past Academic Record, as reflected in undergraduate GPA.
2. Graduate Management Admission Test (GMAT)
3. Managerial Experience: demonstration of increasing levels of responsibility.
4. Communication: ability to clearly identify the applicant's leadership potential, educational goals and academic strengths.
5. Two Letters of Recommendation

Upon completion of evaluation by the College of Business Administration MBA office, the student is notified by mail of acceptance or rejection. If accepted, the letter includes an evaluation listing prerequisites met by the student in previous course work and those still requiring completion. Course work over ten years old at the time of acceptance will not be considered for satisfaction of the First Year Core.

### *Enrollment*

Admission to the University as a graduate student does not constitute admission to graduate study in the College of Business Administration. MBA programs may require different admissions criteria.

### *Admission to Graduate Courses*

Only students who have been admitted to the MBA program may take graduate courses in Business Administration. The only exception is that students who have been admitted to other Master's programs at CSULB may take select graduate courses in Business Administration to meet the requirements for their programs, with the permission of their major advisor and the MBA office.

Enrollment in graduate courses through the Open University will normally be permitted only for students in an AACSB accredited graduate program elsewhere with a letter of permission from the Associate Dean/Dean of the student's home university.

### *Continuous Enrollment*

Once a student is accepted and enrolled in the MBA Program, he/she is expected to attend classes both semesters of the academic year. (Fall and Spring semesters are considered the regular semesters of the academic year; Summer attendance is optional.) Registration and completion of at least one course each semester satisfies the Continuous Enrollment requirement.

If a student is unable to satisfy the Continuous Enrollment requirement, he/she must complete the Educational Leave of

Absence procedures detailed below. Continuous Enrollment status will only be preserved if the student's absence from a regular semester has been processed and approved through the Educational Leave of Absence procedures.

Students failing to maintain Continuous Enrollment status will be administratively removed from the MBA Program. Registration privileges will be revoked. Students planning to continue in the MBA Program who have been administratively removed due to the violation of the Continuous Enrollment condition will be required to re-apply to the MBA Program.

### *Leave of Absence*

Any MBA student in good academic standing may request an Educational Leave. Students requesting an Educational Leave must complete an Educational Leave Form, in advance, including an explanation of their reasons for seeking the leave and a statement of when they intend to resume academic work. The completed form is to be submitted for approval to the MBA Office and the University Admission & Records Office in accordance with University Policy.

The minimum initial leave will be one full semester; the maximum will be one calendar year. A student may request, in writing, in advance, an extension of leave. Under no circumstances will the total number of approved educational leaves exceed two, nor will the duration of approved educational leaves extend beyond two calendar years.

Students returning from an approved one semester educational leave are not required to submit an application form. Students on leave longer than one semester must apply for re-admission to the university. Students returning from an absence for which an educational leave was appropriate but not approved in advance must complete the entire MBA admission process.

An Educational Leave of Absence, if properly requested and processed, allows a student to satisfy the Continuous Enrollment requirement and therefore does not affect their good standing status. Students on an approved education leave of absence will continue to receive registration information and access to the VRR system until the authorized leave time expires.

Graduate students who plan to enroll for credit at another institution of higher education during the leave period must obtain prior approval for the transfer of course credit to the student's program for the department chair in question and the MBA Director.

The period of an educational leave is counted in the calculation of elapsed time under the regulations governing the seven year maximum period for completion of the MBA degree requirements.

For the period of an educational leave the student's rights under the "Election of Regulation" rule are preserved, maintaining the right of the student to elect regulations as if he or she had maintained continuous attendance. See the CSULB Catalog, General Rules and Procedures section, for a complete explanation of the Election of Regulation - "Catalog Rights".

An educational leave presupposes no expenditure of University resources or faculty and staff time in behalf of the student during the period of the leave. In addition, no computer facilities, no library privileges, and no student services are available to a student on educational leave.

### *Transfer Credit*

Assuming the Continuous Enrollment requirement has been satisfied, a maximum of six credits that closely complement the student's degree objectives may be applied toward the requirements for the MBA degree beyond the First Year Core under the following conditions:

1. the credits under consideration must be graduate credits
2. the course work must be taken at an AACSB accredited graduate program.
3. prior approval must be obtained from the MBA Director
4. prior approval must be obtained from the department chair of the course work being transferred.

The remaining units must be completed in courses at CSULB reserved exclusively for graduate students.

### *Scholastic Standards/Probation/Disqualification*

A student who fails to maintain a cumulative GPA of 3.0 or higher in all work completed as a graduate student at this University or in all transferred work applied to the program will be placed on academic probation. The semester in which the student's GPA falls below 3.0 is the First Probationary Semester.

A student on probation, who at the end of the Second Probationary Semester (or summer, if classes are taken) fails to obtain a cumulative GPA of 3.0 or higher on all units attempted in post-baccalaureate work at CSULB, will be disqualified and removed from the graduate program. The student should note that the cumulative GPA is calculated by the University Admissions and Records Office and includes all upper division and graduate courses taken while enrolled in the graduate program.

A grade of "C" or better is required in any course taken to satisfy first or second year Core requirements. A grade of "B" or better is required in GBA 699. If either of these requirements is not met, a student must take the course a second time or withdraw from the program. A second failure to achieve the requirement grade will result in involuntary separation from the program. This requirement operates independently of the requirement for a cumulative GPA of 3.0 or better.

### *Master of Business Administration Degree (code 7-2701)*

The Master of Business Administration program develops competencies essential to functioning professionally in a complex and competitive business environment. The program prepares students for responsible administrative positions and provides the background essential for advancement in professional management careers. The Master of Business Administration degree encompasses a program of breadth which builds a wide range of competencies required for effective management while permitting students to specialize in a functional area.

The Master of Business Administration is normally a 60 unit program for the graduate without an undergraduate degree in Business.

#### *Requirements*

The Master of Business Administration program requires completion of a minimum of 33 units of graduate course work as established and approved by the College of Business Administration MBA office. The MBA program must include:

I. First Year Core	0-27
II. Second Year Core	18
III. Advanced Study	12
IV. Capstone Course	3
Total units	33-60

## I. First Year Core: Common Body of Knowledge

The masters degree presupposes mastery of a common body of knowledge. Students with a bachelor's degree in business from this University or from other AACSB accredited universities within the last 10 years will have met all or most of the First Year Core requirements. Individual business Administration courses taken as an undergraduate student at another AACSB institution may also meet specific First Year Core requirements. Upon acceptance to the program, a student's transcripts are reviewed for completion of the necessary course work for mastery of the common body of knowledge. A grade of "C" or better is required to meet the criteria.

Waivers of First Year Core are based upon previous educational background at either a graduate or undergraduate level. Information on waivers and MBA Placement Exam qualifications may be obtained from the College of Business Administration, MBA Office. Placement examinations may only be taken prior to the first semester an MBA student enters the program. Students who have not met the entire common body of knowledge requirements prior to admission to the MBA Program will be required to enroll in the appropriate First Year Core courses. This core should be completed before enrollment in the Second Year Core: ACCT 500, ECON 500, FIN 500, FIN 501, HRM 500, IS 500, IS 501, MGMT 500, MKTG 500.

## II. Second Year Core

Upon completion of the First Year Core, either by waiver, placement exam or graduate course work, students move directly into the Second Year Core. (See section on Advancement to Candidacy). This core consists of six courses (18 units) which provide the breadth requirements for the MBA degree at the advanced level: ACCT 510, FIN 631, HRM 652, IS 502, MGMT 647, MKTG 661.

## III. Advanced Study

### General MBA

The General MBA is designed for students with an undergraduate business degree or any other student desiring a more broad-based MBA curriculum. The General MBA normally requires 12 units of graduate course work in four different areas within the College of Business Administration subject to approval by the MBA Director. For example, an International Focus could be achieved by selecting the internationally designated courses from Finance, Human Resources Management, Management, and Marketing

### Specialization

The specializations require 12 units of graduate course work in one area. Each specialization should be planned in consultation with the MBA Director. Specializations are available in the following areas:

### Finance

Requirements: Twelve units to be selected from FIN 524, 531, 532, 533, 630, 633, 666, 691.

### Human Resources Management

Requirements: Twelve units to be selected from HRM 650, 654, 655, 657, 658, 697.

### Information Systems

Requirements: Twelve units to be selected from IS 550, 564, 580, 584, 685.

### Management

Requirements: Twelve units to be selected from MGMT 541, 542, 543, 645, 646, 647, 697.

### Marketing

Requirements: Twelve units to be selected from MKTG 610, 663, 665, 666, 668, 669, 695, 697.

**Engineering Systems:** The engineering systems specialization allows students with a strong engineering background to specialize within the MBA program in an area that may more closely match their career objectives. This specialization consists of four graduate courses within the College of Engineering, subject to approval by the MBA Director.

Students may count 3 units of Directed Studies (697) toward the Advanced Study requirements. Elective courses designed to fulfill specialization requirements must be approved by the MBA Office through the completion and acceptance of the student's Advancement to Candidacy form.

## IV. Capstone Course: GBA 699 Integrated Analysis

Integrated Analysis, GBA 699 is taken as the last or capstone course in the program. Students must plan to complete the Second Year Core before enrolling in GBA 699. This critical course is given during the Fall and Spring semesters. In this comprehensive analysis, the student will integrate the knowledge obtained in the functional areas. This capstone course serves in place of either comprehensive examination or thesis as the required evaluation of candidate competency. In addition to completion of the required GBA 699, an MBA candidate may elect to complete a thesis for a minimum of four units credit.

Application for acceptance into GBA 699 must be filed in the MBA Office before the end of the fourth week of instruction in the semester preceding enrollment in the course. Application forms and advisement relating to this important requirement are available in the MBA Office.

### Advancement to Candidacy

Students admitted with all First Year Core requirements completed must file an application for Advancement to Candidacy for the degree after completion of their first 6 units. Other students must file the application during the semester in which the First Year Core requirements are to be completed. Prior to advancement to candidacy, a student must:

1. Be accepted into the MBA Program.
2. Maintain an overall minimum 3.0 cumulative GPA, including work transferred from other institutions, and a minimum 3.0 GPA in all work completed at this University.

3. Complete all First Year Core Requirements, with no grade lower than "C".
4. Pass the Writing Proficiency Examination. (See next section)
5. Prepare an official student program in consultation with the MBA Director. This program must include the Second-Year Core in effect at the time of Advancement to Candidacy, the 12 unit program for the area of Advanced Study and the Capstone Course, GBA 699, for a total of 33 units.
6. File the application for Advancement to Candidacy with the MBA office for approval by the MBA Director.

#### Time Limitation

All courses on the official student program must be completed within seven years of the commencement of the first class toward fulfillment of the Second Year Core requirement.

#### Writing Proficiency Examination

The Writing Proficiency Examination (WPE) is a unique requirement of this University. Satisfactory completion of the WPE is required before a student may Advance to Candidacy. Therefore, graduate students should register for the WPE in person when they first arrive on campus. CSULB will accept certain Graduation Writing Assessment Requirement (GWAR) Tests offered at other CSU campuses. The test must have been taken prior to your initial enrollment at CSULB. The staff in Admissions and Records (SSA-101) can clarify documentation required from each campus. Graduates must present the requirement documentation to the MBA Office as part of their application for Advancement to Candidacy. There are no exemptions to the requirement of an approved form of writing proficiency exam.

## Courses (Undergraduate CBA, Graduate GBA)

### 130. Current Concepts of Business (3)

An overview of CBA options, including professional preparation and employment opportunities. Orientation to current CBA programs and requirements. Development of an understanding of contemporary business issues, including an introduction to major business functions. Strongly recommended for students interested in business careers.

### 300. International Business (3)

An introduction to the nature, dimensions, and environment of international business. Emphasis on business functions, practices, and decisions as they are influenced by cultural, political, economic, social, and institutional factors in various parts of the world. Diffusion of information technology. Traditional grading only.

### 301. Integrated Business Functions and Issues (3)

Prerequisites: ENGL 100; lower-division business core courses. Integrated study of business issues and functional areas of business; foundation competencies needed for business. To familiarize students with interaction among functional areas within business and with the changing political and economic global environment of business; to assess and develop basic competencies for success in the program and in business. Traditional grading only. Cornerstone course: Integrated study of business issues and functional areas of business; foundation competencies needed for business. CBA 301 is a required course for all CBA students. It is a prerequisite for upper-division CBA courses

### 491. Honors in Business Colloquium (3)

Prerequisites: Admission to the Honors in business program. A cross-disciplinary seminar considering important contemporary issues in business and society. Traditional grading only.

### 493. Business Internship (1-3)

Prerequisites: Classified business major and Instructor consent. Qualifying students will be placed in career-related paid assignments in private or public agencies or businesses. An organized plan utilizing a series of seminars and learning agreements is required along with selected reading and writing assignments. a minimum of 120 hours paid experience per semester is required. (May be repeated for a maximum of six units.)

### 498. Thesis (1-3)

Prerequisites: Three units of Independent Study. Planning, preparation, and completion of an undergraduate thesis in business administration. Traditional grading only.

### 601. Applied Research (3)

Prerequisite: IS 500 or equivalent. Scientific methods of research methodology and design. The application of research findings to major phases of business. Individual research projects. Emphasis is on experimentation and surveys. Utilizes background of specific statistical tools and techniques. Computer statistical packages will be utilized.

### 698. Thesis (2-4)

Prerequisite: GBA 601. Planning, preparation, and completion of a thesis in business administration.

### 699. Integrated Analysis (3)

Prerequisites: Student shall have completed all 2nd year core classes. Classified MBA status in the last semester or within six units of completion of the 33-unit minimum graduate program and advanced to candidacy. A comprehensive course which serves as the required terminal examination for College of Business Administration graduate candidates. A project is required. A study of a wide range of business problems and formulation of solutions to them. The object of this course is to assess student skills in integrating knowledge from all functional areas of business and applying them to complex business problems arising out of changing technology, competitive market conditions, social changes and governmental actions. The methodology may include cases, business simulation, and team teaching. A grade of "B" or better is required for successful completion. Students must file application for entry into GBA 699 no later than the fourth week of instruction in the semester preceding the one in which GBA 699 will be taken. Application forms are available in the MBA Office.

# 1998 -1999 ACADEMIC CALENDAR

Please note: This is not intended to be construed as an employee work calendar.

## JUNE 1998

S	M	T	W	TH	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

## JULY

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			1	2	3	4
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12	13	14	15	16	17	18
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26	27	28	29	30	31	

## AUGUST

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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## SEPTEMBER

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27	28	29	30			

## OCTOBER

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18	19	20	21	22	23	24
25	26	27	28	29	30	31

## NOVEMBER

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22	23	24	25	26	27	28
29	30					

## DECEMBER

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20	21	22	23	24	25	26
27	28	29	30	31		

## JANUARY 1999

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24	25	26	27	28	29	30
31						

## FEBRUARY

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28						

## MARCH

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21	22	23	24	25	26	27
28	29	30	31			

## APRIL

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25	26	27	28	29	30	

## MAY

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23	24	25	26	27	28	29
30	31					

## FALL 1998 SEMESTER

- August 18 - 21 Departmental Advising
- August 18 First Day of the Semester
- August 24 First Day of Instruction
- September 7 Labor Day Holiday (campus closed)
- October 12 Columbus Day (campus open)
- November 26 and 27 Thanksgiving Holiday (campus closed)
- December 5 Last Day of Instruction
- December 7 - 12 Final Examinations
- December 16 Last Day of the Semester
- December 17 - January 20 Winter Recess

## WINTER 1999 SESSION

- January 4 First Day of Instruction
- January 18 Martin Luther King, Jr. Holiday (campus closed)
- January 22 Last Day of Instruction

## SPRING 1999 SEMESTER

- January 21 - 22 Departmental Advising
- January 21 First Day of the Semester
- January 25 First Day of Instruction
- February 12 Lincoln's Birthday (campus open)
- February 15 Washington's Birthday (campus closed)
- March 29 - April 2 Spring Recess (campus closed)
- May 14 Last Day of Instruction
- May 17 - 22 Final Examinations
- May 26 - 28 Commencements
- May 28 Last Day of the Semester
- May 31 Memorial Day Holiday (campus closed)

## SUMMER 1999 SESSION

- First Session June 1 - July 9
- Second Session June 21 - July 30
- July 5 Independence Day Holiday (campus closed)
- Third Session July 12 - August 20

# CHEMISTRY AND BIOCHEMISTRY

*College of Natural Sciences and Mathematics*

## Department Chair

Nail M. Senozan

## Department Office

PH3-213

## Telephone/FAX

(562) 985-4941/(562) 985-8557

## Faculty

### Professors

Roger A. Acey

Dennis M. Anjo

Peter Baine

Stuart R. Berryhill

Jeffrey A. Cohlberg

Jerald A. Devore

Dorothy M. Goldish

Edwin R. Harris (Emeritus, 1997)

Gene E. Kalbus (Emeritus, 1994)

Van T. Lieu (Emeritus, 1996)

Robert L. Loeschen

Tom J. Maricich

Kenneth L. Marsi (Emeritus, 1996)

Glenn M. Nagel

Henry N. Po

Nail M. Senozan

Leslie K. Wynston

### Associate Professors

Marco A. Lopez

Margaret L. Merryfield

Kensaku Nakayama

Kimberly A. Schugart

### Assistant Professor

Douglas D. McAbee

### Department Secretary

Jeannette Santage

Students desiring information should contact the department office for referral to one of the faculty advisors.

### Undergraduate Advising Coordinator

Margaret Merryfield

### Undergraduate Advisors

Dennis M. Anjo

Dorothy M. Goldish

Kenneth L. Marsi

Margaret L. Merryfield

Leslie K. Wynston

### Graduate Advisors

Chemistry: Henry N. Po

Biochemistry: Jeffrey A. Cohlberg

### Graduate Studies Committee

Dennis M. Anjo

Jeffrey A. Cohlberg

Marco A. Lopez

Kenneth L. Marsi

Henry N. Po

Nail M. Senozan

The Chemistry Department Advisory Council, including persons prominent in the community, fosters communication between academic and industrial chemistry. It advises the department concerning the instructional program and informs the department of opportunities for interaction with the community.

### *Degree Programs*

The program in chemistry at the bachelor's degree level is planned to develop background in a specific science, to serve as preparation for graduate work in chemistry or biochemistry, and to provide a foundation for those students seeking careers in the chemical sciences, teaching, law, medicine, dentistry, pharmacy and other health-related professions, and in industrial and governmental scientific occupations. The B.S. degree in chemistry is certified by the American Chemical Society (American Chemical Society, Committee of Professional Training, 1155 Sixteenth St., NW, Washington, DC 20036, phone: 202-872-4589).

The Department of Chemistry and Biochemistry offers graduate study leading to research-based master of science degrees in chemistry and biochemistry. The candidate is urged to observe the general requirements stated in this Catalog as well as the specific departmental requirements stated here and, more fully, in the Graduate Studies Brochure of the department which is available upon request.

A limited number of teaching associate and graduate and research assistantships are available. Usually, these involve half-time work in the instructional program at the freshman and sophomore level or work in the laboratory. Application forms for these positions are available from the Graduate Advisors, Department of Chemistry and Biochemistry.

Transfer Students: A student who transfers to the University must take at least 16 units of upper division chemistry courses here. To receive credit towards the major for courses taken elsewhere in place of CHEM 320A,B and/or 371A,B and/or 377A,B, consent of the department chair is required. Satisfactory performance on appropriate proficiency examinations may also be required.

### *Facilitated Enrollment into Classes*

All entering students who declare a major in a degree program offered by this Department must participate in the College of Natural Sciences and Mathematics' Science Safari to Success (for first-time freshmen) or EONS (Enrollment and Orientation in the Natural Sciences and Mathematics for transfer students) Program. These programs are held in June-July for those starting in the fall semester and in January for those starting in the spring semester. Department advisors will be available to provide an overview of the students' chosen baccalaureate degree program, to assist with academic advisement, to provide information on the many career opportunities available, and to aid students in enrolling in classes. Contact the Student Access to Science Center (FO5-109) or Department Office for additional information.

## Bachelor of Science in Chemistry (code 3-7661) (124 units)

The bachelor of science degree program is intended to provide a thorough background in chemistry for those planning to pursue careers as professional chemists or to do graduate study in chemistry or biochemistry. This program, when supplemented with study in other appropriate areas, can serve as preparation for admission to the health professional schools (medicine, dentistry, pharmacy, etc.). Each student should consult with a faculty advisor (Professors Anjo, Goldish, Marsi, Merryfield or Wynston) to plan his or her individual program.

Chemistry majors must achieve a grade of "C" or better in each chemistry course required for the major.

### Requirements

Lower Division: CHEM 111A, B, 251; courses to support the major to include PHYS 151 or 151P, 152 or 152P, 154, 155; MATH 122, 123, 224; and BIOL 211A.

Upper Division: CHEM 320A, B, 371A, B, 373, 420, 431, 451; ENGL 317; and an additional six units of upper division chemistry which must include at least one unit of CHEM 496. A maximum of three units from CHEM 495, 496, and 499 and CH E 330, 425, 430, or 475 may be used to fulfill this six unit requirement. One additional course in computer programming must be taken from CHEM 385, CH E 210, or CECS 175.

B.S. candidates are encouraged to acquire competence in reading scientific German, French, Russian, Chinese or Japanese. Students are also advised to take one or more additional courses in mathematics, such as MATH 247, 364A, 370A, 380.

## Bachelor of Arts in Chemistry (code 2-7662) (124 units)

The bachelor of arts degree program in chemistry is intended to provide a background in chemistry, but not in the depth required for a bachelor of science degree. This program, when complemented with study in other areas, will serve as preparation for a career in chemical and related industries or secondary science education. The bachelor of arts program is also an appropriate preparation for medical, dental, law, and pharmacy schools. In order to take full advantage of the bachelor of arts program for various career objectives, adequate counseling by chemistry advisors is indispensable. Each student must confer with an advisor to set up his/her individually tailored program in chemistry and one or more complementary areas prior to beginning the course of study.

Chemistry majors must achieve a grade of "C" or better in each chemistry course required for the major.

### Requirements

Lower Division: CHEM 111A,B, 251; courses to support the major to include PHYS 100A,B or 151, 152; and MATH 122, 123.

Upper Division: CHEM 320A,B, 371A,B or 377A,B, 420, 451; ENGL 300 or 317. A minimum of 3 additional units to be chosen in consultation with an advisor must be taken from CHEM 373, 385, 421, 431, 441A, 441B, 471, 496. Two additional units involving computer programming must be taken from NSCI 200 or CHEM 385. Other computer courses may be substituted for the above with the approval of the chemistry department chair. Students must consult an advisor to select additional courses to meet the student's individual goals and interests.

## Bachelor of Science in Biochemistry (code 3-7658) (124 units)

The Bachelor of Science degree in biochemistry is intended to provide a rigorous background in chemistry and biochemistry for those planning for graduate study in biochemistry or other life sciences, or for careers in biochemical and related industries. This program is also an appropriate preparation for medicine, dentistry, pharmacy and clinical chemistry at the graduate level. Students must confer with an advisor to set up an appropriate program for their goals.

Biochemistry majors must achieve a grade of "C" or better in each chemistry and biochemistry course required for the major.

### Requirements

Lower Division: CHEM 111A, 111B, 251; courses to support the major to include BIOL 211A, 211B; MATH 122, 123; and PHYS 100A,B or 151, 152.

Upper Division: CHEM 320A,B, 371A or 377A, 377B, 420, 441A,B, 443, and 3 units of elective chosen from CHEM 373, 421, 431, 451, A/P 445, 447, BIOL 340, 473, MICR 452, 473. Courses to support the major must include A/P 342 and 342L, MICR 450 and 451 (or BIOL 370), and ENGL 317. Computer programming requirement: NSCI 200 or CHEM 385. Other computer courses may be substituted for the above with the approval of the chemistry department chair.

## Minor in Chemistry (code 0-7661)

A minimum of 20 units of chemistry which must include CHEM 111A,B. A minimum of nine units must be taken from upper division chemistry courses. The following courses are not acceptable toward the minor: CHEM 100, 101, 202, 302.

## Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community or other college to meet curricular requirements while enrolled as undergraduates in the College of Natural Sciences and Mathematics must petition the appropriate department for prior approval to enroll in specific courses. This policy applies to concurrent enrollment or summer enrollment. University policy must also be complied with. See "Concurrent Enrollment" and "Transfer of Undergraduate Credit" in this Catalog. Courses not receiving prior approval will not be accepted for credit by the department.

## Graduate Credit Earned as an Undergraduate Chemistry or Biochemistry Major

Graduate credit usually may not be earned in advance of the baccalaureate degree. However, based upon the recommendation of the Department Chairman and the Chairman of the Department Graduate Studies Committee, academic performance (a grade point average of 3.00 overall and 3.00 in the major), and promise of academic achievement in post-graduate study, a student in his/her senior year may be granted approval to earn a maximum of 12 units of course work in the 400 and 500 level taken at this University toward his/her prospective graduate program, subject to the following conditions:

1. The course work must be in addition to that required by the department for the B.A. or B.S. degree in chemistry or the B.S. degree in biochemistry.



- The undergraduate student must have a "Petition to Earn Credit in the Senior Year" approved by the appropriate department graduate advisor, the Associate Dean for Graduate Accountability in the College of Natural Sciences and Mathematics, and the Dean of Graduate Studies.

## Master of Science in Chemistry (code 6-7661)

### Prerequisites

- Acceptance as a graduate student by the Chemistry and Biochemistry Department;
- A bachelor's degree with a major in chemistry; or
- A bachelor's degree with undergraduate preparation in chemistry, physics and mathematics equivalent to that required for the bachelor of science degree with a major in chemistry at this University;
- Entering graduate students are required to take placement examinations in analytical, inorganic, organic and physical chemistry. Any student failing to take and pass a placement examination in any of these subjects is required to enroll in an appropriate course as recommended by the Graduate Studies Committee. Usually the recommended courses are: CHEM 451 if the subject is analytical chemistry; CHEM 431 if the subject is inorganic chemistry; CHEM 320A and/or 320B if the subject is organic chemistry; CHEM 371A and/or 371B if the subject is physical chemistry.
- The placement examinations are usually given on Monday and Tuesday of the week preceding the first day of instruction. The Graduate Studies Committee evaluates the examinations and recommends appropriate courses to correct for any deficiencies in chemistry. The chemistry graduate advisor meets with the student at this time to prepare a tentative degree program.

### Advancement to Candidacy

The department recommends advancement to candidacy after the graduate student has:

- Either passed the placement examinations in analytical, inorganic, organic and physical chemistry or passed the courses as recommended by the Graduate Studies Committee for correcting deficiencies;
- Earned an average of at least 3.0 (B) in all work completed at this University as a graduate student;
- Passed the Writing Proficiency Examination;
- Obtained approval of a graduate degree program by the chemistry graduate advisor, the department chairman (in consultation with the Graduate Studies Committee), Associate Dean for Graduate Accountability in the College of Natural Sciences and Mathematics, and the Dean of Graduate Studies.

The student is expected to be advanced to candidacy by the beginning of the third semester of graduate work. Upon advancement to candidacy, a Thesis Committee will be selected in consultation with the Graduate Studies Committee.

### Requirement

- Advancement to candidacy at least one semester before the graduation date;
- The completion of a minimum of 30 units to be distributed in the following way:
  - Minimum of nine units in chemistry lecture courses in the

500 series (excluding CHEM 595). These courses must be selected from at least two of the following fields: analytical, inorganic, organic, physical and biological chemistry;

B. Two units of CHEM 595;

C. One unit of CHEM 660, a maximum of 3 units of CHEM 697 and/or 695 and 4 to 6 units of 698;

D. Nine to 12 units from 400 and 500 series courses (excluding CHEM 595). The exact number of units depends on the number of 600-level courses taken. Changes in the above pattern of course requirements may be made only at the discretion of the Graduate Studies Committee and the graduate advisor.

- Completion of an acceptable thesis.

## Master of Science in Biochemistry (code 6-7658)

### Prerequisites

- Acceptance as a graduate student by the Chemistry and Biochemistry Department;
- A bachelor's degree with a major in chemistry or one of the biological sciences. Prerequisite courses include CHEM 251, 320A,B, 377A,B, 441A,B, MATH 122,123, or their equivalents, and courses in general biology and cell/molecular biology. A student deficient in any of these courses must complete the course as a graduate student;
- Entering graduate students are required to take placement examinations in analytical, biological, organic and physical chemistry. Any student failing to take and pass a placement examination in any of these subjects is required to enroll in an appropriate course. The courses usually designated are: CHEM 451 if the subject is analytical chemistry; CHEM 441A and/or 441B if the subject is biochemistry; CHEM 320A and/or 320B if the subject is organic chemistry; CHEM 371A and/or 371B; or 377A and/or 377B if the subject is physical chemistry.
- The placement examinations are usually given on Monday and Tuesday of the week preceding the first day of instruction. Entering students should correspond with the biochemistry graduate advisor before arrival to arrange to take these examinations. The Graduate Studies Committee evaluates the examinations and recommends appropriate courses to correct any deficiencies in chemistry or biochemistry. The biochemistry graduate advisor will meet with the student at this time to prepare a tentative degree program.

### Advancement to Candidacy

The department recommends advancement to candidacy after the graduate student has:

- Either passed the placement examinations in analytical, biological, organic and physical chemistry or passed courses recommended by the Graduate Studies Committee for correcting the deficiencies;
- Earned at least a 3.0 ("B") average in all graduate work completed at this University;
- Passed the Writing Proficiency Examination;
- Obtained approval of a graduate degree program by the graduate advisor, the department chairman (in consultation with the Graduate Studies Committee), Associate Dean for Graduate Accountability in the College of Natural Sciences and Mathematics, and the Dean of Graduate Studies.

The criteria above should be met by the beginning of the third semester of graduate study. Deficient students may continue at the discretion of the department Graduate Studies Committee.

#### Requirement

1. Advancement to candidacy;
2. The completion of a minimum of 30 units with:
  - A. A minimum of nine units in chemistry lecture courses in the 500 series (excluding CHEM 595);
  - B. Three units of CHEM 595;
  - C. One unit of CHEM 660, a maximum of 3 units of CHEM 697, and 4 to 6 units of CHEM 698;
  - D. The following courses taken either prior to or during the course of this program: (1) CHEM 377A or 371A and CHEM 377B or 371B; (2) CHEM 443 and either 420 or 451; (3) at least one senior or graduate level course in cell/molecular biology or a related area. Credit earned in these courses may be included in the student's official program at the discretion of the graduate advisor.
  - E. Additional 400 and 500 level science courses (excluding CHEM 595) approved by the graduate advisor.
3. Completion of an acceptable thesis.

Changes in the above pattern of course requirements may be made only at the discretion of the Graduate Studies Committee and the graduate advisor.

### Courses (CHEM)

#### Lower Division

##### 100. Chemistry and Today's World (4)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Introduction to the basic principles of chemistry and a consideration of the benefits and problems arising from applications of chemistry. Discussions of foods and food additives, drugs, plastics and other materials of everyday life, fuel sources, the atmosphere, and fresh water. Suitable for general education credit. Not open for credit to chemistry or biochemistry majors or students with credit in CHEM 111A or 201A or CHEM 202. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

##### 101. Introduction to General Chemistry (4)

Prerequisite: One year of high school algebra. (This course is a prerequisite to CHEM 111A if the student fails to pass the Chemistry Placement Examination.) Basic principles and concepts including atomic structure, nomenclature and chemical calculations with emphasis on problem solving. Does not count for General Education credit. Credit/No Credit grading only. (Lecture 3 hrs., lab-problem session 3 hrs.) A course fee may be required.

##### 111A. General Chemistry (5)

(Recommended for students who intend to pursue careers in science or engineering.) Prerequisite: A passing score on the Chemistry Placement Examination or credit in CHEM 101 within the preceding year; satisfactory completion of CSU entrance requirements in mathematics. One year of high school chemistry is strongly recommended. The first semester of a two-semester sequence (CHEM 111A and CHEM 111B). Introduction to the principles of chemistry including chemical bonding, solution properties and chemical equilibrium and kinetics. (Lecture 3 hrs., laboratory and problem session 6 hrs.) A course fee may be required. (CAN CHEM 2)

##### 111B. General Chemistry (5)

Prerequisite: CHEM 111A with a grade of "C" or better. The second semester of a two-semester sequence (CHEM 111A and 111B). Continuation of the study of chemical principles with application to inorganic systems. Includes application of modern bonding theories to inorganic molecules and study of trends and reactivities of the ele-

ments and their compounds. Qualitative inorganic analysis and extensive solving of aqueous equilibrium problems are emphasized in laboratory and problem solving sessions. (Lecture 3 hrs., lab and problem solving sessions 6 hrs.) A course fee may be required. (CAN CHEM 4)

##### 202. Survey of General and Organic Chemistry (3)

Prerequisites: High school chemistry or equivalent. Three years of high school mathematics including intermediate algebra (or MATH 010) or the equivalent. The first semester of a two-semester sequence (CHEM 202 and 302) covering general and organic chemistry and biochemistry. CHEM 202 deals with general chemistry and organic chemistry. Not open for credit to students with credit in CHEM 111A or CHEM 201A. (Lecture 3 hrs.)

##### 251. Quantitative Analysis (4)

Prerequisite: CHEM 111B with a grade of "C" or better. Introduction to the techniques and theory of gravimetric and volumetric analysis, spectrophotometry, potentiometry and chromatography. This course meets the requirements of most medical and dental schools. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

#### Upper Division

##### 302. Survey of Biochemistry (3)

Prerequisites: CHEM 202 with a grade of "C" or better and satisfactory performance on a qualifying examination. The second semester of a two-semester sequence (CHEM 202, 302). Study of the chemistry, structures, metabolic reactions and functions of the major classes of biochemical compounds. Does not meet the requirements of medical or dental schools. Not open to students with credit in CHEM 201B. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

##### 320A. Organic Chemistry (3)

Prerequisites: CHEM 111B with a grade of "C" or better. CHEM 251 is recommended. The first semester of a two-semester sequence (CHEM 320A and 320B). This sequence meets the requirements for medical and dental schools. Emphasis is upon the application of modern principles of structure, reactivity, methods of synthesis, physical properties and spectroscopy. Not open to students with credit in CHEM 321A. (Lecture 3 hrs., discussion 1 hr.)

##### 320B. Organic Chemistry (5)

Prerequisites: CHEM 320A with a grade of "C" or better. The second semester of a two-semester sequence (CHEM 320A and 320B). A continuation of the study of organic chemistry including the chemistry of compounds containing more than one functional group, bioorganic molecules and special topics. Not open to students with credit in CHEM 321B or 322. (Lecture 3 hrs., laboratory 6 hrs.) A course fee may be required.

##### 327. Organic Chemistry (3)

Prerequisites: CHEM 111A with a grade of "C" or better; CHEM 111B is recommended. CHEM 201A or CHEM 202 may not substitute for CHEM 111A. Lecture course in the chemistry of the carbon compounds. Not applicable to a degree in chemistry. (Lecture 3 hrs.)

##### 370. Statistical Thermodynamics (3)

Prerequisites: CHEM 111B, PHYS154, MATH 224, and one upper-division chemistry or physics course. Principles of statistical mechanics and thermodynamics with applications to chemical equilibrium and kinetics, spectroscopy, solid state phenomena, and problems of biological interest. (Lecture 3 hrs.)

##### 371A. Physical Chemistry (3) F

Prerequisite: CHEM 111B and 251 with a grade of "C" or better, MATH 224 (may be taken concurrently), PHYS 152. The first semester of a two-semester sequence (CHEM 371A and either CHEM 371B). Principles and applications of classical thermodynamics. Introduction to statistical thermodynamics. (Lecture 3 hrs.)

##### 371B. Physical Chemistry (3) S

Prerequisite: CHEM 371A with a grade of "C" or better. The second semester of a two-semester sequence (CHEM 371A and 371B) in physical chemistry. Introduction to quantum chemistry, spectroscopy and chemical kinetics. (Lecture 3 hrs.)

**373. Physical Chemistry Laboratory (3) S**

Prerequisites: CHEM 251, 371A,B, or 377A,B (CHEM 371B or 377B may be taken concurrently), all with a grade of "C" or better. Introduction to basic apparatus and techniques of physico-chemical experimentation and research and application of the principles discussed in CHEM 371A,B and 377A,B. Reference to chemical literature is required. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

**377A. Fundamentals of Physical Chemistry (3)**

Prerequisites: CHEM 111B with a grade of "C" or better; MATH 123 (may be taken concurrently); PHYS 100B or 152. The first semester of a two-semester sequence. Principles of physical chemistry with emphasis on thermodynamics and chemical kinetics. Examples from biological and environmental sciences will be used to illustrate principles. (Lecture 3 hrs.)

**377B. Fundamentals of Physical Chemistry (3)**

Prerequisite: CHEM 377A or 371A, each with a grade of "C" or better. The second semester of a two-semester sequence. Principles of physical chemistry with emphasis on molecular structure and spectroscopy. (Lecture 3 hrs.)

**385. Computer Methods in Chemistry (2)**

Prerequisites: CHEM 111B with a grade of "C" or better; MATH 224; PHYS 152; and NSCI 200. Prerequisite of NSCI 200 may be waived upon demonstration of computing experience. Beginning FORTRAN programming applied to typical problems in chemical engineering and chemistry. (Lecture 1 hr., laboratory 3 hrs.) Not open to students with credit in CHE 210. A course fee may be required.

**\*420. Advanced Organic Chemistry Laboratory (3)**

Prerequisites: CHEM 251 and CHEM 320B with a grade of "C" or better. The synthesis and characterization of organic compounds. Analysis of organic structures through the interpretation of spectral data. Emphasis on the use of high field NMR, mass spectrometry, IR, and UV. Applications of modern separation techniques. In addition to regularly scheduled lectures, students are expected during the semester to attend three hours of lecture on use of the chemical literature. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

**421./521. Physical Organic Chemistry (3) F**

Prerequisites: CHEM 320B with a grade of "C" or better or pass the organic entrance exam; 371B or 377B (may be taken concurrently). (Undergraduates register in CHEM 421; graduates register in CHEM 521.) Theoretical interpretation of the chemical and physical properties of organic compounds including the following: mathematical derivations of rate equations from experimental results, calculations of reaction rate constants from experimental data, quantitative comparison of the reactivities of organic compounds, mathematical correlations of structure and properties. Practice in solving problems relating reaction mechanisms to the factors derived above. (Lecture 3 hrs.)

**\*431. Advanced Inorganic Chemistry (3) F**

Prerequisites: CHEM 371B with a grade of "C" or better. Detailed quantitative study of chemical bonding in inorganic molecules with emphasis on molecular orbital theory. Extensive coverage of transition metal chemistry including coordination chemistry, ligand field theory, application of spectroscopy to structural analysis of inorganic molecules and a review of properties and reactivities of the elements and their compounds. (Lecture 3 hrs.)

**\*441A. Biological Chemistry (3)**

Prerequisites: CHEM 111B and either CHEM 320B or 327, each with a grade of "C" or better; a biology or microbiology course is recommended. The first semester of a two-semester sequence (CHEM 441A and 441B) in biochemistry. A chemical and mathematical treatment of the energetics and kinetics of reactions in living systems, including the chemistry and metabolism of carbohydrates and the chemistry of proteins. (Lecture 3 hrs.)

**\*441B. Biological Chemistry (3)**

Prerequisite: CHEM 441A with a grade of "C" or better. The second semester of a two-semester sequence (CHEM 441A and 441B) in biochemistry. Metabolism of lipids, proteins and nucleic acids and other advanced topics in metabolism. (Lecture 3 hrs.)

**\*443. Biological Chemistry Laboratory (3)**

Prerequisites: CHEM 251 and 441B, both with a grade of "C" or better. Laboratory techniques used in biochemical research. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

**447. Clinical Chemistry (3)**

Prerequisites: CHEM 251, 441A and 441B, all with grades of "C" or better (CHEM 441B may be taken concurrently). Methods of analysis and chemical properties of blood, urine, and other biological materials. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

**448. Fundamentals of Biological Chemistry (3)**

Prerequisites: CHEM 111A and 327, both with a grade of "C" or better. CHEM 201A or CHEM 202 may not substitute for CHEM 111A, and CHEM 201A-B or CHEM 202/302 may not substitute for CHEM 327. Major principles of biochemistry including metabolic processes, biological control and regulatory processes, nutrition and chemical energetics and kinetics of animals, plants and microorganisms. Emphasis on major concepts and problem solving. Not open to chemistry majors. (Lecture 3 hrs.)

**449. Nutritional Biochemistry Laboratory (3)**

Prerequisite: CHEM 448 with a grade of "C" or better. Analytical and biochemical analyses of foodstuffs and other compounds of biochemical interest. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

**\*451. Instrumental Methods of Analysis (4)**

Prerequisites: CHEM 251 and 371A or 377A, all with a grade of "C" or better, or consent of instructor. Theory and application of instrumental methods to chemical problems. Techniques covered include the following: atomic and molecular absorption and emission, electroanalytical chemistry, techniques of separations, mass spectroscopy, magnetic resonance and other modern methods of analysis. (Lecture 2 hrs., laboratory 6 hrs.) A course fee may be required.

**\*471. Chemical Thermodynamics (3)**

Prerequisites: CHEM 371A with a grade of "C" or better and consent of instructor. Mathematical derivation and quantitative application of thermodynamic relationships of particular importance in all fields of chemistry with extensive problem solving to show the application of these relationships. (Lecture 3 hrs.)

**495. Colloquium in Chemistry (1)**

Prerequisites: One semester of organic chemistry. Presentation of reports by students on original research or current literature. May be repeated for credit to a maximum of three units; only one unit may be counted toward the major requirement of the chemistry degree. An oral report is required. Traditional grading only.

**496. Special Problems in Chemistry (1-3)**

Prerequisite: Consent of instructor. Problems selected for considered and mature analysis. A written report will be required. May be repeated to a maximum of six units (Independent Study). A course fee may be required.

**499. Directed Reading (1)**

Thorough survey of the chemical literature on some topic of current interest under the supervision of a faculty member. Preparation of a written report based on this reading. Not open to graduate students.

## Graduate Division

**521./421. Physical Organic Chemistry (3)**

Prerequisites: CHEM 320B with a grade of "C" or better or pass the organic entrance exam; 371B or 377B (may be taken concurrently). (Undergraduates register in CHEM 421; graduates register in CHEM 521.) Theoretical interpretation of the chemical and physical properties of organic compounds including the following: mathematical derivations of rate equations from experimental results, calculations of reaction rate constants from experimental data, quantitative comparison of the reactivities of organic compounds, mathematical correlations of structure and properties. Practice in solving problems relating reaction mechanisms to the factors derived above. (Lecture 3 hrs.)

**522. Special Topics in Organic Chemistry (3)**

Prerequisite: CHEM 421 or 521 or consent of instructor. Areas of current interest in organic chemistry. Normally two of the following topics are treated. May be repeated with different topics to a maximum of 6 units. (Lecture 3 hrs.)

#### Natural Products:

Structure, biological activity, biogenesis and synthesis of selected naturally occurring compounds.

#### Organic Synthesis:

Modern synthetic reactions as demonstrated in recent syntheses of molecules of biological or theoretical interest.

#### Organophosphorus Chemistry:

Nomenclature, synthesis and reactivity of phosphorus-containing organic compounds. Emphasis is placed upon mechanisms of reactions of such compounds. Some discussion of the biochemistry of organophosphorus compounds will be given.

#### Photochemistry:

The effects of light absorption by organic compounds. Involves a study of the types and mechanisms of reactions, energy transfer, fluorescence and phosphorescence.

#### Kinetics and Mechanism:

A survey of methods of elucidation of reaction mechanisms. Theory and application of kinetics, isotope effects, acidity functions. Catalysis and linear free energy relationships may be included as related to molecular rearrangements, hydrolyses, hydration reactions and intra-molecular catalysis.

#### Bioorganic Mechanisms:

The application of mechanistic organic chemistry to the mechanism of action of biological compounds. Emphasis may center on drug action or enzyme catalysis.

#### Stereochemistry:

Molecular configurations, conformations and stereochemical effects in the organic reactions of carbon and heteroatom compounds.

#### Reactive Intermediates:

Organic chemistry of reactive intermediates such as carbenes, nitrenes and free radicals.

#### 531. Advances in Inorganic Chemistry (3)

Prerequisite: CHEM 431 or consent of instructor. Current topics and advances in inorganic chemistry. May be repeated with different topics to a maximum of six units. (Lecture 3 hrs.)

#### Metallo-organic Chemistry:

Complexes of transition metals in low oxidation states, emphasizing structure of complexes and bonding, reaction types and homogeneous catalysis.

#### Physical Methods of Inorganic Chemistry:

A brief survey of the basic theoretical principles of the quantum mechanics of bonding, followed by an intensive discussion of modern physical techniques. Application of most physical methods to selected inorganic compounds will be discussed.

#### Mechanisms of Inorganic Reactions:

Inorganic reactions in aqueous solution, emphasizing the substitution mechanisms of octahedral complexes, types of electron-transfer reactions of complexes, application of Marcus-Hush theory and catalysis by transition metal complexes.

#### Bioinorganic Chemistry:

The role of inorganic chemistry in biology, emphasizing the chemistry of dioxygen and related species, metalloproteins (including superoxide dismutase, catalase, peroxidase, and cytochrome P450), Vitamin B-12, and inorganic models of their activity.

#### 542. Special Topics in Biochemistry (3)

Prerequisites: CHEM 441B or consent of instructor. A detailed intensive discussion of a limited aspect of biochemistry with reference to current literature. Course content will vary from year to year. May be repeated for credit with consent of graduate advisor to a maximum of six units. (Lecture 3 hrs.)

#### 544. Physical Biochemistry (3)

Prerequisites: Either CHEM 371B, 372 or 377B, or consent of instructor and CHEM 441B. Physical chemical aspects of protein and nucleic acid chemistry and related analytical methods. (Lecture 3 hrs.)

#### 545. Enzymology (3)

Prerequisites: CHEM 371A or 377A and 441B, or consent of instructor. Detailed study of the mechanisms and kinetics of enzyme-catalyzed reactions and mechanisms of enzyme regulation. (Lecture 3 hrs.)

#### 547. Biochemistry of Nucleic Acids (3)

Prerequisites: CHEM 441A and 441B or consent of instructor. A detailed treatment of gene expression with emphasis on regulatory mechanisms. Analytical techniques for isolation, purification, and characterization of nucleic acids. (Lecture 3 hrs.)

#### 552. Special Topics in Analytical Chemistry (3)

Prerequisite: CHEM 451 or consent of instructor. Selected topics including electrochemical measurements, chromatographic techniques, spectroscopic techniques (molecular and atomic absorption and emission), radiochemical analysis and basic electronic components of instrumentation. Emphasis will be placed on an in-depth understanding of the chemical principles involved, along with the utility and limitations of each method. Other topics include trace analysis by electrochemical methods and instrumental analysis of water and air pollution control. May be repeated with different topics to a maximum of six units. (Lecture 3 hrs.)

#### 571. Advanced Thermodynamics (3)

Prerequisite: CHEM 371A. Continuation of CHEM 371A to include statistical and solution thermodynamics. (Lecture 3 hrs.)

#### 572. Advanced Physical Chemistry (3)

Prerequisite: CHEM 371B or consent of instructor. Special topics in physical chemistry. May be repeated with different topics to a maximum of six units. (Lecture 3 hrs.)

#### Group Theory:

Group theory and its application in chemistry. Topics covered will include hybridization, molecular orbital theory, crystal and ligand field theories and molecular vibrations.

#### Spectroscopy and Molecular Structure:

The use of spectroscopic methods to elucidate molecular structure. Topics covered will include microwave, infrared, visible, ultraviolet, Raman, nuclear magnetic resonance, electron spin resonance, nuclear quadrupole and Mossbauer spectroscopy.

#### Dynamics of Chemical Reactions:

Review of phenomenological kinetics equations; methods of elucidating complex photochemical and thermal gas phase reaction mechanisms; theoretical approaches to physico-chemical reactions including the RRKM method and quantum mechanical scattering; applications of kinetics to the various fields of chemistry.

#### 595A. Colloquium in Biochemistry (1)

#### 595B. Colloquium in Organic Chemistry (1)

#### 595C. Colloquium in Analytical, Physical and Inorganic Chemistry (1) F,S

Prerequisite: Graduate standing or consent of instructor. Discussion of advances in chemistry as reported in recent literature. Designed to give experience in library use, organization and presentation and critical evaluation of the chemical literature. May be repeated for credit, but not more than a total of three units may be earned in any combination of 595 courses. (Seminar 1 hr.)

#### 660. Seminar in Chemistry (1)

Weekly meetings for presentation and discussion of advanced work in special fields including original research by faculty and graduate students. (Seminar 1 hr.)

#### 695. Directed Reading (1)

Survey of the information in chemical literature on a current research topic, under the direction of a faculty member. Preparation of a written report based on this reading.

#### 697. Directed Research (1-3)

Prerequisite: Arrangement with instructor. Laboratory work supervised on an individual basis. A written report will be required. May be repeated for credit. A course fee may be required.

#### 698. Research and Thesis (1-6)

Prerequisites: Arrangement with instructor. Planning, preparation and completion of a thesis in chemistry or biochemistry.

# CHEMICAL ENGINEERING

## *College of Engineering*

Department Chair

Lloyd Hile

Department Office

EN2-101

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Larry K. Jang

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Graduate Advisor

Shirley C. Tsai

General Education Advisor

Lloyd Hile

**C**hemical engineering is concerned with the conversion of chemical materials into products of increased economic utility and benefit to consumers. The chemical engineering curriculum gives the student a thorough background in chemistry, mathematics, physics, engineering science, and engineering design and analysis for application to current technical problems as well as potential technical problems that might arise in the future. The objectives are to serve as preparation for immediate employment as a chemical engineer in industry, to provide a basis for later graduate study and research or to offer a background for possible advanced study in business administration, marketing or law. Students interested in obtaining a Minor in Environmental Engineering should see the College of Engineering section of this catalog.

Students wishing to pursue advanced study may be interested in the Engineering College's Master of Science in Engineering degree. Graduate study leading to the MSE can be tailored to the goals of a student with a background in chemical engineering by taking advanced course work in the interfacing areas of chemistry, civil engineering (environmental area), electrical engineering (semiconductor processing, control and computer areas), mechanical engineering (thermal, fluids and materials areas) and mathematics in addition to chemical engineering. Thesis work may be done with chemical engineering faculty. Requirements for the MSE are specified in the College of Engineering section of this Catalog.

All chemical engineering students must have received a minimum grade of "C" in each of the prerequisites for any chemical engineering course.

Students desiring detailed information should contact the department office for referral to one of the faculty advisors.

### *Chemical Engineering Professional Advisory Council*

The Department of Chemical Engineering is supported by an Advisory and Development Council consisting of outstanding engineers and executives from industry and government in Southern California. Its function is to form a liaison between the University and industry and to keep the administration and faculty informed of modern engineering practices. This ensures that the curricula are kept up-to-date. It also advises on placement opportunities before and after graduation.

### *ABET Accreditation*

The Bachelor of Science in Chemical Engineering is accredited by the Accreditation Board for Engineering and Technology (ABET) (Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710). Students enrolling in this program are strongly advised to get in touch with an undergraduate advisor as early as possible to know the details of the ABET requirements in math/sciences, humanities and social sciences areas.

## Bachelor of Science In Chemical Engineering (code 3-4320) (135 units)

### Requirements

Lower Division: CH E 200, 210; CHEM 111A, 111B, 251; EE 211; CE 205; MATH 122, 123, 224; PHYS 151, 152; ENGR 101.

Upper Division: CH E 310, 320, 330, 410, 420, 430, 440, 450, 460, 470; CHEM 320A, 371A; one course from CHEM 320B, 371B or 372; MATH 370A; six units from CH E 300, 335, 385, 405, 415, 425, 435, 436, 437, 445, 455, 465, 475, 480, 485, 490; three units of approved engineering electives; three units of approved advanced science electives; a course in economics.

A minimum of 135 units is required.

## Courses (CH E)

### Lower Division

200. Chemical Engineering Fundamentals (3)  
Prerequisites: CHEM 111A, MATH 123, PHYS 151. Dimensional analysis of units, steady and transient balances of mass, momentum and energy, the mathematical solution of chemical engineering problems. (Lec-problems 3 hrs.)
210. Computer Methods in Chemical Engineering (3) F  
Prerequisites: CHEM 111A, MATH 122, PHYS 151. Beginning programming and techniques of numerical analysis applied to typical problems in chemical engineering. (Lecture-problems 2 hours, laboratory 3 hours.)

### Upper Division

300. The Chemical Industry (3)  
Prerequisites: CH E 200, CHEM 320A or consent of instructor. Survey of industrial chemical processing techniques and the activities of engineers in this area, illustrated by field trips, speakers, professional society meetings, films, readings, etc. (Lec-problems 2 hr, lab 3 hrs.)
310. Chemical Engineering Thermodynamics I (3) S  
Prerequisites: CH E 200, CHEM 371A. Thermodynamics of real gases and liquids, thermodynamic functions, relations between heat and work, application to chemical engineering processes. (Lecture-problems 3 hours.)
320. Fluids (3) S  
Prerequisites: CH E 200, C E 205. Study of the deformation and flow of fluids, both liquids and gases, with applications to chemical engineering. (Lecture-problems 3 hours.)
330. Separation Processes (4) F  
Prerequisites: CH E 200, 210, CHEM 371A. Computation methods for predicting the separation of materials by distillation, absorption, extraction and other methods. (Lecture-problems 3 hours, laboratory 3 hours.)
335. Materials for Electronics Manufacturing (3)  
Prerequisites: CHEM 111A, PHYS 152. Properties of advanced semiconductor and opto electronic materials including polymers for electronic application, packaging and storage materials, and effects on product design. (Lecture-problems 3 hours.) Traditional grading only.
385. Advanced Manufacturing Processes (3)  
Prerequisites: CHEM 111A, PHYS 152, and ENGR 223 or consent of instructor. Application of diffusion, oxidation, reaction rate, heat transfer and surface science to semiconductor and secondary processing. Processes include film growth, chemical vapor deposition, ion implantation and surface alloying, micro lithography, etching, metalization, coating and adhesion. Numerically-controlled machining and computer modeling. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.
- 405./505. Safety in the Chemical Process Industries (3)  
Prerequisite: CH E 200, 310, 320. Industrial safety, hygiene and toxicology. Source models for flow of fluids from equipment. Toxic release and dispersion models. Fires and explosions. Relief valves. Hazards identification and risk assessment. Accident investigations and case histories. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours.)
410. Chemical Engineering Thermodynamics II (3) F  
Prerequisites: CH E 210, 310. Multiphase properties including advanced equations of state. Thermodynamics of reactive systems and flow processes. (Lecture-problems 3 hours.)
- 415./515. Occupational and Environmental Safety Engineering and Management (3)  
Prerequisite: CHEM 327 or consent of instructor. Safety engineering and management, legislation, regulations and standards; toxicology and personal protective equipment; fire hazards; noise control; electrical safety; system safety analysis; container and spill management; use of computer systems and statistical methods. Extra requirements for graduate students: term papers or projects. (Lecture-problems 3 hours.)
420. Heat and Mass Transport (3) F  
Prerequisite: CH E 210, 320. Heat exchange by conduction, convection and radiation. Diffusion in fluids and solids. Simultaneous heat and mass transport. (Lecture-problems 2 hours, laboratory 3 hours.)
425. Polymer Synthesis and Characterization (3) S  
Prerequisite: CHEM 320A or consent of instructor. Physical and chemical concepts in the production of polymers. Relation of the chemical structure to bulk properties of plastics. Laboratory synthesis of polymers and their mechanical, thermal and molecular characterization. (Lecture-problems 2 hours, laboratory 3 hours.)
430. Chemical Reactor Kinetics (3) F  
Prerequisites: CH E 210, CHEM 371A. Homogeneous and heterogeneous reactions and application to reactor design, catalysts. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.
435. Chemical and Electrochemical Manufacturing Processes (3)  
Prerequisites: ME 322, 330; or CHEM 371A or consent of instructor. Theory of electrochemical processing. Electroplating and electroless plating solutions, processes and equipment. Anodizing and other surface treatments. Carburizing, nitriding atmospheres and equipment. Diffusion in solids. The effect of surface treatments on mechanical properties. Same course as ME 425. (Lecture-problems 3 hours.) Traditional grading only.
436. Corrosion Engineering (3)  
Prerequisites: ME 322 or CHEM 371A or consent of instructor. Principles of oxide film growth and electrochemical corrosion, corrosion testing, environmental and metallurgical effects on corrosion, environmental stress cracking, corrosion control and prevention. Same course as ME 426. (Lecture-problems 3 hours.) Traditional grading only.
- 437./537. Materials Purification Processes (3)  
Prerequisite: CH E 310, 420, or consent of instructor. Rate-controlled separation processes such as membrane separations, pressure swing adsorption, molecular sieve separation, supercritical fluid extraction, reverse osmosis, and spray drying. Additional projects required for CH E 537. (Lecture-problems 3 hours.) Traditional grading only.
440. Chemical Engineering Laboratory I (2) F  
Prerequisites: CH E 310, 320, 330, pass Writing Proficiency Exam. Laboratory study of fluid mechanics, separation processes and thermodynamics. Experimental design and analysis and preparation of engineering reports. (Laboratory 6 hours.)
- 445./545. Pollution Prevention (3)  
Prerequisite: CH E 330. Overview of pollution prevention strategies in chemical industry and related industries. Hierarchical approach of minimizing industrial wastes and pollutants. Discussions of life cycle analyses of wastes, identifying and prioritizing pollutants from industrial sites, selecting environmentally compatible materials, design of unit operations for minimizing waste, economics of pollution prevention, and computer-aided process flowsheeting for minimizing waste. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours.) Traditional grading only.
450. Chemical Engineering Laboratory II (2) S  
Prerequisites: CH E 420, 430, 440, 460. Laboratory study of heat and mass transport, chemical kinetics and control theory. Experimental design and analysis and preparation of engineering reports. (Lab: 6 hours.)
- 455./555. Environmental Compliance (3)  
Prerequisite: CHEM 327 or consent of instructor. Physical and chemical properties of hazardous materials and wastes. Environmental hazards. An examination of environmental laws, regulations and standards dealing with storage, transportation, treatment and disposal of hazardous wastes. Emergency planning and preparedness. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours.)

460. Chemical Process Control (3) S  
Prerequisites: CH E 420; MATH 370 A. Control theory and practice, instrumentation, system responses, transfer functions, feed-back control, and stability as applied to chemical engineering processes. (Lecture-problems 2 hours, laboratory 3 hours.)

465./565. Biochemical Engineering (3)  
Prerequisite: CH E 200, 330, 430, and life science course(s) with instructor's approval. Microbial physiology and genetics. Chemicals of life. Metabolic stoichiometry and energetics. Kinetics of enzyme-catalyzed reactions. Kinetics of substrate utilization, product formation and biomass production. Design and analysis of bioreactors. Product recovery operations. Bioprocess economics. Applications to natural systems wastewater treatment, and biohydrometallurgy. Extra requirements for graduate students: term papers and laboratory projects on biomass production, microbial enhanced oil recovery or metal recovery. (Lecture-problems 3 hours.)

470. Chemical Engineering Design (4) S  
Prerequisites: CH E 310, 330, 420, 430, CHEM 320A. Design based upon economics and chemical engineering design and analysis. (Lecture-problems 3 hours, problem-design session 3 hours.)

475. Environmental Pollution (3)  
Prerequisites: CHEM 111A-B. Recommended: Chemistry 320A, 371A. Application of chemistry to the problems of pollution. (Lecture-problems 3 hours.)

480./580. Theoretical Methods in Chemical Engineering (3)  
Prerequisites: CH E 420, 430. Simulation and optimization of chemical engineering processes by mathematical formulation and computer modeling. Extra requirements for graduate students: term papers or projects. (Lecture-problems 3 hours.)

485./585. Air Pollution (3)  
Prerequisites: CH E 200, 310, and CH E 475 or CE 364 or consent of instructor. Air pollution chemistry; control strategies; origin of pollutants; meteorology; vapor dispersion models; control principles for particulates, sulfur dioxide, and nitrogen oxides. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours)

490. Special Problems (1-3)  
Prerequisite: Consent of instructor. Assigned topics in technical literature or laboratory projects and reports on same.

## Graduate Courses

505./405. Safety in the Chemical Process Industries (3)  
Prerequisite: CH E 200, 310, 320. Industrial safety, hygiene and toxicology. Source models for flow of fluids from equipment. Toxic release and dispersion models. Fires and explosions. Relief valves. Hazards identification and risk assessment. Accident investigations and case histories. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours.)

510. Multiphase Flow and Interfacial Phenomena (3)  
Prerequisites: CH E 320 or consent of instructor. Equation of motion in multiphase systems such as slurries and fluidized beds involving bubbles, drops, and particles. Effects of interfacial tension, particle-surface and interparticulate interactions. (Lecture-Problems: 3 hours) Traditional grading only.

515./415. Occupational and Environmental Safety Engineering and Management (3)  
Prerequisite: CHEM 327 or consent of instructor. Safety engineering and management, legislation, regulations and standards; toxicology and personal protective equipment; fire hazards; noise control; electrical safety; system safety analysis; container and spill management; use of computer systems and statistical methods. Extra requirements for graduate students: term papers or projects. (Lecture-problems 3 hours.)

520. Advanced Transport Phenomena (3)  
Prerequisites: CH E 320, 420, 430. Application of differential and integral mass, momentum and energy balances to chemical engineering processes. Analysis of fluid flow, heat transfer, diffusion

and chemical reaction in various unit operations. (Lecture-Problems: 3 hours) Traditional grading only.

530. Advanced Reactor Kinetics (3)  
Prerequisites: CH E 430. Modeling of chemical reactors; effects of multiple phases, mixing, adsorption, diffusion and catalysts on reactor performance. (Lecture-Problems: 3 hours) Traditional grading only.

537./437. Materials Purification Processes (3)  
Prerequisite: CH E 310, 420, or consent of instructor. Rate-controlled separation processes such as membrane separations, pressure swing adsorption, molecular sieve separation, supercritical fluid extraction, reverse osmosis, and spray drying. Additional projects required for CH E 537. (Lecture-problems 3 hours.) Traditional grading only.

540. Energy Conservation (3)  
Prerequisites: CH E 410, 420, 430. Improving the efficiency of industrial processes involving heat exchange, distillation, chemical reaction and other unit operations through application of thermodynamic analysis. Pinch technology, cogeneration, exergy and other topics are examined. (Lecture-Problems: 3 hours) Traditional grading only.

545./445. Pollution Prevention (3)  
Prerequisite: CH E 330. Overview of pollution prevention strategies in chemical industry and related industries. Hierarchical approach of minimizing industrial wastes and pollutants. Discussions of life cycle analyses of wastes, identifying and prioritizing pollutants from industrial sites, selecting environmentally compatible materials, design of unit operations for minimizing waste, economics of pollution prevention, and computer-aided process flowsheeting for minimizing waste. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours.) Traditional grading only.

555./455. Environmental Compliance (3)  
Prerequisite: CHEM 327 or consent of instructor. Physical and chemical properties of hazardous materials and wastes. Environmental hazards. An examination of environmental laws, regulations and standards dealing with storage, transportation, treatment and disposal of hazardous wastes. Emergency planning and preparedness. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours.)

565./465. Biochemical Engineering (3)  
Prerequisite: CH E 200, 330, 430, and life science course(s) with instructor's approval. Microbial physiology and genetics. Chemicals of life. Metabolic stoichiometry and energetics. Kinetics of enzyme-catalyzed reactions. Kinetics of substrate utilization, product formation and biomass production. Design and analysis of bioreactors. Product recovery operations. Bioprocess economics. Applications to natural systems wastewater treatment, and biohydrometallurgy. Extra requirements for graduate students: term papers and laboratory projects on biomass production, microbial enhanced oil recovery or metal recovery. (Lecture-problems 3 hours.)

580./480. Theoretical Methods in Chemical Engineering (3)  
Prerequisites: CH E 420, 430. Simulation and optimization of chemical engineering processes by mathematical formulation and computer modeling. Extra requirements for graduate students: term papers or projects. (Lecture-problems 3 hours.)

585./485. Air Pollution (3)  
Prerequisites: CH E 200, 310, and CH E 475 or CE 364 or consent of instructor. Air pollution chemistry; control strategies; origin of pollutants; meteorology; vapor dispersion models; control principles for particulates, sulfur dioxide, and nitrogen oxides. Extra requirement for graduate students: term papers or projects. (Lecture-problems 3 hours)

697. Directed Research (1-3)  
Prerequisites: Graduate standing. Individual research or intensive study under the guidance of a faculty member on theoretical or experimental problems in chemical engineering. (Independent Study) Traditional grading only.

698. Thesis (2-6)  
Prerequisite: Advancement to Candidacy. Planning, preparation and completion of a thesis in chemical engineering.

# CHICANO AND LATINO STUDIES

*College of Liberal Arts*

Department Chair  
Luis Arroyo

Department Office  
FO3-300

Telephone  
(562) 985-4644

## Faculty

Professors  
Luis Arroyo  
Jose Lopez  
Federico A. Sanchez  
Adela de la Torre  
Rodolfo D. Torres

Department Secretary  
Olga Alvarez

Students desiring information should contact the department office for referral to a faculty advisor:

Academic Advisor  
Luis Arroyo

Chicano and Latino Studies courses are designed to train students to work effectively in multicultural settings, to enhance their analytical and technological skills, and to provide them a profound understanding of the Chicano and Latino experiences in the United States. The department offers programs to serve the interests and goals of (1) those entering a variety of occupations including urban studies, government, journalism, social work, school administration, business, criminology, law, foreign service and other related areas; (2) teachers, counselors, administrators; (3) majors in other fields such as history, sociology, psychology, economics, literature, anthropology, who wish to include additional scope to their field of study.

## Bachelor of Arts in Chicano and Latino Studies (code 2-8817) (124 units)

### Requirements

Lower Division: (15 units) Core Courses: CHLS 100, 101, 105, 205, 230.

Upper Division: (24 Units) Core Courses (12 units required): CHLS 300, 310, 350, 498.

Upper Division (continued): 12 units of electives from Cultural Studies courses: CHLS 390I, 395, 405, 420, 490, 499; and Social Inquiry courses: CHLS 319, 340, 352, 362, 380, 400, 415, 421, 470I, 490, 499.

Departmental Requirement: Two years of college Spanish. If student is proficient in Spanish, the two years' requirement may be met by successful completion of proficiency examination.

### Special Track

In addition to the general major in Chicano and Latino Studies, the department also offers a program for students who wish to complete a Special Track major in Chicano and Latino Studies. Within the Special Track, students may receive up to a maximum of 12 units of credit for upper division Chicano and Latino Studies related course work taken from other disciplines. Students wishing to pursue the Special Track major must develop an approved program of study in consultation with the Chicano and Latino Studies Department advisor.

The Special Track consists of 39 units total, 24 of which must be upper division, including the following:

Lower-division: CHLS 100, 101, 105, 205, 230.

Upper-division: CHLS 300, 310, 350, 498.

Special Track: A maximum of 12 units of upper division course work from related fields, selected with the approval of the Chicano and Latino Studies Department advisor.

Language Requirement: Two years of college Spanish. If student is proficient in Spanish, the two years' requirement may be met by successful completion of proficiency examination.



## Minor in Chicano and Latino Studies (code 0-8817)

A prerequisite to taking this minor is the successful completion of two Spanish courses recommended by the Chicano and Latino Studies Department advisor or the successful completion of an intermediate Spanish proficiency examination.

### Requirements

Upper Division: a minimum of 24 units distributed as follows: 12 units of core requirements: CHLS 300, 310, 350, 498; 12 units selected from Cultural Studies courses and Social Inquiry; Cultural Studies courses: 390I, 395, 405, 420, 490, 498, 499, and Social Inquiry courses: 300, 310, 319, 340, 350, 352, 362, 380, 400, 415, 421, 443, 470I, 490, 498, 499.

## Certificate in Chicano and Latino Studies (code 1-8817)

The Chicano and Latino Studies Department has established a program which offers students interested in this field the opportunity to pursue courses leading to a certificate in Chicano and Latino Studies. Courses used to meet this certificate requirement may be counted also, where applicable, toward the General Education requirements and the major and teaching minor requirements of the cooperating departments.

### Requirements

1. A bachelor's degree with a major in another discipline;
2. A minimum of 24 units distributed as follows: 12 units of core requirements: CHLS 300, 310, 350, 498; 12 units selected from Cultural Studies and Social Inquiry courses; Cultural Studies courses: 390I, 395, 405, 420, 490, 498, 499; and Social Inquiry courses: 300, 310, 319, 340, 350, 352, 362, 380, 400, 415, 421, 443, 470I, 490, 498, 499.

## Courses (CHLS)

### Lower Division

#### 001. Bilingual Communication Skills-English (3)

Prerequisite: To be taken concurrently with CHLS 103A. Basic fundamentals of English communication for students of bilingual background. Credit/no credit only. Counts as part of student's course load but does not carry graduation credit.

#### 100. Introduction to Chicano Studies (3)

This is an introductory-level course designed with two goals in mind. The first is to acquaint students with the most important social, political, economic and historic aspects of the Chicano experience in the United States. The second goal is to discuss these aspects in relationship to their historic relevance to contemporary and future Chicano society. Traditional grading only.

#### 101. Introduction to Chicano Life (3)

This course is designed to introduce students to the study of Chicano culture and society in the Southwest U.S. from 1540 to the 1980. The course will emphasize three topics: 1) The cultural formation and transformation of Chicano community; 2) The relationship between culture and identity; 3) The dynamic role of women in shaping Chicano culture. Traditional grading only.

#### 103A. Bilingual Communication Skills-Spanish (4)

Prerequisite: Placement test. Designed for those students from a Spanish speaking background who have minimal ability in the Spanish language.

#### 103B. Bilingual Communication Skills Spanish (4)

Prerequisite: Placement test or completion of 103A. Designed for those students from a Spanish-speaking background who have an oral-aural communicative skill in the language.

#### 104. Bilingual Communication Skills-English (3)

Prerequisite: A recorded total score of 151 or above on the English Placement Test, or credit in CHLS 001 (or its equivalent) and consent of the instructor. Advanced fundamentals of English communication for students of bilingual background. Traditional grading only. (Fulfills ENGL 100 requirements.)

#### 105. Identity and Assimilation in Chicano Life (3)

An interdisciplinary introduction to the study of cultural and historical issues that have influenced formation of Chicano communities from pre-Columbian times to the present. Evolution of Chicano identity examined through survey of Mexican American regional cultures and development of societal divisions based on gender, race, and class categories. Traditional grading only.

#### 205. Introduction to Chicano Literary Studies (3)

Introductory survey course in Chicano and Latino literature covering traditional and contemporary literary styles and forms from selected translated Chicano and Latino readings. Traditional grading only.

#### 230. Chicano Community Organization (3)

Analysis of Chicano community groups; emphasis on development of community organizational techniques.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 300. Chicano History (3)

Chicanos in the settlement and development of the Southwest and in contemporary U.S. society; Chicano experience as a U.S. minority group; emerging civil rights movement of La Raza. Traditional grading only. Same course as HIST 370.

#### 310. Chicano Thought (3)

Study of the ideas, philosophies and events affecting Chicano life; identification and examination of the Chicano world view, of a Chicano reality.

#### 319. The Ethnic Experience in the U.S. (3)

Ethnic Studies 319 is an examination of the dynamics of the development of our multicultural society, emphasizing study of the four distinct ethnic strands of American society (Asian American, Black American, Mexican American, and American Indian) and their role in the maintenance of cultural diversity in the United States. Same course as AIS 319, ASAM 319, B/ST 319, W/ST 319. (Lecture/Discussion.)

#### 335I. Asian and Latino Immigration since World War II (3)

Prerequisite: Upper-division standing, G.E. Category A. Analyzes the causes of a dramatic post-World War II shift in immigration from Europe to Asia and Latin America, immigrants' settlement and adaptation patterns, and the Asian and Latino communities' social, racial, political and economic impact on American society. Same course as ASAM 335I. (Lecture and discussion, 3 hours)

#### 340. Latino Education in the U.S. (3)

A theoretical and empirical examination of Latino educational issues in the United States. Special emphasis is placed on disentangling the effects of ethnicity, gender, class and immigrant status on educational attainment and achievement. A critical understanding of how historical, social, political, and economic forces impact on Latinos/as with regard to their experience in the educational system. Traditional grading only.

#### 350. The Latino Population in the United States (3)

Survey of the most recent socio-economic information on "Hispanics," issues of immigration and settlement patterns, employment and income, family, language and culture will be examined. Particular attention will be paid to the changing points at which racism has intersected with factors of class and gender. This is a comparative course designed to highlight heterogeneity of the larger Latino aggregate population. Traditional grading only. Same course as SOC 340.

352. Central American and Caribbean Peoples in California (3)

Survey of the socioeconomic conditions and cultural life of the Central American and Spanish-speaking Caribbean communities of California: Salvadorans, Guatemalans, Puerto Ricans, Cubans, etc. Not all groups will necessarily be dealt with each time the course is offered. Similarities with and differences from the Mexican American community will be examined. Same course as SOC 341.

362. Chicanos and the Law (3)

Analysis of the relationship of the Chicano to the U.S. legal and judicial system. Topics include traditional sociological and criminological theories of Chicano criminality, the Pachuco image, and Chicano experiences with the police and correctional institutions. Traditional grading only.

380. History of Pre-Columbian Mexico (3)

History of Meso-America from prehistoric times to the Spanish conquest, emphasizing the study of the societies and the religious and intellectual life of people of ancient middle America. Same course as HIST 461.

390I. The "Hispanic" Southwest: Historical and Literary Images (3)

Prerequisite: ENGL 100 and upper division status. Critical, interdisciplinary examination of the portrayals of Latinos in selected historical and literary texts by Euro-American authors.

395. Latino Cultural Images in Film (3)

Critical, interdisciplinary examination of selected Latino cultural traits and values as these are depicted in motion pictures, documentaries, and other types of film.

400. Chicano Roots in Modern Mexico (3)

Effects of the political and cultural evolution of modern Mexico on the Chicanos of the Southwest as demonstrated by the conquest, War of Independence, the revolution and contemporary times.

402. Bilingual Linguistic Studies (4)

Prerequisite: Two years of college level Spanish. Study of the Spanish and English linguistic patterns of the Chicano, specifically in the southwestern United States.

405. Chicano Literature (3)

Prerequisite: Reading and listening comprehension of Spanish language plus any upper division literature class. In depth study and analysis of the history, development, themes and genres of the literature of the Chicano and by the Chicano in English and Spanish language texts.

415. Latina Women in the United States (3)

Prerequisite: Junior standing or permission of the instructor. This course will examine the cultural, political, economic, and sexual forces that mold Latina women. The first section of the course will focus on cultural stereotypes and responses to these stereotypes by Latina women scholars. The second section of the course will focus on Latina class differences and the politics of race. This will provide an overview of the contemporary public policy issues affecting Latinas and the broader Latino community. The contradictions that are identified in this course segment will be juxtaposed against selected African American perspectives to identify areas of symmetry as well as areas of divergence in the domain of political strategizing for political reform and Latina empowerment. The last section of the course will address issues of gender identity and sexuality that challenge, undermine, and strengthen the position of Latina women in the greater society. Same course as W/ST 320.

420. Chicano Heritage in the Arts of Mexico and the Southwest (3)

Historical and philosophical analysis of Indian Mestizo and Chicano plastic arts, music and dances with a view to understanding the Chicano heritage.

421. Street Gangs in Comparative Perspective (3)

This course addresses the contemporary issue of street gangs within the Chicano/Latino community. It analyzes the relationships across the United States of the Chicano gangs with African American gangs, the South East Asian gangs and the White (PUNK-

ERS, Heavy Metalists and Skinheads)-- street gangs. Structural forces of the urban societies, such as proletarian socialization, patriarchy traditions and problems revolving around gender identity are examined. Through theory and a historical analysis, the basis for addressing this contemporary subject is set. This course is a comparative study of youth behavior using both a public health model and a criminal justice model. Traditional grading only.

470I. Latinas/Latinos: Health Status and Health Care Access (3)

Prerequisite: ENGL 100 and upper division status. This course is a critical interdisciplinary examination of the health status and health care access of Latinas/os in the United States. The primary objective of the course is to provide an overview of the policies, epidemiologic, and cultural factors that influence the etiologies of diseases within Latina/Latino subpopulations. This cross disciplinary approach will also be used to analyze the health care access problems faced by Latina/Latino subpopulations that constrain efficient management of services and equitable delivery of health care. Traditional grading only. Same course as HCA 470I.

490. Special Topics in Chicano Studies (1-3)

Prerequisite: Consent of instructor. Topics of current interest in Chicano and Latino Studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

498. Senior Colloquium (3)

Prerequisite: Consent of the instructor. Analysis of issues and problems in Chicano and Latino studies. Designed as a seminar in research and methodology. The material discussed will center about a general theme selected by the instructor. May be repeated with different topics to a maximum of six units, but no more than three units may be used to satisfy the requirements for the majors. Traditional grading only. Course may be repeated for a maximum of 6 units.

499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Preparation of research reports on selected topics relating to the Mexican-American. May be repeated for a maximum of six units.

# CIVIL ENGINEERING

## *College of Engineering*

Department Chair

Ali Eshett

Department Office

VEC 104

Telephone

(562) 985-5118

Faculty

Professors

H. L. Chu

Peter A. Cowan

Ali Eshett

Richard P. Nguyen

Joseph M. Plecnik

Chan-Feng Tsai

William H. Ying

Elena Zagustin

Assistant Professor

Van T. Nguyen

Emelinda M. Parentela

Undergraduate Advisor

W. H. Ying

Graduate Advisor

Chan-Feng Tsai

General Education Advisor

W. H. Ying

Department Secretary

Carol A. Peters

Students desiring detailed information should contact the department office for referral to one of the faculty advisors. The Department of Civil Engineering provides students with a broad educational background essential to modern civil engineering practice and research. The program is built around a basic core of mathematics, natural and engineering sciences common to accredited professional engineering programs. It is planned to give a selection of basic engineering-science and design education to enable the graduate to begin a career in any of the various fields of practice in civil engineering or to prepare for graduate study in related engineering majors. It makes possible a systematic and integrated foundation in the principles of structural analysis and design, transportation systems, environmental systems, geotechnical engineering, water resources engineering, materials, construction engineering management, and information technology. Opportunity to explore a particular area of interest is offered in the wide selection of civil engineering design electives to permit students a sequence of courses related to the area of their choice.

The four engineering buildings house laboratory facilities in fluid mechanics and hydraulics, materials of construction, geotechnical engineering, earthquake engineering and structures, engineering mechanics, surveying, urban and environmental engineering. The Department of Civil Engineering offers graduate study programs leading to the degrees of master of science in civil engineering (M.S.C.E.) and the advanced degree of civil engineer (C.E.). These programs provide opportunities for graduate students to develop as civil engineers capable of competent research, design, and application through integrated curricula of engineering and science while permitting a concentration in the student's area of interest. Areas of specialization include: construction engineering and management, environmental engineering, water resources engineering, geotechnical engineering, structural engineering, and transportation engineering.

Additional information concerning the programs, special facilities, laboratories and research possibilities is contained in the Civil Engineering Department brochures. The department actively participates in MSE programs of interdisciplinary nature with course offerings and theses/directed studies in management engineering, safety engineering systems, and structural mechanics.

Some graduate laboratory, teaching and research assistantships are available to qualified graduate students. Applications should be sent to the department chair.

### *Advisory and Development Council*

The Department of Civil Engineering is supported by an Advisory and Development Council consisting of outstanding engineers and executives from industry and government in Southern California. Its function is to form a liaison between the University and industry and to keep the administration and faculty informed of modern engineering practices. This ensures that the curricula are kept up-to-date. It also advises on placement opportunities before and after graduation.

### **ABET Accreditation**

The Bachelor of Science in Civil Engineering is accredited by the Accreditation Board for Engineering and Technology (ABET) (Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710). Students enrolling in this program are strongly advised to get in touch with an undergraduate advisor as early as possible to know the details of the ABET requirements in math/sciences, humanities and social sciences areas and engineering sciences and design.

### **Bachelor of Science in Civil Engineering (code 3-4325) (139 units)**

A grade of "C" or better must be achieved in all prerequisites for all Civil Engineering courses.

Lower Division: BIOL 200 or MICR 200; CHEM 111A; CE 205, 206, 225; EE 211; MATH 122, 123, 224; ME 172; PHYS 151, 152.

Upper Division: GEOL 370; C E 300, 335, 345, 346, 359, 364, 406, 426, 437, 459, 481, 490, 497; ECON 300; MATH 370A; C E 306 or 407; M E 330, 371, 373; nine units of technical design electives from: C E 427, 438, 445, 455, 456, 457, 466, 492, 495; two laboratories from: C E 336, 356, 491, M E 331, 374; three units of technical electives from: C E 429, 435, 446, 458.

### **Master of Science in Civil Engineering (code 6-4325)**

#### **Prerequisites**

1. A bachelor's degree in an accredited curriculum in civil engineering; or
2. A bachelor's degree in engineering, a natural science or other appropriate discipline with the requirement that essential undergraduate prerequisites in civil engineering be satisfied with a minimum GPA of 2.7 in the last 60 semester units attempted;
3. Graduate students must consult with the graduate advisor for information concerning procedures and requirements for appropriate approval of their courses of study prior to enrolling in their graduate programs.

#### **Advancement to Candidacy**

1. Removal of all undergraduate deficiencies as determined by the Department Graduate Studies Committee;
2. Completed at least 12 graduate units at CSULB; minimum GPA of 3.0; currently enrolled;
3. Passing the Writing Proficiency Examination.

#### **Requirements**

Completion of a minimum of 30 units beyond the bachelor's degree and graduate coursework as follows:

1. A minimum of 24 units in engineering, probability and statistics and mathematics courses with 18 units of 500-/600-level courses in Civil Engineering. Within these 18 units a student may include six units of CE 698 or three units of CE 602; Students are required to complete successfully either CE 697 or CE 698;
2. Six units of electives selected from approved upper-division or graduate courses in appropriate subjects;
3. Fulfill one of the following alternatives:

I - Write and present orally a thesis to be approved by the thesis committee;

II - Pass a written comprehensive examination on coursework in the student's program.

### **Civil Engineer Degree (C.E.) (code 7-4324)**

The program leading to the Civil Engineer degree offers the qualified student professionally oriented courses with greater concentration in civil engineering than is required by the master of science in civil engineering. This program encourages appropriate advanced studies in other disciplines of the University.

#### **Prerequisites**

1. A master of science degree in civil engineering from an accredited institution with a minimum GPA of 3.5; or
2. A bachelor of science degree in civil engineering from an accredited institution with a minimum GPA of 3.0; or
3. A bachelor of science degree in engineering, mathematics, physical sciences or other appropriate disciplines from an accredited institution with a minimum GPA of 3.0 with the requirement that essential undergraduate prerequisites in civil engineering will be satisfied prior to commencing the student's civil engineering degree program;
4. The graduate student must consult with the graduate advisor and Civil Engineering Department graduate brochure for information concerning departmental procedures and requirements and for appropriate approvals of the course of study prior to enrolling in courses in the student's graduate program.

Exceptional cases not meeting the above minimum GPA may be considered by the Department Graduate Studies Committee.

#### **Advancement to Candidacy**

1. A Department Graduate Studies Committee, consisting of the graduate student's advisor and at least two other faculty members, will be responsible for the formulation and supervision of each individual graduate student's program;
2. The committee shall determine candidacy admission, and requirements as to removal of undergraduate and/or graduate prerequisite deficiencies;
3. Prior to determining advancement requirements the committee may, at its discretion, require the student to take an examination in the chosen area.

#### **Requirements**

1. Completion of a minimum of 60 units beyond the bachelor's degree and graduate courses, approved by the student's Department Graduate Studies Committee including:
  - a. A minimum of 36 units of 500- and 600-level civil engineering courses including a thesis of nine units to be written and presented orally;
  - b. Twenty-four units of 400-, 500- and 600-level approved electives.
2. No more than 30 units completed before advancement to candidacy may be used in completing the requirements for the CE degree.

## Certificate in Waste Engineering and Management (code 1-4050)

The 24-unit Certificate Program in Waste Management is designed to provide the interested student or qualified practitioner with the very latest in education and training in the field management of waste as well as related resource and energy recovery.

The program is conducted in cooperation with local engineering consulting firms and government agencies and could accommodate an internship of three units through directed study (CE 697).

The 24-unit certificate program may be taken (1) by a graduate as a matriculated student, (2) admitted to a CSULB graduate degree program, or admitted as an unclassified graduate student.

Regardless of how the program is taken, a grade of "C" or better must be obtained in all courses applied to the certificate, with an overall G.P.A. of 3.0. Courses taken on Credit/No Credit or Audit basis will not apply to the certificate. Graduate students taking courses in this program are reminded that grades received will be included in calculations of the M.S. requirement.

### Requirements

1. Completion of an accredited baccalaureate degree in engineering or a related scientific discipline, with appropriate prerequisites to be met.
2. Satisfactory completion of 24 units which must include 15 units selected from C E 531, 543, 565, 602; Public Policy and Administration 590 (Waste Management and Policy Regulation); a minimum of nine units (electives) selected from the following: C E 504, 549, 560, 561, 562, 563, 564, 566, 567, 569; CH E 555, 585; and ME 695. At least one course should normally be from non-Civil Engineering offerings.
3. Passing score in GWPE.
4. File a program application card with Admissions and Records, and file for the Certificate at least one semester prior to completion.

## Courses (C E)

### Lower Division

#### 205. Analytical Mechanics I (Statics) (3)

Prerequisite: PHYS 151. Prerequisite or corequisite: MATH 123. Application of the mechanics of equilibrium to force systems using analytical and graphical solutions of problems involving structures and machines. (Lecture-Problems 3 hours.) (CAN ENGR 8)

#### 206. Computer Programming and Civil Engineering Applications I (2)

Prerequisites: MATH 122, PHYS 151. Introduction to Fortran programming and application of computers to elementary civil engineering problems. (Lecture-Problems 1 hour, Laboratory 3 hours.)

#### 225. Surveying and Mapping (2)

Prerequisites: ME 172. Theory and practice of plane surveying, including the use of instruments, measurements and keeping field notes of distances, angles, elevations, traversing and plane tabling. Plotting of surveying data as related to profiling contours and topography. Study and interpretation of maps relating to civil engineering. (Lecture-Problems 1 hour, Fieldwork 3 hours.) (CAN ENGR 10)

### Upper Division

#### CE 300. Materials for Civil Engineering (2)

Prerequisites: CHEM 111A, PHYS 151. Prerequisite or corequisite: CE 205. Basic properties of materials in civil engineering, including concrete, masonry, steel, wood, asphalt and composites. (Lecture 1 hour, Laboratory 3 hours.) Traditional grading only.

#### 305. Technical Communications (3)

Prerequisite: English composition. Various oral, written, symbolic and numerical methods of recording, processing and transmitting technical information. (Lecture-Problems 3 hours.)

#### 306. Computer Programming and Civil Engineering Applications II (2)

Prerequisite: CE 206. Application of numerical methods and computer programming to the solution of civil engineering problems. (Lecture-Problems 1 hour, Laboratory 3 hours.)

#### 307. Civil Engineering Design Graphics (2)

Prerequisite: ME 172 or consent of instructor. Introduction to graphic design software for civil engineering. Applications to land planning and development, and general civil engineering problems. (Lecture-Problems 1 hour, Laboratory 3 hours)

#### 325. Engineering Surveying, Mapping and Automated Applications (2)

Prerequisite: ME 172. Theory and practice of plane surveying including the use of instruments, measurement and keeping field notes of distances, angles, elevations, traversing and plane tabling. Plotting of surveying data as related to profiling contours and topography for civil engineering applications. Study and interpretation of maps relating to civil engineering cartography. Introduction to automated engineering surveying and microcomputers including computer-aided mapping and applications relating. (Lecture-Problems 1 hour, Field Work 3 hours.)

#### 335. Fluid Mechanics (3)

Prerequisites: MATH 224, C E 205 or consent of instructor. Properties of fluids, fluid statics, fluid dynamics, dynamic similitude, flow of compressible and incompressible fluids in closed conduits, uniform flow in prismatic open channels. (Lecture-Problems 3 hours.)

#### 336. Fluid Mechanics Laboratory (1)

Prerequisite: ENGL 100 or equivalent. Prerequisite or corequisite: C E 335. Experiments in and study of the phenomena of fluid flow. (Laboratory 3 hours.)

#### 345. Geotechnical Engineering I (3)

Corequisites: ME 373; GEOL 370. Soil mechanics applied to engineering structures. Soil exploration, identification, classification, drainage, stability and bearing capacity. (Lecture-Problems 3 hours.)

#### 346. Geotechnical Engineering Laboratory (1)

Prerequisites: ENGL 100 or equivalent. Corequisite: CE 345. Laboratory investigation and experiments in the phenomena of soil mechanics. (Laboratory 3 hours)

#### 356. Engineering Materials Laboratory II (1)

Prerequisites: C E 300; ENGL 100 or equivalent. Advanced studies of the properties of civil engineering construction materials. (Laboratory 3 hours)

#### 359. Structural Analysis I (3)

Prerequisite: ME 373. Analysis of structures including trusses, beams, and frames, conjugate beam, virtual work, energy methods, approximate methods, and influence lines. (Lecture-Problems 3 hours.)

#### 364. Environmental Engineering (3)

Prerequisite or corequisite: CE 335; Prerequisite: ENGL 100 or equivalent. Study, simulations and design of the environmental elements of a community. Special emphasis is made in the field of water quality. Introduction to land and air pollution abatement and environmental health engineering. Standard laboratory methods of water and wastewater analysis. (Lecture 2 hours, Laboratory 3 hours)

### 370. Analytical Mechanics (3)

Prerequisites: PHYS 151; Prerequisite or corequisite: MATH 123. Fundamental principles of statics, kinematics and kinetics, with application to idealized structures and systems. Intended for Electrical Engineering majors. Not open to Civil or Mechanical Engineering majors. (Lecture-Problems 3 hours.)

### 404. Laboratory Techniques (1)

Prerequisites: ENGL 100 or equivalent, senior standing in civil engineering and consent of instructor. Study in the techniques of organizing and directing of the civil engineering laboratory. May be repeated for maximum credit of 3 units. (Conference 1 hour, Laboratory 3 hours.)

### 405. Special Topics in Civil Engineering (3)

Prerequisite: Senior standing in civil engineering or consent of instructor. Selected topics from recent advances in civil engineering. Course content will vary from year to year. (Maximum credit 6 units. Lecture-Problems 3 hours.)

### 406. Engineering Economy and Administration (3)

Prerequisite or corequisite: ECON 300 or consent of instructor. Engineering management principles and economic analysis: with time value of money, after-tax analysis for rate of return. (Lecture-Problems 3 hours.)

### 407. Civil Engineering Systems (2)

Prerequisite: MATH 370A and senior standing. Mathematical techniques associated with operations research and systems engineering and their applications to the planning and design of civil engineering systems. (Lecture-Problems 1 hour, Laboratory 3 hours.)

### 408. Special Problems (1-3)

Prerequisite: Senior standing in civil engineering. Assigned topics in technical literature or laboratory projects and report on same.

### 410./510. Concrete Materials and Construction Engineering (3)

Prerequisite: CE 300 or consent of instructor. Advances in materials for making concretes, mixed design using computers. Modern applications of concrete construction including buildings, transportation structures, rehabilitation of infrastructures. Polymer concretes. Quality control, durability and economics. Graduate students will be required to do additional readings from journals, research reports and advanced texts, and write a research term paper to deal with Problems of current interest on concrete materials and advanced concrete construction engineering methods. (Lecture-Problems 2 hours, Laboratory 3 hours.)

### 411. Computer Aided Design and Analysis for Civil Engineers (3)

Prerequisite: CE 206 and senior standing. Techniques for utilizing selected computer models currently recognized by the civil engineering profession. Case studies, capabilities and limitations of these models. Application of selected models in the planning, analysis and design of civil engineering projects. (Lecture-Problems 3 hours.) Traditional grading only.

### 426. Transportation Engineering (3)

Prerequisites: CE 345, CE 406 and Senior standing, or consent of the instructor. Theory, Design and operation of various modes of transportation. (Lecture-Problems 3 hours.)

### 427. Highway Design (3)

Prerequisite: C E 345. Design problems in highway engineering. Design project. (Lecture-Problems 3 hours.)

### 429./529. Traffic Engineering (3)

Prerequisite: CE 426 or consent of instructor. Traffic Engineering as related to studies, planning, operation and administration. Graduate students will be required to do extra work, including assigned readings and a term paper in order to understand the planning and design of complex highway projects involving the relationship of traffic data and interpretation for design and applications. (Lecture-Problems 2 hours, Laboratory 3 hours.)

### 435. Hydrology and Water Resources Engineering (3)

Prerequisite: C E 335. Fundamental surface and ground water hydrology concepts and quantitative methods. Selected topics

and procedures of the hydrological cycle. Planning, development and management of water resource surface systems. (Lecture-Problems 3 hours.)

### 437. Engineering Hydraulics (3)

Prerequisites: C E 335, MATH 370 A. Theory and analysis of steady uniform and non-uniform flow in open conduits. Energy and momentum principles, critical flow computations and applications, design of channels, computations of gradually varied, spatially varied and rapidly varied flows. (Lecture-Problems 3 hours.)

### 438. Hydraulic Engineering Design I (3)

Prerequisite: CE 335. Application of hydraulic principles to the design of dams, water courses, water systems and their related structures and devices. (Lecture-Problems 2 hours, Laboratory 3 hours.)

### 445. Geotechnical Engineering II (3)

Prerequisites: CE 345, 346. Methods of design and construction of various geotechnical engineering projects utilizing theory of soil mechanics. (Lecture-Problems 3 hours.) Traditional grading only.

### 446./542. Geotechnical Projects (3)

Prerequisite: CE 345. Design and problem solving oriented geotechnical projects using soil mechanics theory and experimental methods according to the current state-of-the-art practice. Emphasis is placed on the fields of slope stability, pile foundation, seepage and soil dynamics. Graduate students will be required to do additional readings from journals, research reports and advanced texts, and write a research term paper to deal with current topics in geotechnical engineering, including soil remediation for waste treatment and landfill, and soil dynamics problems in foundations and earthquake engineering. (Lecture-Problems 2 hours, Laboratory 3 hours.)

### 455. Structural Steel Design (3)

Prerequisite: C E 458. Detailed design of components with typical codes and specifications. (Lecture-Problems 3 hours.)

### 456./516. Timber Design (3)

Prerequisite: CE 359. Corequisite: CE 458. Design of stressed skin panels, supporting members, frames and their connections. Applications to timber structures and concrete formwork. Graduate students will be required to do required readings and term paper linking material and structural behavior to design codes, applications. (Lecture-Problems 2 hours, Laboratory 3 hours.)

### 457./517. Reinforced Masonry Design (3)

Prerequisite: CE 359. Corequisite: CE 458. Theory, design and application of reinforced masonry (brick and block) in compliance with the Uniform Building Code. Earthquake provisions. Construction and specifications. Design of high rise buildings, industrial buildings, retaining walls. Advanced students will be required to do a design project using a response spectrum of a two-story building; assigned readings from journals and a research term paper linking behavior of reinforced masonry systems to design codes and design applications for wind and seismic effects. (Lecture-Problems 2 hours, Laboratory 3 hours.)

### 458. Structural Analysis II (3)

Prerequisite: C E 359. Solution of indeterminate truss and frame structures using moment distribution and slope deflection methods. Introduction to matrix methods. Computer solutions. Energy theorems and virtual work principles. (Lecture-Problems 3 hours.)

### 459. Reinforced Concrete Design I (3)

Prerequisite: C E 300 and C E 359. Theory and design of structural elements of reinforced concrete, analysis by working stress and ultimate strength design theories. (Lecture-Problems 3 hours.)

### 466. Environmental Systems Design (3)

Prerequisites: CE 364 or consent of instructor. Principles of environmental systems design. Design and planning of systems for water distribution, wastewater collection and storm water management. (Lecture-Problems 3 hours)

469./569. Hazardous and Toxic Waste Engineering Management (3)

Prerequisite: Consent of instructor. Engineering analysis of hazardous and toxic waste problems of contemporary interest. Current technical specifications at federal, state and local level. Engineering planning, design and management considerations. Detailed engineering, chemical, biological and risk-cost effectiveness and effect on public health. Current literature. Case studies. Term project for graduate students (Research paper/design project.) (Lecture-Problems 3 hours.)

481. Professional Practice In Civil Engineering (1)

Prerequisite: Senior standing. Topics related to practice of civil engineering profession. Professional society meetings and readings. (Lecture-Problems 1 hour.)

485./585. Safety Systems Engineering and Management: Occupational Health and Environmental Safety (3)

Prerequisite: Consent of instructor. OSHAAct and other Environmental Acts, liabilities and safety legislation, standards, codes and other safety documents. Hazards and their control - occupational, environmental-natural and technological, promoting safe practices, planning for emergencies, heat and temperature, pressure hazards, explosions and explosives, hazards of toxic materials, radiation, vibration and noise, safety analyses, hierarchy of systems safety. (Lecture-Problems 3 hours.)

490. Senior Design Project (3)

Prerequisites: WPE, completion of all 300-level engineering courses for the civil engineering major and consent of department undergraduate adviser. Normally taken in the last year of the undergraduate program. A supervised design laboratory, with a required individual or group project incorporating all aspects from concept to completed design and presentation. (Lecture-Problems 2 hours, Design Laboratory 3 hours)

491. Structures Laboratory (1)

Prerequisite: C E 359 and ENGL 100 or equivalent. Prerequisites or corequisites C E 455, C E 459; Laboratory examination of structural concepts. (Laboratory 3 hours.)

492./512. Reinforced Concrete Design II (3)

Prerequisite or corequisite: CE 458, 459. Complete integrated design of structural systems in concrete. Code provisions. Graduate students are required to do assigned readings and research term paper which is linked to load and time dependent behavior of columns, two-way and flat slabs and durability requirements for earthquake resistant design. (Lecture-Problems 2 hours, Laboratory 3 hours)

494. Finite Element Methods I (3)

Prerequisite: C E 458 or consent of instructor. Introduction to finite element methods for structural and stress analysis and design. Applications using computer program SAP and various elements are emphasized. (Lecture-Problems 3 hours.)

495. Seismic Design I (3)

Prerequisites: CE 455, 459. Elements of lateral-force design in steel, concrete, masonry, and timber structures. Application of current building codes. (Lecture 3 hours.)

497. Senior Problem Directed Studies (2)

Prerequisite or corequisite: CE 406, CE 481, CE 490. Directed study on assigned topics or lab/field studies practicum and report on same. Class meets first two weeks and last three weeks of the semester. Required for BSCE degree candidates.

## Graduate Division

500. Engineering Analysis I (3)

Prerequisites: MATH 370A. Application of analytical methods to engineering problems. Differential equations and series solutions, Bessel functions and Legendre polynomials, boundary value and eigenvalue problems, Fourier series, partial differential equations, vector analysis. (Lecture-Problems 3 hours.) Traditional grading only.

501. Engineering Analysis II (3)

Prerequisites: MATH 370A. Analysis of engineering mechanics by matrix theory and complex variables; introduction to numerical techniques. (Lecture-Problems 3 hours.) Traditional grading only.

502. Finite Element Methods II (3)

Prerequisite: C E 494 or consent of instructor. Theory of finite element methods. Discretization of continuum, element stiffness matrices and direct stiffness formulation. Application to frame, plane stress and strain, plate and shell problems using SAP. (Lecture-Problems 3 hours.) Traditional grading only.

503. Selected Topics in Civil Engineering (3)

Prerequisites: Graduate standing and consent of instructor. Selected topics, with laboratory work required, from the most recent developments in civil engineering. Course content will vary from year to year and the specific topic will be recorded on the student's transcript. May be repeated once for credit. No more than six units of CE 503 or CE 504 may be counted for the Master's Degree. (Lecture-Problems 2 hours, Laboratory 3 hours). Traditional grading only.

504. Advanced Topics in Civil Engineering (3)

Prerequisites: Graduate standing or consent of instructor. Selected topics from recent developments in civil engineering. Course content will vary from year to year. May be repeated once for credit. No more than six units of CE 503 and/or CE 504 may be counted for the master's degree. (Lecture-Problems 3 hours) Traditional grading only.

507. Risk Assessment and Decision Making in Engineering (3)

Prerequisites: Graduate standing or consent of instructor. The presentation of research and case studies in risk assessment and decision making processes in engineering management systems. Topics include Loss Prevention Methods, Hazards Engineering and Risk Management. (Lecture-Problems 3 hours)

508. Probabilistic and Statistical Methods in Engineering Applications (3)

Prerequisites: Graduate standing or consent of instructor. Civil Engineering applications of nondeterministic models and decision theory. Applications of proven statistical computer programs. (Lecture-Problems 3 hours). Traditional grading only.

509. Computational Methods in Civil Engineering (3)

Prerequisites: Graduate standing or consent of instructor. Numerical analysis and computer methods applied to various branches, including special problem-oriented languages. Application of proven computer programs. (Lecture-problems 2 hours, Laboratory 3 hours) Traditional grading only.

510./410. Concrete Materials and Construction Engineering (3)

Prerequisites: CE 300 or consent of instructor. Advances in materials for making concretes, mix design using computers. Modern applications of concrete construction including buildings, transportation structures, rehabilitation of infrastructures. Problems and case studies in concrete construction including formwork design. Polymer concretes. Quality control, durability and economics. (Lecture-Problems 2 hours, Laboratory 3 hours) Traditional grading only.

512./492. Reinforced Concrete Design II (3)

Prerequisite or corequisite: CE 458, 459. Complete integrated design of structural systems in concrete. Code provisions. Graduate students are required to do assigned readings and research term paper which is linked to load and time dependent behavior of columns, two-way and flat slabs and durability requirements for earthquake resistant design. (Lecture-Problems 2 hours, Laboratory 3 hours). Traditional grading only.

516./456. Timber Design (3)

Prerequisite: CE 359. Corequisite: CE 458. Design of stressed skin panels, supporting members, frames and their connections. Applications to timber structures and concrete formwork. Graduate students will be required to do required readings and term paper linking material and structural behavior to design codes, applications. (Lecture-Problems 2 hours, Laboratory 3 hours). Traditional grading only.

517./457. Reinforced Masonry Design (3)

Prerequisite: CE 359. Corequisite: CE 458. Theory, design and application of reinforced masonry (brick and block) in compliance with the Uniform Building Code. Earthquake provisions. Construction and specifications. Design of high rise buildings, industrial buildings, retaining walls. Advanced students will be required to do a design project using a response spectrum of a two-story building; assigned readings from journals and a research term paper linking behavior of reinforced masonry systems to design codes and design applications for wind and seismic effects. (Lecture-Problems 2 hours, Laboratory 3 hours.) Traditional grading only.

520. Seaport Planning and Design (3)

Prerequisite: CE 426 or consent of instructor. Planning and design of seaports and facilities as access systems. Support transportation, use analysis and ocean transport crafts. Site selection and comprehensive planning. (Lecture-Problems 3 hours.) Traditional grading only.

522. Transportation Planning (3)

Prerequisite: C E 426 or consent of instructor. Planning of fixed facilities for various modes of transportation in urban areas. Engineering administration and integration of transportation systems. (Lecture-Problems 3 hours) Traditional grading only.

526. Pavement Engineering (3)

Corequisite: C E 427 or consent of instructor. Aggregate, binder systems. Theory and design of pavement structures. (Lecture-Problems 3 hours.) Traditional grading only.

529./429. Traffic Engineering (3)

Prerequisite: CE 426 or consent of instructor. Traffic Engineering as related to studies, planning, operation and administration. Graduate students will be required to do extra work, including assigned readings and a term paper in order to understand the planning and design of complex highway projects involving the relationship of traffic data and interpretation for design and applications. (Lecture-Problems 2 hours. Laboratory 3 hours.) Traditional grading only.

531. Groundwater and Seepage (3)

Prerequisites: C E 335, 345 or consent of instructor. Theory and application of ground-water flow and seepage through earth structures. (Lecture-Problems 3 hours.) Traditional grading only.

532. Sediment Transportation (3)

Prerequisite: C E 437. Phenomena of sediment transportation related to streams and marine environments. (Lecture-Problems 3 hours.) Traditional grading only.

534. Hydraulic Models (3)

Prerequisite: C E 336, 437 or consent of instructor. Hydraulic measurement and principles of hydraulic similitude as applied to stream, estuarine and coastal environments. (Lecture-Problems 3 hours) Traditional grading only.

535. Advanced Hydrology (3)

Prerequisites: Graduate standing or consent of instructor. Theory and application of surface hydrology. Hydrologic statistics, dynamic wave routing, frequency analysis and risk analysis. Simulation of design flows, flood forecasting, flood plain analysis and hydrologic design. Mathematical models, numerical methods in analysis and evaluation. (Lecture-Problems 3 hours.) Traditional grading only.

536. Urban Surface Water Management (3)

Prerequisite: CE 437 or consent of instructor. Planning and design of facilities to control flooding, erosion, sedimentation, and non-point source pollution for urban storm water runoff management. Presentation of analysis and design methodologies, structural and non-structural measures for management, and master planning principles. (Lecture-Problems 3 hours.) Traditional grading only.

538. Hydraulic Engineering Design II (3)

Prerequisites: C E 437, 438 or consent of instructor. Design of water supply networks, hydraulic transitions, controls and structures. Hydraulic power conversion. River engineering. Water resources systems. (Lecture-Problems 3 hours.) Traditional grading only.

539. Coastal Engineering (3)

Prerequisite: consent of instructor. Wave mechanics, tides, surge, wave refraction, diffraction and reflection, application to design of coastal and off shore structures and to the study of beach erosion problems. (Lecture-Problems 3 hours.) Traditional grading only.

542./446. Geotechnical Projects (3)

Prerequisite: CE 345. Design and problem solving oriented geotechnical projects using soil mechanics theory and experimental methods according to the current state-of-the-art practice. Emphasis is placed on the fields of slope stability, pile foundation, seepage and soil dynamics. Graduate students will be required to do additional readings from journals, research reports and advanced texts, and write a research term paper to deal with current topics in geotechnical engineering, including soil remediation for waste treatment and landfill, and soil dynamics problems in foundations and earthquake engineering. (Lecture-Problems 2 hours, Laboratory 3 hours.) Traditional grading only.

543. Waste Management and Landfill Engineering (3)

Prerequisites: Graduate standing or consent of instructor. Advanced principles and practices of landfill engineering for waste management and subsurface flow problems. Presentation of research and case studies in geotechnical aspects of waste management and landfill engineering. (Lecture-Problems 3 hours) Traditional grading only.

545. Rock Mechanics in Engineering Practice (3)

Prerequisites: CE 345, 346, or consent of instructor. Principles of rock mechanics with emphasis on engineering practices for problems of slopes, foundations and tunnels. Same course as GEOL 545. (Lecture-Problems 3 hours) Traditional grading only.

546. Theory and Design of Foundation Structures (3)

Prerequisites: CE 345 or consent of instructor. Foundation, explorations, stress and deformation relationships and design of various footings, piles, piers and caissons. Analysis of lateral loads and design of retaining structures, machinery foundations and foundation dewatering. (Lecture-Problems 3 hours) Traditional grading only.

547. Soil Dynamics (3)

Prerequisites: CE 345 or consent of instructor. Theories and field behaviors of dynamically loaded foundation systems and soil responses with emphasis on engineering applications. (Lecture-Problems 3 hours) Traditional grading only.

548. Geotechnical Engineering III (3)

Prerequisite: C E 345 or consent of instructor. Stress-strain time relationship of soils. Theory and methods of analysis with special emphasis on the applications and limitations in soil engineering. (Lecture-Problems 3 hours.) Traditional grading only.

549. Advanced Soil Mechanics Techniques (3)

Prerequisite: CE 345 or consent of instructor. Current theories on soil mechanics topics and advanced testing techniques. (Lecture-Problems 2 hours, Laboratory 3 hours) Traditional grading only.

550. Behavior and Design of Concrete Structures (3)

Prerequisite: C E 459. Behavior of plain, and partially prestressed concrete members and structures, theories of composite action, structural safety, code provisions and applications to advanced design of concrete structures. (Lecture-Problems 3 hours.) Traditional grading only.

551. Prestressed Concrete (3)

Prerequisite: C E 459. Principles of prestressed concrete. materials used, applications to structural design, review of existing specifications. (Lecture-Problems 3 hours.) Traditional grading only.

552. Theory of Plates and Shells (3)

Prerequisite: Completion of C E Graduate MATH Requirement. Review of theory of elasticity; formulation of general equation of bending of thin elastic plates; methods of obtaining exact and approximate solutions; membrane and bending theories of shells with emphasis on cylindrical shells and shells of revolution. (Lecture-Problems 3 hours.) Traditional grading only.



553. Behavior and Design of Steel Structures (3)  
Prerequisite: C E 455. Study of torsion, unsymmetrical bending, stability. Plastic design, code provisions and commentary. Design of complete structural systems in steel. (Lecture-Problems 3 hours.) Traditional grading only.
554. Analysis and Design with Composite Materials (3)  
Prerequisites: Graduate standing or consent of instructor. Mechanics of composite materials with design applications in aerospace, civil engineering and construction. Lab experiments on composite samples. Project required with canned computer programs. (Lecture-Problems 3 hours) Traditional grading only.
555. Seismic Design II (3)  
Prerequisite: C E 495 or consent of instructor. Characteristics of earthquakes and seismicity response spectra, modal methods of analysis, practical examples of elastic and inelastic response of structures to earthquake motions. New development in codes, computer applications. (Lecture-Problems 3 hours.) Traditional grading only.
556. Constructed Facilities Planning and Management (3)  
Prerequisites: Graduate standing or consent of instructor. Public Works Organization for policy and operations planning, budgeting and management of new and rehabilitation of existing facilities. Civil Engineering construction industry infrastructure as it relates to economic infrastructure. Case Studies in the planning, implementation and management of constructed facilities and infrastructure. (Lecture-Problems 3 hours). Traditional grading only.
557. Advanced Structural Analysis (3)  
Prerequisite: C E 458 or consent of instructor. Virtual forces and displacements, strain energy and complementary energy. Force and displacement matrix methods. Computer applications to planar and space frames, trusses, floor beams and shear wall systems. (Lecture-Problems 3 hours.) Traditional grading only.
558. Dynamics of Structures (3)  
Prerequisite: CE 458 or consent of instructor. Response of structures and structural components having one or more degrees of freedom. Damping and inelastic action; earthquake and nuclear blasts, dynamic resistance of structural elements and structures, elastic and inelastic response of structures. (Lecture-Problems 3 hours) Traditional grading only.
559. Elastic-Plastic Instability of Structures (3)  
Prerequisites: CE 458 or consent of instructor. Instability of structural elements of static and dynamic loadings. Lateral and torsional buckling of bars, frames, plates and shells. Computer applications. (Lecture-Problems 3 hours) Traditional grading only.
560. Environmental Engineering Laboratory II (3)  
Prerequisite: CE 364 or consent of instructor. Sensing, sampling and laboratory analysis of the physical, chemical, biological and radiological properties of water, wastewater, waste and air pollution samples. (Lecture-Problems 2 hours, Laboratory 3 hours) Traditional grading only.
561. Waste Minimization and Resources Recovery (3)  
Prerequisite: CE 364, or consent of instructor. Management practices, technology, regulations, characteristics of waste disposal options, resource recovery systems, recycling, hazardous wastes and waste reduction as related to municipal solid waste and hazardous waste reduction strategies. (Lecture-Problems 3 hours) Traditional grading only.
562. Water and Wastewater Treatment Design I (3)  
Prerequisite: C E 364 or consent of instructor. Design of physical and chemical processes for water and wastewater treatment, with emphasis on water treatment plants. (Lecture-Problems 3 hours.) Traditional grading only.
563. Water and Wastewater Treatment Design II (3)  
Prerequisite: C E 562 or consent of instructor. Design of chemical and biological processes for water and wastewater treatment with emphasis on wastewater treatment. (Lecture-Problems 3 hours.) Traditional grading only.
564. Environmental Health Engineering (3)  
Prerequisites: CE 364 or consent of instructor. Health and safety aspects of environmental quality and related engineering systems. Regulatory aspects. Projects and case studies. (Lecture-Problems 3 hours) Traditional grading only.
565. Environmental Waste Engineering (3)  
Prerequisites: CE 364 or consent of instructor. Generation, treatment, resource recovery and disposal of industrial wastes, solid wastes and hazardous materials. (Lecture-Problems 3 hours) Traditional grading only.
566. Unit Operations in Environmental Engineering (3)  
Prerequisites: CE 364 or consent of instructor. Civil engineering applications of the fundamentals of chemical reactions, kinetics of biochemical systems, gas transfer operations, liquid/solid separations, solubility equilibria, adsorption, ion exchange and membrane processes. (Lecture-Problems 3 hours) Traditional grading only.
567. Liquid and Solid Waste Project Planning & Management (3)  
Prerequisites: CE 364 or consent of instructor. The presentation of research and case studies of liquid and solid waste project planning and management. (Lecture-Problems 3 hours) Traditional grading only.
- 569./469. Hazardous and Toxic Waste Engineering Management (3)  
Prerequisite: Consent of instructor. Engineering analysis of hazardous and toxic waste problems of contemporary interest. Current technical specifications at federal, state and local level. Engineering planning, design and management considerations. Detailed engineering, chemical, biological and risk-cost effectiveness and effect on public health. Current literature. Case studies. Term project for graduate students (Research paper/design project.) (Lecture-Problems 3 hours.) Traditional grading only.
570. Engineering Management Principles and Practices (3)  
Prerequisites: CE 406, graduate standing or consent of instructor. Transition of engineers into management. Analysis of technical manager's functions at lower and middle levels as support to corporate management. Principles of engineering management and applications to private and public sector organizations. Case studies of practices in different technical organizations. (Lecture 3 hours.) Traditional grading only.
571. Construction Planning and Cost Control (3)  
Prerequisites: Graduate standing or consent of instructor. Planning, scheduling and resource allocation for a complex construction project. Topics include traditional critical path method, advanced computer expert systems and optimization techniques for construction planning and cost control. (Lecture-Problems 3 hours). Traditional grading only.
572. Modeling of Engineering Project Management Principles and Practices (3)  
Prerequisites: Graduate standing or consent of instructor. Mathematical modeling techniques applied to engineering project management decisions. Application of proven computer programs. (Lecture-Problems 2 hours, Laboratory 3 hours) Traditional grading only.
573. Engineering Specifications, Law and Contracts (3)  
Prerequisite: Graduate standing or consent of instructor. Application of law of contracts to construction contracts. Legal matters of concern to engineers. (Lecture-Problems 3 hours) Traditional grading only.
574. Methods, Analysis & Design of Construction Operations (3)  
Prerequisite: CE 571 or consent of instructor. Equipment, methods, analysis and design of a construction operation, from site work improvement and data acquisition to modeling and design. Particular attention will be paid to interfacing between design and construction activities and work method development, productivity and safety. (Lecture-Problems 3 hours.) Traditional grading only.
575. Computer Applications and Expert Systems in Construction (3)  
Prerequisite: Graduate standing or consent of instructor. Development, implementation and application of computer-based systems for construction engineering and management. Hardware and software used in construction; expert systems in construction project management; applications of computers in construction planning, scheduling, quality control and decision management. (Lecture-Problems 2 hours, Laboratory 3 hours.) Traditional grading only.

**576. Construction Organization and Management (3)**

Prerequisites: Graduate standing or consent of instructor. An introduction to construction organization, control concepts and labor, emphasizing the business aspects of construction engineering management. Topics include legal framework, finance in construction management, labor, accounting and other decision making in the construction business. (Lecture-Problems 3 hours) Traditional grading only.

**577. Business Aspects and Finance of Construction Projects (3)**

Prerequisite: CE 406 or consent of instructor. Economics and business aspects in construction, financing structure, methodology, and project financial evaluation. Emphasis is on financial aspects in property acquisition, development, construction, and project management. (Lecture-Problems 3 hours.) Traditional grading only.

**578. Management of Advanced Technologies in Construction (3)**

Prerequisite: CE 575 or consent of instructor. New development of advanced technology as applied to construction industry. Productivity and competitiveness in construction on the basis of new technology. Comparison of construction innovation in the U.S., Japan, and other countries. (Lecture-problems 3 hours) Traditional grading only.

**582. Management of Productivity and Quality (3)**

Prerequisite: CE 570 or consent of instructor. System approaches to quality and productivity in construction. Total Quality Management (TQM) in construction engineering and management. Investigation of methods and strategies for improving competitiveness at the company level. Domestic and international competitiveness in the construction business. (Lecture-Problems 3 hours.) Traditional grading only.

**585./485. Safety Systems Engineering and Management: Occupational Health and Environmental Safety (3)**

Prerequisite: Consent of instructor. OSHA and other Environmental Acts, liabilities and safety legislation, standards, codes and other safety documents. Hazards and their control - occupational, environmental-natural and technological, promoting safe practices, planning for emergencies, heat and temperature, pressure hazards, explosions and explosives, hazards of toxic materials, radiation, vibration and noise, safety analyses, hierarchy of systems safety. (Lecture-Problems 3 hours.) Traditional grading only.

**602. Seminar in Civil Engineering (3)**

Prerequisite: Graduate standing or consent of instructor. Presentation of research in special fields of structures, transportation, environmental, urban, geotechnical, water resources, or construction engineering management. May be repeated once for credit. No more than six units of CE 602 and/or CE 603 may be counted for the Master's degree. (Lecture-Problems 3 hours.) Traditional grading only.

**603. Seminar in Civil Engineering (3)**

Prerequisites: Graduate standing and consent of instructor. Presentation of research, with laboratory work, in special fields: Structures, Transportation, Environmental, Urban, Geotechnical, Construction Engineering Management, Water Resources Engineering, and Engineering Management. May be repeated once for credit. No more than six units of CE 602 and/or CE 603 may be counted for the Master's Degree. (Lecture-Problems 2 hours, Laboratory 3 hours.) Traditional grading only.

**629/729. Traffic Operations (3)**

Prerequisite: CE 429 or CE 529, or consent of instructor. Principles of traffic flow, signal timing optimization, signal coordination, and traffic. Graduates enroll in CE 629; post graduates enroll in CE 729. Post-graduate students will be required to do additional work (Lecture-Problems 3 hours). Traditional grading only.

**630./730. Mathematical Modeling in Hydraulic Engineering (3)**

Prerequisite: CE 437 or consent of instructor. Numerical techniques for solving hydraulic problems in water supply, waste water disposal and storm drainage systems. Prediction of important

parameters by mathematical modeling on problems encountered in artificial channels, rivers, estuaries and marine environments. M.S. students register in CE 630; Ph.D. students register in CE 730. Ph.D. students will be required to complete a more rigorous computer project. Traditional grading only. (Lecture-Problems 3 hours)

**640./740. Mathematical Modeling in Geotechnical Engineering (3)**

Prerequisite: Graduate standing or consent of instructor. Mathematical modeling techniques used in geotechnical engineering. Application of proven computer programs. M.S. students register in CE 640; Ph.D. students register in CE 740. Ph.D. students will be required to complete a more rigorous computer project. Traditional grading only. (Lecture-Problems 3 hours)

**696. Research Methods (1)**

Prerequisite: Candidacy or consent of instructor. Bibliographical and library techniques and resources. Preparation and presentation of theses and directed studies technical papers. Traditional grading only.

**697. Directed Studies (1-3)**

Prerequisite: Graduate standing. Corequisite: CE 696 or written consent of directed studies advisor. MSCE and MSE degree candidates in Civil Engineering and Interdisciplinary Areas need to have either CE 697 or CE 698 as their program requirement. Theoretical and experimental problems in civil engineering requiring intensive analysis. Traditional grading only.

**698. Thesis (2-6)**

Prerequisite: Admission to candidacy for degree of master of science in civil engineering. Corequisite: CE 696 or written consent of faculty advisor. Planning, preparation and completion of a thesis and/or project in the field of civil engineering. May be repeated to a total of 6 units.

**699. Thesis (3-9)**

Prerequisite: Admission to candidacy for degree of Civil Engineer. Corequisite: CE 696 or written consent of faculty advisor. Planning, preparation and completion of a thesis in the field of civil engineering practice. May be repeated to a total of 9 units.

**729/629. Traffic Operations (3)**

Prerequisite: CE 429 or CE 529, or consent of instructor. Principles of traffic flow, signal timing optimization, signal coordination, and traffic. Graduates enroll in CE 629; post graduates enroll in CE 729. Post-graduate students will be required to do additional work (Lecture-Problems 3 hours). Traditional grading only.

**730./630. Mathematical Modeling in Hydraulic Engineering (3)**

Prerequisite: CE 437 or consent of instructor. Numerical techniques for solving hydraulic problems in water supply, waste water disposal and storm drainage systems. Prediction of important parameters by mathematical modeling on problems encountered in artificial channels, rivers, estuaries and marine environments. M.S. students register in CE 630; Ph.D. students register in CE 730. Ph.D. students will be required to complete a more rigorous computer project. Traditional grading only. (Lecture-Problems 3 hours)

**740./640. Mathematical Modeling in Geotechnical Engineering (3)**

Prerequisite: Graduate standing or consent of instructor. Mathematical modeling techniques used in geotechnical engineering. Application of proven computer programs. M.S. students register in CE 640; Ph.D. students register in CE 740. Ph.D. students will be required to complete a more rigorous computer project. Traditional grading only. (Lecture-Problems 3 hours)

# COLLEGE OF LIBERAL ARTS

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Associate Deans  
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Frank Fata

Director, Facilities Planning and Technology  
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The College of Liberal Arts provides courses in the Humanities and Social Sciences for all university students, as well as for majors in its disciplines. The College is also responsible for much of the General Education required of all students and provides professional training in Journalism. Through the Liberal Arts, students acquire a fundamental understanding of social and individual behavior and of cultures and belief systems in the past and present. Communication, verbal and written, in English and other languages, and across cultures, is a fundamental emphasis throughout the curriculum. Liberal Arts disciplines also emphasize the acquisition and analysis of information and its use to understand and to help resolve complex social problems. The College of Liberal Arts is the center of the university's commitment to developing greater knowledge and understanding of international and multicultural issues in the contemporary world.

## *Degree programs offered*

### Bachelor of Arts:

Anthropology, Asian Studies, Black Studies, Chicano and Latino Studies, Comparative Literature, Economics, English, Geography, French, German, History, Human Development, International Studies, Japanese, Journalism, Philosophy, Political Science, Psychology, Religious Studies, Sociology, Spanish, Speech Communication, and Women's Studies.

### Master of Arts:

Anthropology, Asian Studies, Economics, English, French, Geography, German, History, Linguistics, Philosophy, Political Science, Psychology (with options in general research and in industrial and organizational psychology), Spanish, and Speech Communication.

### Master of Fine Arts:

English

### Master of Science:

Psychology

### Certificate Programs:

American Indian Studies, Asian Studies, Asian American Studies, Black Studies, Japanese, Latin American Studies, Legal Studies in the Liberal Arts, Medieval and Renaissance Studies, Russian-East European Studies, Teaching English as a Second Language, Technical and Professional Writing, and Urban Studies

### Minor Programs:

American Indian Studies, American Studies, Anthropology, Asian Studies, Asian American Studies, Black Studies, Chicano and Latino Studies, Comparative Literature, Classical Studies, English (Literature, Language and Composition, Creative Writing, Teaching, or Special Option), French, Geography, German, Greek, History, Italian, Latin, Linguistics, Philosophy, Political Science, Public Administration, Psychology, Religious Studies, Russian, Sociology, Spanish, Speech Communication, and Women's Studies.

## Language Courses:

Chinese (Mandarin), Cambodian (Khmer), French, German, Greek, Italian, Japanese, Latin, Russian, Spanish, and Swahili.

## Special Facilities

The College operates special facilities including archeology, geography, language, photo, psychology, and computer laboratories.

## Student Activities

Most of the departments in the College of Liberal Arts have either a student association or honor organization which provides students with a program of activities. Students should contact the department of their major to inquire about the kinds of organizations available to them or contact the College Coordinator for Student Life and Development, Brett Waterfield (985-5142).

The College and Associated Students promote the College Student Council with its representation from each department acting as liaison between the College administration, faculty, and members of the College's student body. The Student Council provides a forum for the discussion and resolution of common student concerns.

## Internships

The College of Liberal Arts offers internships with on- and off-campus cooperating organizations designed to provide students with practice in the field under supervision. Many individual departments also offer discipline-based internships for advanced students.

## Credential Programs

Single subject credential programs are offered in English, Foreign Language, Japanese and Social Science. Students who plan to teach social studies in the secondary schools are strongly advised to consult the Single Subject Advisor as early as possible in their studies, so that they fulfill subject matter preparation requirements while completing an undergraduate major.

### Credential Advisors

Dr. Donald Schwartz (985-5090)

Dr. Jerry Sullivan (985-4402)

## Courses (C/LA)

### Lower Division

#### 250. Elementary Statistics (4)

Prerequisites: Knowledge of mathematical procedures usually covered in elementary high school algebra. Introduction to descriptive and inferential statistics and their applications in social and behavioral science research; performance of statistical exercises by interactive computer. Emphasis upon knowledge of which statistical tests to use and how to interpret their results. Not open to students with credit in ANTH 302, MATH 180, PSY 210 or SOC 255. (Discussion 3 hours, laboratory 2 hours.) Same course as HDEV 250.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 305. British Life and Culture (3)

This series of lectures with follow-up discussion and written responses is a required part of the London Semester Program. The lectures are designed to offer in-depth information on a wide range of social, artistic, and intellectual issues relevant to contemporary England. Although the course is specifically geared to students participating in the London Semester Program, the materials covered are closely related to many topics covered in classes offered during the rest of the students' work on campus.

#### 310. Film and Culture (3)

Prerequisites: Upper-division status, ENGL 100. An exploration of the ways films create, pattern, shape, reinforce and/or change culture. A variety of view points, derived from contemporary critical and culture studies, highlight the relationship between a culture and its images. Co-taught by instructors from several disciplines. Course fee: \$20.

#### 314I. Introduction to Contemporary Europe (3)

Prerequisites: ENGL 100 or its equivalent and upper division status. An interdisciplinary introduction to contemporary European cultures and related issues through a combination of travel and study. Students will be introduced to some principles and methods useful for analyzing cultures and their own interactions with them. Traditional grading only.

#### 315I. Contemporary European Society (3)

Prerequisites: ENGL 100 or its equivalent and upper division status. An interdisciplinary approach to understanding cultural and political developments in contemporary European societies. Although the study of history serves as the foundation of the course, the perspectives and methodologies of several other social science disciplines are an important component of the course. Traditional grading only.

#### 350I. California Culture (3)

Prerequisites: ENGL 100 or its equivalent and upper division status. This course examines the culture of California from several distinct disciplinary perspectives including history, political science, geography, sociology, art, and literature. It seeks to integrate the knowledge and methodologies of these disciplines as they converge on the study of California. The course is team-taught and modular in format. Students take three four-week intensive modules and a final three-week synthesizing module.

#### 400. Evaluating Literacy (3)

Prerequisites: Limited to students in the Liberal Studies major, Track I, who have completed all AREA I Core requirements with a "C" or better grade and passed the WPE, or consent of Program Director. Study of contemporary literacy theory and practice with focus on language, culture, literature, and development of literacy. Students will gain greater, more precise understanding of literacy assessment and its implications, determinations and effects as they are themselves assessed for language competencies. Traditional grading only.

#### 403. Civic Issues and Values (3)

Prerequisites: Limited to students in the Liberal Studies major, Track I, who have completed all Area IV Core requirements with a "C" or better grade. Provides subject opportunities and experiential activities for students to learn to confront controversial issues, solve problems cooperatively, examine issues from multiple and dialogical points of view, and practice listening with understanding and empathy. Student literacy in the social sciences and ability to recognize and deal with the dynamics of a multicultural, multiethnic community will be assessed.

#### 444I. European Culture Today (3)

Prerequisites: ENGL 100 or its equivalent and upper division status. An interdisciplinary study of contemporary Europe (post-1945). The course combines the substance and the meth-

ods of the social sciences and those of the hermeneutic disciplines. The topics include: the stabilization of Europe into an East-West division after World War II and the transformations of the late 1980s and early 1990s; social trends; the relation of culture and economy; the bases of culture in general; intellectual trends; literature; the arts and the place of popular culture. Traditional grading only.

#### 485. Oral History Methods (1)

Through a series of workshops and through field experience, skills in oral history will be developed which will enable students to use oral history either for their own personal use in family history or for class projects. Credit/No Credit grading only. Same course as HIST 402.

#### 490. Special Topics (1-3)

Topics of special interest in the social sciences for intensive study. Topics will be announced in the Schedule of Classes each semester. Course may be repeated for a maximum of 9 units with different topics.

#### 491. Special Topics (2)

Topics of special interest in the liberal arts for intensive study. Topics will be announced in the Schedule of Classes each semester.

#### 492A. Internship in Liberal Arts (3)

Prerequisites: Upper division standing, consent of instructor, and a formally declared major in one of the programs included in the College of Liberal Arts. EPIC field experience. Students qualifying can be placed in major or career-related volunteer assignments in private industry or public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. (Minimum 120 hours work per semester.) May be repeated to a maximum of six units. No more than six units total in 492 A and B. Traditional grading only.

#### 492B. Internship in Liberal Arts (3)

Prerequisites: Upper division standing, consent of the instructor, and a formally declared major in one of the programs included in the College of Liberal Arts. Co-Op field experience. Students who qualify can be placed in major or career-related, community-based, preprofessional experiences as employees in private industry or in public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. (Minimum 120 hours work per semester. May be repeated to a maximum of six units. No more than six units total in 492A and B. Traditional grading only.

#### 495. Social Science for Teachers (3)

Prerequisites: Students must have completed all coursework in the Social Science Matter Program. A capstone course for students in the Social Science Subject Matter Program, to be offered just prior to student teaching. Examination of issues in social science education in accord with topics highlighted in the California History/Social Science Framework. A grade of "B" or better is required for advancement to student teaching. Traditional grading only.

#### 498. Directed Studies in Oral History (1-6)

Permission of faculty required. Directed study on a research topic using the methodology of oral history. May be repeated for a maximum of 6 units. (Same course as HIST 498O.)

# COMPARATIVE LITERATURE AND CLASSICS

*College of Liberal Arts*

Department Chair

Douglas Domingo-Forasté

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Conrad Barrett

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Frank Fata

J. Charles Jernigan

Associate Professors

Alwin Baum

Douglas Domingo-Forasté

Assistant Professor

Teri Yamada

Professor Emerita

Roberta H. Markman

Department Secretary

Lisa Behrendt

Students desiring information should contact the department office for an appointment with the advisor. Comparative Literature is the study of foreign literatures in translation and the relationships among those literatures and between literature and other fields such as art, music, history, philosophy, and theatre. At CSULB, Comparative Literature also offers a strong focus in cultural studies and mythology as bases for understanding literature and for the ways we see ourselves in a multicultural environment. Suggested preparation: course work in world literature, history, English composition, and foreign language.

Classics includes the studies of ancient Greek, Latin, and classical literature, mythology and civilizations, and their influence on later eras. Suggested preparation: course work in Latin, Greek, and classical history, art and literature.

## Bachelor of Arts in Comparative Literature (code 2-6832) (124 units)

The Bachelor of Arts in Comparative Literature consists of the required core of courses (24 units), together with one of the three emphases that follow. In addition, C/LT 261 is strongly recommended.

### The Core

24 units, required of every major, distributed as follows:

C/LT 330A and 330B

At least one course from each of the following groups:

1. Genre: C/LT 320I\*, 346, 405, 440, 422I\*, 451I\*, 453; CLSC 421I\*;
2. Author: C/LT 430, 449;
3. Non-Western or Mythology: C/LT 342\*, 403, 416, 440, 445, 452;
4. Theory: C/LT 361, 461;
5. Movement or Comparative Study: C/LT 310I\*, 312I\*, 349, 404, 410, 412I\*, 413I\*, 414I\*, 415I\*, 448; CLSC 310I\*;
6. Period: C/LT 431, 432, 437, 438.

Note: C/LT 440 may be used in both groups 1 and 3 with different appropriate topics.

These courses may also be applied to the core, with the approval of the course instructor and the department chair, by completing supplementary work.

### Emphasis I: Language and Literature

This emphasis is designed primarily to prepare the student for graduate studies in Comparative Literature or related fields; it is traditional undergraduate major in Comparative Literature.

Primary Concentration: 15 upper division units from any one of the following: English, English/creative writing, a single foreign language, philosophy, religious studies, music history, art history, history, or theatre arts. (If this concentration is English or foreign language, the equivalent of 6 of these units must be in literature. If the concentration is English/creative writing, 12 units of creative writing will be

permitted, with the remaining units in literature. If the concentration is theatre/ drama, courses in dramatic literature may be chosen from English, theatre arts, foreign languages or comparative literature/theatre arts courses.)

Secondary Concentration: 12 upper division units (six of which must be in literature) in one foreign language. In the case of languages offered in a limited number of courses, the equivalent of four semesters of college study will suffice.

The unit count of the two concentrations may be reversed.

#### Emphasis II: World Literature

This emphasis is primarily designed for the student who wants a broad background in world literature in translation allied with a strong concentration in one specific field.

It is also appropriate for the student who elects the Comparative Literature teaching option of the English Single Subject Credential. Advisement from both English and Comparative Literature is necessary.

Concentration: 24 upper division units from any one of the following: English, English/creative writing, a single foreign language, philosophy, religious studies, music history, art history, history, or theatre arts. The unit restriction on English/Creative Writing and the proviso regarding theatre in emphasis I apply.

#### Emphasis III: Interdisciplinary Studies

This emphasis is designed to allow the student, with the aid of a faculty committee, to create an interdisciplinary program of study founded in literature.

Concentration: 24 upper division units to be arranged in an interdisciplinary pattern by the student in cooperation with a faculty committee. It will be the responsibility of the faculty committee to be sure that the student's program is academically acceptable. All students wishing to participate in this emphasis must receive permission from the department chairperson before beginning the process. The committee will be chosen by the student in cooperation with the department chair and will consist of two full-time faculty in comparative literature and one full-time faculty member from another discipline. The student's program must be established by the end of the first semester of the junior year.

#### Foreign Language Examination

For emphases II and III, an examination of basic reading proficiency in a foreign language is required. Four semesters of college study of a foreign language or equivalent may be used in lieu of an examination.

#### Minor in Comparative Literature (code 0-6832)

In addition to the bachelor of arts degree, the Department offers a minor in comparative literature. The minor provides a flexible program for the student who is majoring in another discipline, but who is interested in comparative literature either for professional advantages or for intellectual enrichment.

#### Requirements

A minimum of 18 units in comparative literature, of which at least 12 are upper division excluding C/LT 499.

## Courses (C/LT)

### Lower Division

124. Introduction to World Theatre and Drama (3)  
Introduction to all aspects of theatre, including criticism, dramatic literature, movements, themes, historical background and theatrical production from different parts of the world. (Same course as THEA 124.)

161. Reading the World (3)

This course is an introduction to contemporary theories of reading and interpretation in the humanities. Lectures and classroom discussion will examine various and diverse forms of human expression and critical understanding from around the world and across the disciplines while developing and refining a broad repertoire of reading tools and practices.

230. Introduction to World Literature (3)

Readings in translation from masterpieces of world literature with emphasis on the technique and form of literary art as developed in various cultures.

232. Folklore and Mythology (3)

Introduction to mythology and folklore, with emphasis on myths of Eastern and Western civilization and their application in literature.

234. Introduction to Asian Literature (3)

A comprehensive introduction to Asian culture by reading representative selections from the literature of China, Japan, and Korea.

235. Middle Eastern and South Asian Literature (3)

Introduction to the classical and modern literature of the Middle East and South Asia including India. English translations of major works of epic, drama, poetry and fiction originally written in Arabic, Persian, Turkish, Sanskrit, Hindi, Urdu, and Tamil.

236. Introduction to Southeast Asian Literatures (3)

A survey of the traditional and modern literatures of Cambodia, Laos, Myanmar, Vietnam, Thailand, Malaysia, Indonesia and the Philippines. Influences from Europe (Catholicism), the Near East (Islam), India (Hinduism and Buddhism) and China (Confucianism and Buddhism) on these cultures and their traditional literatures will be discussed. The importance of Western influence on the development of contemporary literature will be discussed.

250. European Literature and the Other Arts I (3)

Investigation of the interrelationships between the arts. Analysis of literary, fine art and music materials from ancient periods through the Middle Ages in regard to movements, techniques, philosophies and formal organization to achieve artistic expression.

251. European Literature and the Other Arts II (3)

Interrelationships among the arts through analysis of literary, fine art, and music materials in the western world from the Renaissance to the present. Movements, techniques, philosophies and the formal organization necessary to achieve artistic expression will be examined.

261. Introduction to Comparative Literature (3)

An introduction to the basics of literary interpretation and comparative literature. Strongly recommended for majors in Comparative Literature.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

310I. Greek World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major events and ideas in the society and culture of ancient Greece with an emphasis on literature, the arts, and the historical forces at work. Topics include the foundations of Greek culture, Minoan civilization, Homer and the Trojan War, mythology and religion, lyric poetry, the Persian Wars, the "Golden Age" of Athens, the Peloponnesian War, Hellenistic culture and the contributions of the Greeks to the modern world. Same course as HIST 310I.

312I. Roman World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major events and ideas in the society and culture of ancient Rome with an emphasis on literature, the arts, and the historical forces at work. Topics include genesis and growth of the Roman world, transition from Republic to Empire, Imperial maturity, decay and decline, and the contributions of the Romans to the modern world. Same course as HIST 312I.

320I. Comic Spirit (3)

Prerequisites: ENGL 100 and upper division status. An investigation of comedy as a literary genre and of the manifestation of the comic spirit in related art forms such as music, art, and film. Examination is given to the history of comedy as well as to theories of the causes and effects of laughter.

324I. Western Theatre Today (3)

Prerequisites: ENGL 100 and upper division status. Current trends, problems and achievements of the theatre of the present day from an international point of view with an examination of influences of the avant-garde movements of post World War I (Expressionism, Dada, Surrealism, the Absurd, Existentialism). Same course as THEA 324I.

330A,B. Masterpieces of European Literature (3,3)

Prerequisite: One course in literature or consent of instructor. Representative selections, in translation, of European texts to and since the Renaissance, and their relation to the development of Western civilization.

342. The Bible as Literature (3)

Prerequisite: One course in literature or consent of instructor. Reading of representative Biblical selections evaluated by literary criteria.

346. Readings in World Poetry (3)

Prerequisite: One course in literature or consent of instructor. Representative selections of the poetry of the world from the earliest examples to the present. Facing-page translations will be included.

349. Literary Movements (3)

Prerequisite: One course in literature or consent of instructor. Intensive study of a movement or theme in world literature. Specific movement or theme will be announced in the Schedule of Classes. (May be repeated for credit to a maximum of nine units with different topics.)

361. Masterpieces of Literary Criticism (3)

Representative selections of literary theory from Plato to the present. Readings from each theory will be supplemented by applications to a specific literary text. Course will provide students with a broad historical background and the critical and practical tools to analyze a literary text.

403. Studies in Asian Literature (3)

Prerequisite: One course in literature or consent of instructor. Interrelationships of two or more authors, themes, genres, movements or aspects of literature and culture in Asia or between Asia and the West. Topics to be announced in the Schedule of Classes. May be repeated with different topics, for a maximum of nine units.

404. Women in World Literature (3)

Prerequisite: One course in literature or consent of instructor. Study of the role of women in world literature. Specific movement, area, or theme will be announced in the Schedule of Classes. May be repeated for a maximum of six units with different topics.

405./505. The Modern Confessional Novel (3)

Prerequisite: One course in literature or consent of instructor. A comparative analysis of the thematic and structural characteristics of the confessional novel in the 19th and 20th centuries. Representative novels from Europe, Asia and Latin America are examined.

410. Literature and Music (3)

Prerequisites: ENGL 100 and upper division status. An examination of the relationship between music and literature in the late 19th and 20th centuries with emphasis placed on representative literary works and musical compositions that show mutual influences and common features and structures.

412I. Art and Literature (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary study of the dominant movements in art and literature during the 19th and 20th centuries, from Realism through Postmodernism. The course emphasizes comparative analysis of the styles, methods, and aesthetic principles characteristic of the various movements, focusing on the works of major artists, writers and theorists, and examines the social and historical context in which the movements developed.

413I. Romantic Spirit (3)

Prerequisites: ENGL 100 (or its equivalent), one course in literature, and upper-division standing. An interdisciplinary study of European Romanticism comparing representative works in the fields of literature, aesthetic theory, painting, and music with a particular emphasis on those from Germany and France including some comparative reference to works from Italy, Spain, England and Russia in the period from about 1785 to 1860. Traditional grading only.

414I. Medieval World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major themes in medieval society and culture with emphasis on literature, the arts, and the historical forces at work. Topics will include the Roman heritage of the middle ages, barbarian culture, Romanesque and Gothic worlds, crusades and pilgrimages, commerce and cathedrals, and late medieval problems. Same course as HIST 414I.

415I. Ethnic Literature and Culture in America (3)

Prerequisites: ENGL 100, upper division status or consent of the instructor. This course will introduce the comparative, interdisciplinary study of multicultural literature along with issues of racism and ethnic discrimination. Ethnic groups to be discussed: European-American, Native American, African-American, Latino/Latina, Asian-American, Southeast Asian-American, Middle-Eastern American. Recurrent themes in literature will be situated in their historical and sociopolitical context using printed and media materials. Analytical essays on various theories of race and ethnicity will be presented using supporting multimedia. Traditional grading and credit/no credit.

416. Global Literature in American Culture (3)

Prerequisites: ENGL 100; upper division or consent of the instructor. This course is designed to introduce students to the comparative and thematic study of global literature. Representative global literature from the following ethnic groups will be discussed: European, European-American and Anglo-American; indigenous people and North American Indian; Black and African-American; Hispanic and Latino/Latina-American; Asian and Asian-American; Middle Eastern and Middle Eastern American.

422I. Renaissance Theatre and Drama (3)

Prerequisites: ENGL 100 and upper division status, one course in literature or theatre arts. An interdisciplinary study of the achievements, problems, themes and trends of Renaissance drama in Italy, Spain, France, and England between 1350 and 1650. Major plays of the period are read in translation, including works by Machiavelli, Tasso, Tirso de Molina, Lope de Vega, Calderon, and Shakespeare. Texts are treated both as literature and as theatre.

430./530. Dante (3)

Prerequisite: One course in literature or consent of instructor. A reading, in translation, of the major works of Dante, including the Vita Nuova and the Divine Comedy. Examination is also given to the comparative nature of Dante's work: his sources and his influence on later writers, artists, and composers.

431./531. Medieval Literature (3)

Prerequisite: One course in literature or consent of instructor. Representative selections, in translation, from writings of the medieval period, reflecting dominant ideas of the time.

432./532. Continental Renaissance Literature (3)

Prerequisite: One course in literature or consent of instructor. A comparative study of the major works of the chief non-dramatic authors of Renaissance Europe, including all or some of the following: Petrarch, Boccaccio, Lorenzo de' Medici, Machiavelli, Ariosto, Tasso, Ronsard, Rabelais, Erasmus, and Cervantes. Emphasis is also given to influences, trends, and contributions to the modern world.



437. Romantic Literature (3)

Prerequisites: ENGL 100 or its equivalent and one course in literature. Representative selections, in translation, from European writings of the Romantic period with an emphasis on a comparative study of works from Germany and France from about 1785 to 1870. Traditional grading only.

438./538. 20th Century Continental Literature (3)

Prerequisite: One course in literature or consent of instructor. Comparative study of continental European literature, in translation from 1900 to the present. Novelists studied include Kafka, Gide, Proust, Hesse, Moravia, Kazantzakis, and Mann; dramatists include Pirandello, Chekhov, Beckett, Sartre, and Camus. Movements include realism, naturalism, the development of the psychological novel, existentialism, and the theatre of the absurd.

440./540. Latin American Literary Studies (3)

Prerequisite: One course in literature or consent of instructor. A comparative study of major literary genres in Latin American literature in relation to the principal periods and movements of the Western literary tradition. The genres for the semester will be announced in the Schedule of Classes. May be repeated with different topics up to nine units.

445. American Folklore Studies (3)

Prerequisite: One course in literature or consent of instructor. Special topics in American folklore. Topics are chosen to provide a bridge between literary, aesthetic and specialized folkloristic studies of American culture. Special attention will be paid to European and Third World contributions to American folklore. Topics to be announced in the Schedule of Classes. May be repeated with different topics up to nine units.

448./548. Comparative Studies (3)

Prerequisite: One course in literature or consent of instructor. Interrelationship of two or more disciplines, with emphasis on reciprocal influences and borrowing of materials during various literary periods. The class will feature a different interdisciplinary study each semester to be announced in the Schedule of Classes. May be repeated for a maximum of nine units with different topics.

449./549. Critical Studies in Major Continental Writers (3)

Prerequisite: One course in literature or consent of instructor. Intensive and comparative study of one to three major continental authors. Authors to be studied will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

451I. The Novel and the Motion Picture in Contemporary Society (3)

Prerequisites: ENGL 100 and upper division status. Interdisciplinary study of two genres, with particular focus on novels made into films and on the aesthetic distinction of both forms as major genres in the 20th century.

452./552. Studies in Mythology (3)

Prerequisites: One course in literature or consent of instructor. Interrelation of two or more mythologies, mythological themes or theories of mythology. This class will feature a different area of an interdisciplinary or comparative nature in the study of mythology each semester, to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of nine units.

453./553. Fairy Tales (3)

Prerequisite: One course in literature or consent of instructor. An in-depth study of the fairy tale as a unique literary genre and art form. Class will investigate various theories as applied to the tales and identify psychological, religious, cultural, and alchemical patterns and symbols that reappear in fairy tales and manifest man's early realization of his identity and of the creative process.

461. Topics in Contemporary Literary Criticism (3)

Prerequisite: Two upper division literature courses or consent of instructor. An in-depth study of a particular critic or movement in contemporary literary theory. May be repeated for credit to a maximum of nine units with different topics.

492. Internship Program (1-3)

Prerequisites: Consent of instructor and department chair. Field work in literature related industries. Internships and other assignments directed by a supervising faculty member. Course may be repeated for a maximum of 6 units.

495. Genre (1-3)

Prerequisite: Consent of instructor. Production of the student journal, Genre, including editing, design, soliciting contributors, working with printer, desktop publishing, and financial management. Organizational meeting previous fall semester. Contact department office for information. Course may be repeated for a maximum of 9 units.

499. Directed Studies (1-4)

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member. May be repeated for a maximum of six units with consent of department.

## Graduate Division

501. Advanced Interdisciplinary Study (3)

Intensive study of the theories and methods of comparing and interrelating literature with other disciplines such as various areas among the fine arts, the social sciences and the sciences. Course will involve independent research.

505./405. The Modern Confessional Novel (3)

Prerequisite: One course in literature or consent of instructor. A comparative analysis of the thematic and structural characteristics of the confessional novel in the 19th and 20th centuries. Representative novels from Europe, Asia and Latin America are examined.

530./430. Dante (3)

Prerequisite: One course in literature or consent of instructor. A reading, in translation, of the major works of Dante, including the Vita Nuova and the Divine Comedy. Examination is also given to the comparative nature of Dante's work: his sources and his influence on later writers, artists, and composers.

531./431. Medieval Literature (3)

Prerequisite: One course in literature or consent of instructor. Representative selections, in translation, from writings of the medieval period, reflecting dominant ideas of the time.

532./432. Continental Renaissance Literature (3)

Prerequisite: One course in literature or consent of instructor. A comparative study of the major works of the chief non-dramatic authors of Renaissance Europe, including all or some of the following: Petrarch, Boccaccio, Lorenzo de' Medici, Machiavelli, Ariosto, Tasso, Ronsard, Rabelais, Erasmus, and Cervantes. Emphasis is also given to influences, trends, and contributions to the modern world.

538./438. 20th Century Continental Literature (3)

Prerequisite: One course in literature or consent of instructor. Comparative study of continental European literature, in translation from 1900 to the present. Novelists studied include Kafka, Gide, Proust, Hesse, Moravia, Kazantzakis, and Mann; dramatists include Pirandello, Chekhov, Beckett, Sartre, and Camus. Movements include realism, naturalism, the development of the psychological novel, existentialism, and the theatre of the absurd.

540./440. Latin American Literary Studies (3)

Prerequisite: One course in literature or consent of instructor. A comparative study of major literary genres in Latin American literature in relation to the principal periods and movements of the Western literary tradition. The genres for the semester will be announced in the Schedule of Classes. May be repeated with different topics up to nine units.

548./448. Comparative Studies (3)

Prerequisite: One course in literature or consent of instructor. Interrelationship of two or more disciplines, with emphasis on reciprocal influences and borrowing of materials during various literary periods. The class will feature a different interdisciplinary study each semester to be announced in the Schedule of Classes. May be repeated for a maximum of nine units with different topics.

549./449. Critical Studies in Major Continental Writers (3)

Prerequisite: One course in literature or consent of instructor. Intensive and comparative study of one to three major continental authors. Authors to be studied will be announced in the Schedule of Classes. May be repeated for maximum of nine units with different topics.

### 550. Topics in Comparative Literature (3)

Prerequisite: C/LT 501 or consent of instructor. Special studies of movements, figures and relationships in world literature; or between world literature and other disciplines. Topics to be announced in the Schedule of Classes. May be repeated to a maximum of nine units with different topics.

### 552./452. Studies in Mythology (3)

Prerequisites: One course in literature or consent of instructor. Interrelation of two or more mythologies, mythological themes or theories of mythology. This class will feature a different area of an interdisciplinary or comparative nature in the study of mythology each semester, to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of nine units.

### 553./453. Fairy Tales (3)

Prerequisite: One course in literature or consent of instructor. An in-depth study of the fairy tale as a unique literary genre and art form. Class will investigate various theories as applied to the tales and identify psychological, religious, cultural, and alchemical patterns and symbols that reappear in fairy tales and manifest man's early realization of his identity and of the creative process.

## CLASSICS

Students may pursue several aspects of ancient Greek and Roman civilization by taking classes in the Classics Program and related areas: Anthropology, Art, Comparative Literature, English, History, Philosophy, Political Science, and Religious Studies. Courses in the Classics Program teach one to read Greek and Latin, to understand ancient institutions and cultural practices, to be conversant with Greek myths, to analyze English works derived from the ancient languages, and to appreciate the Greek and Roman view of human nature. Interested students should confer with the Classics faculty to plan a Special Major in Classics or one of the minors described below.

### Minor in Classical Studies (code 0-6810)

The Minor offers students majoring in any subject an opportunity to supplement their education with background in the oldest European tradition.

The Minor consists of a minimum of 20 units which must include a minimum of 9 units of upper division coursework selected from the following:

1. Two courses in Latin or Greek, both in the same language.
2. A minimum of two courses from: CLSC 124, 135, 291, 310I, 410I, 421I, C/LT 448 and 452 (with an appropriate topic); or additional courses in Latin or Greek, not necessarily in the same language as selected in (A).
3. A minimum of two courses from the following C/LT 310I or HIST 310I; C/LT 312I or HIST 312I; HIST 313, 314; PHIL 421, 422; ART 416, 417; ENGL 426, 431; ANTH 140, 448; POSC 301.

Interested students should contact the Classics Advisor prior to or during the first semester of taking courses toward the Minor.

### Minor in Greek (code 0-6811)

A minimum of 20 units which must include four upper division courses. Prospective teachers are strongly urged to take, in addition, HIST 313, CLSC 291, 310I, and other courses touching on the ancient world.

### Minor in Latin (code 0-6815)

A minimum of 20 units which must include four upper division courses. Prospective teachers are strongly urged to take, in addition, HIST 314, CLSC 291, and 310I, and other courses touching on the ancient world.

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## Classics Courses (CLSC)

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### Lower Division

#### 124. The Classical World (3)

Introduction to the literature, language and culture of the ancient Greek and Roman worlds. Class lectures and discussions will use primary sources, such as drama, epic, inscriptions, and the visual arts to explore issues of gender, mythology, the hero, theater, ancient combat and sports, slavery and the family. Students will be encouraged to develop comparisons between the institutions of the ancient world and their modern counterparts, exploring structural parallels and differences between them.

#### 135. Women in the Classical World (3)

A survey of the roles and status of women in ancient Greece, Rome and Etruria through literature by and about women and other ancient source material.

#### 291. Introduction to Greek Mythology (3)

A survey of the major Greek myths, legends and other tales about gods, heroes and wars. The course will discuss myths in the planes of Earth, Underworld, Sea and Sky.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 310I. Pagan Culture (3)

Prerequisites: ENGL 100 and upper division status. Students investigate the Pagan culture of the Hellenistic and Roman periods after the conquests of Alexander the Great, and will interpret the human condition from the standpoints of literary writers and of philosophers.

#### 410I. Law and Literature in the Classical World (3)

Prerequisites: ENGL 100; upper division status or consent of the instructor. An introduction to the study of the philosophy and interpretation of law through classical literature that encompasses fundamental legal questions and ancient legal source material and the application of modern theories of literary criticism to ancient and modern law.

#### 421I. Classical Drama (3)

Prerequisites: ENGL 100, upper division status, and one course in literature or theatre arts. An interdisciplinary examination of major plays of the Greeks and the Romans, both as literature and as theatre. Includes the "invention" of the drama as an art form, the development of tragedy and comedy, and works by Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terence, and Seneca. Considers also the debt of modern drama and dramatic literature to the theatre of the ancients. Same course as THEA 421I.

#### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special interest. May be repeated for credit up to maximum of six units.

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## Greek Courses (GK)

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### Lower Division

#### 101A-B. Elementary Greek (4-4)

Introduction to ancient Greek, the language of Sophocles, Plato, Aristophanes, Homer, and Demosthenes. Forms, syntax and basic vocabulary leading also to a reading knowledge of New Testament Greek.

101A. Designed for those who are beginning the study of Greek.  
101B. Prerequisite: GK 101A or equivalent.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 301A-B. Intermediate Greek (3-3)

Continued study of the language and culture. Reading and translating of adapted or original selections of classical writers.

301A. Prerequisite: GK 101B or equivalent.

301B. Prerequisite: GK 301A or equivalent.

#### 351. Plato (3)

Prerequisite: GK 301B or its equivalent. Translation and literary study of one or more dialogues of Plato.

#### 352. Homer (3)

Prerequisite: GK 301B or equivalent or consent of instructor. Translation and literary study of selected books of the Iliad or Odyssey.

#### 490. Special Topics (1-3)

Prerequisites: 12 units of upper division Greek courses or consent of instructor. Translation and literary study of the selected works of an author, genre (e.g., oratory) or period (e.g., Hellenistic Greek). Course may be repeated for a maximum of twelve units.

#### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special interest. May be repeated for credit up to a maximum of six units.

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## Latin Courses (LAT)

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### Lower Division

#### 101A-B. Elementary Latin (4-4)

Introduction to the Latin language as used by Cicero, Livy, Catullus, Seneca, Tacitus, and Juvenal as well as late Latin and medieval writers, Roman culture and civilization. Forms, syntax, and basic vocabulary to equip students to begin the study of these and other writers.

101A. Designed for those who are beginning the study of Latin.  
101B. Prerequisite: LAT 101A or equivalent.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 301A-B. Intermediate Latin (3-3)

Continued study of the language and culture. Reading and translating adapted and original selections of classical writers.

301A. Prerequisite: LAT 101B or equivalent, or two years of high school Latin.

301B. Prerequisite: LAT 301A or equivalent, or more than two years of high school Latin.

#### 321. Intensive Latin (6)

Equivalent to two semesters of Elementary Latin. Designed for undergraduate and graduate students with little or no knowledge of Latin, whose degree programs require or recommend a reading knowledge of the language. Not open to students with credit in LAT 101B.

#### 451. Latin Poetry (3)

Prerequisite: LAT 301B or its equivalent. Study of Latin poets such as Vergil, Catullus, Horace, and Ovid. Discussion of themes, techniques, and setting of the works. May be repeated with different content for a maximum of nine units. Topics will be announced in the Schedule of Classes.

#### 452. Latin Prose (3)

Prerequisite: LAT 301B or equivalent. Reading of Latin prose writers such as Cicero, Caesar, Livy, Seneca, Tacitus. Discussion of literary artistry and historical setting. May be repeated with different content for a maximum of nine units. Topics will be announced in the Schedule of Classes.

#### 490. Special Topics (1-3)

Prerequisites: 12 units of upper division Latin courses or consent of instructor. Translation and literary study of the selected works of an author, genre (e.g., satire) or period (e.g., Medieval Latin). May be repeated for credit up to nine units with different topics.

#### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special interest. May be repeated for credit to a maximum of six units.

# COMMUNICATIVE DISORDERS

*College of Health and Human Services*

Department Chair

Lynn Snyder

Department Office

Language Arts Building (LAB), Room 102

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(562) 985-4594

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Faculty

Professors

Randall C. Beattie

Walter H. Moore, Jr.

Bruce P. Ryan

Lynn Snyder

Carolyn Wardrip

Associate Professors

Carolyn Conway Madding

William McFarland

Undergraduate Advisor

Walter H. Hoore, Jr.

Graduate Advisor

Randall C. Beattie

Clinic Coordinator

O. T. Kenworthy

Technician

John Whittaker

Department Secretary

Michele Martinez

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor, Graduate Advisor, Student Teacher Coordinator, and Clinic Director. The Communicative Disorders Department provides specialized course work for students planning careers in speech-language pathology or audiology. Departmental majors may complete work leading to bachelor of arts and/or master of arts degrees, as well as Certificates of Clinical Competence in either audiology or speech-language pathology from the American Speech-Language-Hearing Association and the requirements for licensure by the State of California.

Students seeking special education credentials may obtain specific credentials while completing the Master's degree. Students in allied health fields and linguistic sciences will find courses to supplement their regular majors.

The department maintains a language, speech and hearing clinic to serve as a clinical and research laboratory on campus for both graduate and undergraduate students. This facility is supplemented by many nearby hospitals, rehabilitation agencies and nonprofit language/speech/hearing clinics.

The Department of Communicative Disorders offers graduate study leading to the Master of Arts degree in communicative disorders with options in audiology and speech-language pathology. This coursework meets requirements for certification by the American Speech and Hearing Association (American Speech-Language-Hearing Association, Council on Academic Accreditation, 10801 Rockville Pike, Rockville, MD 20852, phone: 301-897-5700), licensing by the State of California, and educational credential.

## Bachelor of Arts in Communicative Disorders (code 2-6842) (124 units)

Students desiring a bachelor's degree in Communicative Disorders must complete ANTH 170 and a course in language and culture/society, (e.g. ANTH 412I, 413, or SOC 485I), in addition to completing the following required courses:

Lower Division: C D 260, 261, 271; PSY 210 or equivalent.

Upper Division: C D 329, 330, 373, 431, 432, 440, 456, 466, 476, 481A, 481B, 483, 489.

## Credentials for Service in Public Education

Students who wish to complete credentials for service as language, speech and hearing specialists or educational audiologists must be admitted to the graduate program in speech pathology or audiology.

## Clinical-Rehabilitative Services Language, Speech and Hearing Specialist Credential

Candidates must:

1. Complete the master's degree in speech pathology.
2. Complete EDP 350, 451 or 564; C D 483, 489, 686A (Field Experience(s) in order to complete 100 contact hours as a Language, Speech and Hearing Specialist trainee in the school setting).

## Clinical-Rehabilitative Services Audiologist Credential

Candidates must:

1. Complete the master's degree in audiology.
2. Complete EDP 350, C D 280, C D 281, 669G, and 680 (internship to be completed in the schools in order to complete 100 contact hours as an Audiologist trainee in a public school environment.)

## Clinical-Rehabilitative Services Language, Speech and Hearing Specialist Credential with Special Class Authorization to Teach Language Disordered Children

Candidates must:

1. Complete the master's degree in speech pathology;
2. Complete ED P 350; ED P 451 or ED P 564; C D 483, 489; EDEL 550, 560, 570, 686A (in order to complete 100 contact hours as a Language, Speech and Hearing Specialist trainee in the school setting) and 686B (in order to complete 100 contact hours as a teacher of severe language disordered children trainee in a school setting.

## Master of Arts in Communicative Disorders (code 5-6842)

### Admission to the Graduate Program

Enrollment in 500/600 level courses in communicative disorders is restricted to students who have been unconditionally accepted to the graduate program of the department as classified. Students wishing to be admitted must complete the following procedures:

1. Students must meet the criteria for acceptance by the University as a graduate student;
2. Every student (new or continuing) must apply to the Office of Admissions and Records to obtain admission to the University with graduate standing;
3. Every student then must apply to the Department of Communicative Disorders for admission to the graduate program using the department application form. This form must be filed with the graduate advisor by March 1 for admission in the fall semester. The following supportive materials must be filed with the department admission application:
  - a. Change of objective form available at department office (continuing CSULB students only);
  - b. Transcripts of all undergraduate and graduate work. (These transcripts are in addition to those required by the Office of Admissions and Records.) These transcripts should reflect the following minimum criteria:
    - (1) a GPA of 3.0 or better in the last 60 units of course-work; and
    - (2) confirmation of acceptable GPA obtained during the final senior semester.
  - c. Three letters of recommendation from academic faculty in Speech-Language Pathology, Linguistics, etc. Our standard recommendation forms can be obtained from the Graduate Advisor and must be completed.

d. Results of the Graduate Record Examination (GRE). Students must make arrangements to take this test in the semester prior to filing for admission to the department graduate program. This is to insure that the student's test results will be available by the filing date since test scores are used as one criterion for acceptance into the graduate program. Students can make arrangements to take the GRE at the Testing Office in SS/AD Rm 216. The testing Office will supply students with further information and provide them with a description and sample items.

4. Any deficiencies will be determined by the department graduate committee after consultation with the student and the student's faculty advisor and study of transcript records.
5. Student will have completed one of the two prerequisites listed in the next section.

### Prerequisites

1. A bachelor's degree from an accredited institution with a major in communicative disorders (speech pathology and/or audiology); or
2. A bachelor's degree from an accredited institution. The applicant must have 33 units of course work in speech science, speech pathology and/or audiology including courses in (a) anatomy and physiology, (b) phonetics, and (c) introduction to communicative disorders. If student has not completed sufficient units or courses to meet this requirement, he/she may enroll in the University as a conditionally admitted graduate student to complete the required undergraduate courses prior to applying to the Graduate Program in Communicative Disorders.

### Advancement to Candidacy

In order to be advanced to candidacy for a Master's degree, a student must meet the following criteria:

1. enrollment in the semester or summer session in which advancement takes place;
2. selection of Speech-Language Pathology or Audiology option;
3. satisfactory completion of C D 696 and three additional units;
4. satisfactory completion of the CSULB Writing Proficiency Examination. The Writing Proficiency Examination must be passed before the student is advanced to candidacy. (After paying a fee at the Business Office [SS/AD Room 148], take your receipt to the Testing Office [SS/AD Room 216] and sign up for the examination. This examination is administered several times per year. A detailed description of the test is available at the Testing Office);
5. maintenance of a GPA of at least 3.0 in (a) all graduate work completed in Communicative Disorders, (b) all graduate work completed at CSULB, and (c) all graduate work transferred to meet graduation requirements;
6. filing of the student Program for the Master of Arts Degree in Communicative Disorders after completion of items 2-5;
7. a written program of graduate courses approved by the student's department advisor, the department graduate advisor, the department chairperson, and the College of Health and Human Services Associate Dean.

## Requirements

Students must elect one of two available options: audiologic or speech-language pathology.

For speech-language pathology 39 units of course work are required: C D 696, 662, 663, 664, 665, 666, 669A or 669C, 669D, 669F, 669G, 669J, 670, C D 686A and 698 or 695 (Comprehensive Examinations) plus a three-unit elective. Within the context of the clinical courses (C D 669A, 669C, 669D, 669F, 669G, 669J, 670, 669H, or 686A), the student will complete 25 hours of clinical experience under appropriate supervision with a client determined to be of a language or dialect different from that of the student clinician. C D 483 and 489 or 460/560, or equivalent content, are prerequisites to this experience.

For audiology 40 units of course work are required: C D 696, 530, 574, 669A or 669C, 669G, 673, 6 units of 674 (3-3), 675, 6 units (2-2-2) of 679, 680, and either 698 or 695 (Comprehensive Examinations) and 3 units of electives.

Regulations governing the preparation and eligibility for the administration of comprehensive examinations are available in the Department Office. Departmental regulations concerning preparation of theses are also available in the office.

## Courses (C D)

### Lower Division

#### 060. Special Topics (1)

Prerequisite: Consent of instructor. Speech, language and hearing therapy to students enrolled in the University. May be repeated for credit to a maximum of two units.

#### 260. Introduction to Communicative Disorders (3)

Features of human communication dysfunction. Survey of major communicative disorders. Role of speech-language pathologist and audiologist in medical, educational, and private practice settings.

#### 261. Anatomy and Physiology of the Speech and Hearing Mechanism (3)

Anatomical, physiological and neurological components of the speech and hearing mechanism. Designed for students planning to enter the clinical program in communicative disorders.

#### 271. Phonetics (3)

Phonetic basis of speech sounds and the various factors which influence pronunciation. Consideration is given to linguistic variations, regional dialects and standards. (Lecture 2 hours, laboratory 2 hours.)

#### 280. Sign Language (3)

Sign Language and Non-Vocal Communication Systems. Origin, development and principles of sign language. Practice with American Manual Alphabet, American Sign Language and Signing Exact English to provide basic conversational skills; other sign systems and modes of non-vocal communication are discussed.

#### 281. Intermediate Sign Language (3)

Prerequisite: C D 280. Continuation of C D 280 (Sign Language and Non-Vocal Systems) with emphasis on development of receptive/expressive skills and building of vocabulary. Introduction into use of sign language in educational and therapy settings. Discussion of philosophical and cultural aspects of the deaf community. Required for school audiology credential. Traditional grading only.

### Upper Division

#### 329. Introduction to Language Acquisition (3)

Introduction to the study of the acquisition of first and second languages. Linguistic perspectives on the development of phonological, syntactic, semantic, and pragmatic aspects of language. The influence of developmental stages and social and cultural factors on the individual. Traditional grading only. Same course as LING 329.

#### 330. Speech and Hearing Science (3)

This course examines human communication in its neurological, psychological, anatomical, physiological, acoustic and social aspects. Through readings, discussions, films and experiments the student is expected to become more appreciative, more aware, more analytical and more tolerant of the communication behavior of himself and other speaker/hearers.

#### 361. Language Development and Disorders in Monolingual and Bilingual Children (3)

Principles of language and speech development related to cognitive, linguistic and communication behaviors of monolingual and bilingual children. Not open for credit for communicative disorders majors. (Lecture-Discussion)

#### 373. Audiology I (3)

Introduction to audiology; acoustics, anatomy and physiology of the ear, pure-tone audiometry/masking, speech audiometry/masking, principles of taking a case history, and report writing.

#### 431./531. Pediatric Audiology (3)

Prerequisite: C D 373. Pathologies of hearing loss (e.g., syndromes), High-Risk Register/case history, speech and voice characteristics of the hearing-impaired, behavioral observation audiometry, visual reinforcement audiometry, play audiometry, speech audiometry, auditory evoked response, acoustic immittance, counseling parents, hearing screening in the schools, hearing aids/special listening devices. (Lecture 2 hours, laboratory 3 hours.)

#### 432./532. Audiology II (3)

Prerequisites: C D 373. Anatomy/pathology/evaluation of the (1) outer and middle ears, (2) inner ear, (3) central auditory system, and (4) functional hearing loss, taking case history, and report writing.

#### 440. Aural Rehabilitation for the Hearing Impaired (3)

Prerequisites: C D 373 and C D 431 or 432. Acoustic features of speech, visual features of speech, hearing impairment and counseling, vibrotactile communication, total communication and the deaf community, speech reading, the geriatric population, assistive listening devices, cochlear implants, learning and hearing impairment, assessment tools, hearing aid evaluation and case history, amplification/hearing aids in the classroom, and classroom acoustics/noise.

#### 456. Speech Pathology I: Disorders of Phonology (3)

Prerequisites: CD 261, 271, 329. Etiology, assessment, and treatment for disorders of phonology.

#### 460./560. Language Assessment of the Limited English Proficient Child (3)

Prerequisites: CD 329 or equivalent, or consent of instructor. Provides an understanding of the non-discriminatory assessment process for the Limited English Proficient child referred for a Language Assessment. (Lecture-Discussion.) Traditional grading only.

#### 466./566. Speech Pathology II: Fluency Disorders (3)

Prerequisite: CD 261, 271, 330. Etiology, assessment, and therapy for disturbances in the fluency of speech with emphasis on psychological, physiological, and linguistic variables correlated to disfluent behaviors.

#### 476./576. Speech Pathology III: Disorders of Voice/Oro-facial Mechanism (3)

Prerequisites: C D 261, 271, 330. The processes of phonation and resonance and their application to etiology, diagnosis and therapy of functional and organic voice disorders, such as those arising from laryngeal pathology, vocal abuse, neurological impairment, auditory impairment and oro-facial abnormalities.

481A./581A. Speech Pathology IV: Disorders of Language (3)

Prerequisites: CD 271, 329, 330. An analysis of the components of language and how each is involved with language disorders in children. Provides for the understanding and recognition of variables for the assessment and clinical management of such children.

481B./581B. Speech Pathology IV: Disorders of Language Neuropathologies (3)

Prerequisite: CD 271, 329, 330. Neurophysiological and neuro-linguistic basis for language and speech disorders associated with central nervous system pathologies. Provides for the recognition and understanding of variables for the assessment and clinical management of such disorders.

483. Assessment of Monolingual and Bilingual Clients (3)

Prerequisites: CD 261, 271, 329, 330 and either ANTH 170 or a course in language and culture/society. Principles underlying assessment procedures in speech language disorders for both monolingual and bilingual clients. Focus is on the cultural and linguistic variables affecting standardized and non-standardized assessment procedures. (Lecture 2 hours, laboratory 3 hours.)

489. Management of Monolingual and Bilingual Clients (3)

Prerequisites: CD 483. Pre- or corequisites: At least 4 of the following: CD 456, 466, 476, 481A, 481B. Principles underlying management procedures in speech and language disorders for monolingual, bilingual, and/or bicultural clients. Focus is on the relationship of assessment to management, formulation of objectives, task analysis, data collection, clinical techniques and materials, and transfer and maintenance programs (including parent training). 25 hours of clinic observation and participation will be distributed equitably between campus clinic, schools, and hospital/rehabilitation settings. (Lecture 2 hours, laboratory 3 hours.)

491. Proctoring in Communicative Disorders (2-3)

(Open only to students who have achieved the grade of "A" in the course in which they are serving as proctor.) Advanced students shall engage in peer teaching and examination scoring in specific Communicative Disorders undergraduate courses under the specific direction of the course instructor. May be repeated for credit to a maximum of 6 units.

492. Special Studies in Communicative Disorders (1-3)

Open only to communicative disorders majors with senior or graduate standing and consent of department chairperson. Individualized laboratory or library research selected in consultation with instructor. Written report of the research is required. Not acceptable for graduate credit toward the master's degree. May be repeated to a maximum of six units.

499. Directed Studies in Communicative Disorders (1-3)

Prerequisite: Consent of instructor. Independent study under supervision of a faculty member. May be repeated for a maximum of six units. Not acceptable for graduate credit toward the master's degree.

## Graduate Division

530. Audiological Instrumentation (3)

Prerequisite: Consent of instructor. Acoustics/ decibel, psychoacoustics, calibration of pure-tone and speech audiometers, sound field calibration, industrial audiology and noise measurement. (Lecture 1 hour, laboratory 6 hrs.)

531./431. Pediatric Audiology (3)

Prerequisite: C D 373. Pathologies of hearing loss (e.g., syndromes), High-Risk Register/case history, speech and voice characteristics of the hearing-impaired, behavioral observation audiometry, visual reinforcement audiometry, play audiometry, speech audiometry, auditory evoked response, acoustic immittance, counseling parents, hearing screening in the schools, hearing aids/special listening devices. (Lecture 2 hours, laboratory 3 hours.)

532./432. Audiology II (3)

Prerequisites: C D 373. Anatomy/pathology/ evaluation of the (1) outer and middle ears, (2) inner ear, (3) central auditory system,

and (4) functional hearing loss, taking case history, and report writing.

560./460. Language Assessment of the Limited English Proficient Child (3)

Prerequisites: CD 329 or equivalent, or consent of instructor. Provides an understanding of the non-discriminatory assessment process for the Limited English Proficient child referred for a Language Assessment. (Lecture-Discussion.) Traditional grading only.

566./466. Speech Pathology II: Fluency Disorders (3)

Prerequisites: CD 261, 271, 330. Etiology, assessment, and therapy for disturbances in the fluency of speech with emphasis on psychological, physiological, and linguistic variables correlated to disfluent behaviors.

574. Hearing Aids (3)

Prerequisite: Consent of instructor. Electro-acoustic characteristics, hearing aid evaluation in children and adults, case history, probe tube measurements, earmolds, binaural hearing aids, CROS and its modifications, signal processing and control, programmable hearing aids, digital hearing aids, batteries, assistive listening devices, hearing aid orientation and counseling, cochlear implants, classroom amplification and acoustics, hearing aid dispensing.

576./476. Speech Pathology III: Voice/Oro-Facial Mechanism (3)

Prerequisites: C D 261, 271, 330. The processes of phonation and resonance and their application to etiology, diagnosis and therapy of functional and organic voice disorders, such as those arising from laryngeal pathology, vocal abuse, neurological impairment, auditory impairment and oro-facial abnormalities.

581A./481A. Speech Pathology IV: Disorders of Language (3)

Prerequisites: C D 271, 329, 330. An analysis of the components of language and how each is involved with language disorders in children. Provides for the understanding and recognition of variables for the assessment and clinical management of such children.

581B./481B. Speech Pathology IV: Disorders of Language Neuropathologies (3)

Prerequisites: CD 271, 329, 330. Neurophysiological and neuro-linguistic basis for language and speech disorders associated with central nervous system pathologies. Provides for the recognition and understanding of variables for the assessment and clinical management of such disorders.

590. Advanced Topics and Current Issues in Communicative Disorders (1-3)

Selected topics from the most recent developments and issues in speech-language pathology and audiology. Course content will vary with each offering. May be repeated for credit under different topics for a maximum of three units. Topics will be announced in the Schedule of Classes.

662. Seminar in Language Disorders in Children (3)

Prerequisite: C D 481A, 696. The components of language, cognitive and perceptual abilities and communication are examined in children with normal and impaired language development. Major approaches to language intervention are discussed.

663. Seminar in Disorders of Phonology (3)

Prerequisites or corequisite: CD 456. Information in the description, assessment and treatment of phonological disorders. Survey of current literature and practices. Practice in conducting procedures.

664. Seminar in Disorders of Voice and the Oro-facial Mechanism (3)

Prerequisites: C D 476, 696. Selected problems in voice disorders through an investigation of the literature and clinical research.

665. Seminar in Language Disorders in Adults (3)

Prerequisites: C D 481B, 696. Provides an understanding of neuro-pathological substrates of language disorders in adults resulting from brain damage. Provides for the recognition and assessment of the syndromology and clinical aspects of adult language disorders.

666. Seminar in Fluency Disorders (3)

Prerequisites: C D 466, 696. Historical and current research and its effect upon the assessment and management of fluency disorders.

**669A. Clinical Practice in Phonological Disorders (2)**

Prerequisites: C D 489; pre- or co-requisite: C D 663 or consent of instructor. Student conducts assessment of phonological disorders and management of therapy, under supervision, with clients in the university speech and hearing clinic. Students handle all aspects of clinical program including initial interviews, parent counseling, and testing.

**669C. Clinical Practice With Language Delayed/Disordered Children (2)**

Prerequisites: C D 483, 489; pre- or co-requisite: C D 662 or consent of instructor. Students provide assessment and management of preschool and school-age children with identified delays/disorders. Under supervision, the practicum includes standardized and non-standardized assessment, parent interviews and conferences, development and implementation of a management program and report writing. Traditional grading only.

**669D. Clinical Practice with Voice and Oro-facial Mechanism Disorders (2)**

Prerequisites: C D 489; pre- or co-requisite: C D 664 or consent of instructor. Student conducts therapy sessions under supervision for persons with functional and/or organic voice disorders. Practicum includes initial interviews, diagnostics, therapy program planning, counseling and report writing.

**669F. Clinical Practice with Fluency Disorders (2)**

Prerequisites: C D 489; pre- or co-requisite: C D 666 or consent of instructor. Assessment, planning, and management in a supervised clinical experience with persons who have fluency disorders.

**669G. Clinical Practice in Audiology (2)**

Prerequisites: C D 431, 432, 440, or consent of the instructor. Student will conduct individual and group therapy with hearing impaired clients, as well as audiological evaluation of hearing impaired persons.

**669H. Clinical Practice-Special Programs (2)**

Prerequisites:/Course Description: At least one of the C D 669A through J courses. Specialized practice placement to obtain experience with speech, language, and hearing disorders. May be repeated to a maximum of 4 units.

**669J. Clinical Practice with Language Disordered Adults (2)**

Prerequisites: C D 489; pre- or co-requisite: C D 665 or consent of instructor. Student conducts clinical management sessions, under supervision, for adults with neurological language disorders. Practicum includes initial interviews, assessment, management program planning, counseling and report writing.

**670. Internship in Speech and Language Pathology (5)**

Prerequisites: C D 669A or C,D,F,G, and J with a GPA of 3.0. Advanced clinical supervised practice with speech and language disordered persons in either a hospital, rehabilitation agency or speech and language center.

**673. Assessment of Outer, Middle, and Inner Ears (3)**

Prerequisite: Consent of instructor. Advanced masking concepts, anatomy/physiology/pathology of the outer-middle-inner ears, immittance testing, calibration of immittance meters, functional hearing loss.

**674. Seminar in Audiology: Current Topics in Hearing and Hearing Aid Evaluation (3)**

Prerequisite: Consent of instructor. Emphasis will be place on critically analyzing recent articles in (1) hearing aid evaluation for children and adults, (2) evaluating special populations (the elderly, difficult to test, school, and/or industrial), and (3) current topics in audiology. This course will allow students to obtain an in-depth knowledge in areas of interest, and will allow the instructor to share areas of expertise. Course may be repeated to a maximum of 6 units.

**675. Assessment of Central Auditory Nervous and Vestibular Systems (3)**

Prerequisite: Consent of instructor. Anatomy/ physiology/pathology of the 8th cranial nerve, vestibular system, brainstem, and central auditory system; auditory evoked potentials, calibration of

auditory evoked systems, tone decay, Bekesy, SISI, ABLB, electronystagmography, functional hearing loss.

**679. Practicum in Audiology (2-10)**

Prerequisites: C D 431, 432, 440, or consent of instructor. Student conducts evaluation and rehabilitative sessions under supervision with persons with more complex hearing disorders. Student handles all aspects of the audiologic program including evaluation, consultation, program planning and execution. May be repeated for credit to a maximum of 10 units.

**680. Internship in Audiology (5)**

Prerequisites: CD 669A or B or C, 679 and 669G, or consent of the instructor. Advanced clinical practice in audiology with hearing impaired persons in a community facility.

**686A. Advanced Field Studies with Communication Handicapped (5)**

Prerequisites: Passing of CBEST, completion of C D 662, 664, 665, 666, and all but one of the following: 669A, 669C, 669D, 669F, 669G, 669J. Enrollment by application to the Communicative Disorders Department only. Assignments to one or two settings with a commitment of 3 or 5 days a week depending on credential objective. Inservice meetings with University Coordinator to be arranged. Clinical Rehabilitative Services, Language Speech and Hearing Specialist students are assigned to complete a practicum in an itinerant speech and language setting for the equivalent of one semester earning 5 units of field study. Credit/No Credit grading only. (Fieldwork)

**686B. Advanced Field Studies with Severe Language Handicapped/Aphasia Classroom (5)**

Prerequisites: Passing of CBEST, completion of C D 662, 663, 664, 665, 666, and all but one of the following: 669A, 669C, 669D, 669F, 669G, 669J. Enrollment by application to the Communicative Disorders Department only. Assignment to one setting with a commitment of 5 days a week for a minimum of 8 weeks. Inservice meetings with University Coordinator to be arranged. Clinical Rehabilitative Services: Special Class Authorization students are assigned to complete a practicum in a self contained language handicapped classroom earning 5 units of field study. Corequisite enrollment in ED P 686A or a clear Clinical Rehabilitative Services is required. Credit/No Credit Grading Only. (Field-work)

**695. Directed Readings (1-3)**

Prerequisite: Consent of instructor. Readings in communication sciences/disorders. Required of all candidates for the master's degree not electing the thesis option. (Under special circumstances, may be repeated for a maximum of 6 units.)

**696. Research Methods: Applied and Basic (3)**

Prerequisite: PSY 210 or equivalent or consent of instructor. This course focuses on the application of the scientific method in the experimental and clinical settings. Scientific reasoning applied to the clinical and research process is stressed through examination of group and single-subject designs. Strategies and procedures for the control and manipulation of independent variables to effectuate change are explored. Evaluation of the components of research articles and their application to the clinical and research processes are introduced into class readings and discussions. Methods for the organization and analysis of clinical and research data are presented. (Lecture 3 hours.)

**697. Directed Research (1-3)**

Pre- or Corequisite: C D 696 and consent of instructor. Independent research under supervision of a faculty member.

**698. Thesis (1-4)**

Prerequisites: Advancement to candidacy for master's degree. Preparation, completion and submission of an acceptable thesis in partial fulfillment of the requirements for the master's degree.

**701. Psychoacoustics and Speech Acoustics/Perception (3)**

Prerequisite: Consent of instructor. In depth study of theories and processes of measurement for auditory and speech perception. Theories of both speech production and auditory/speech perception will be addressed. (Lecture, 3 hours.)



**702. Pathology and Medical Treatment of the Auditory/Vestibular Systems (3)**

Prerequisites: CD 675 and consent of instructor. Current readings in the anatomy/physiology/pathology and medical/surgical treatment of the auditory/vestibular systems. Topics include otologic, neurologic, Laboratory, and radiologic diagnosis and treatment of the auditory/vestibular system. Pathologies include trauma, anatomical anomalies, impacted cerumen, otitis media, otosclerosis, Meniere's Disease, vascular disorders, viral and bacterial diseases, ototoxicity, noise induced hearing loss, presbycusis, acoustic neuroma and other central auditory space occupying lesions, tinnitus, and vertigo.

**703. Embryology and Genetics of the Auditory/Vestibular Systems (3)**

Prerequisite: consent of instructor. Study of the embryology and genetics of the auditory/vestibular systems, including fundamental processes and concepts in development, methods used to study embryonic development, basic body plan of mammalian embryos, development of the nervous system, the sense organs, and the face and oral region. Genetic causes of conductive and sensorineural hearing loss, including congenital and delayed hearing loss, either alone or in association with other abnormalities (syndromes). Surgical rehabilitation and genetic counseling.

**704. Industrial and School Audiology (3)**

Prerequisites: CD 673, PSY 700, and consent of instructor. In depth study of: 1) the hearing screening process; 2) regulations and legislation related to hearing screening; 3) development and implementation of screening programs; and 4) factors that influence screening outcomes. (Lecture 3 hours.)

**705. Seminar in Assessment of Outer, Middle, and Inner Ears (3)**

Prerequisites: CD 673 and consent of instructor. Current readings are assigned on the anatomy/physiology/pathology and measurement of the peripheral auditory system. Topics include puretone, speech, masking, immittance audiometry, calibration of immittance meters and otoacoustic emissions, functional hearing loss, loudness measurement tests, otoacoustic emissions, and cerumen management.

**706. Seminar in Hearing Aids (3)**

Prerequisites: CD 574 and consent of instructor. Readings in hearing aid evaluation for children and adults, including threshold and supra threshold procedures, speech testing, loudness function testing, self-report scales, probe tube measurements, signal processing and control, programmable hearing aids, and the business aspects of hearing aid dispensing. Case studies illustrating special problems will be discussed.

**707. Seminar in Assessment of Central Auditory Nervous and Vestibular Systems (3)**

Prerequisites: CD 675 and the consent of instructor. Current readings will be assigned on the anatomy/physiology/pathology of the 8th cranial nerve, vestibular system, brainstem, and central auditory system; auditory evoked testing (very early, early, middle, and late potentials) calibration of auditory evoked systems, tone electronystagmography, rotational chair testing, and posturography. The various tests and procedures discussed in class will be conducted on patients with auditory/vestibular pathologies.

**708. Seminar in Aural Rehabilitation (3)**

Prerequisites: CD 440, 574, and consent of instructor. In depth study of: 1) acoustic features of speech; 2) visual features of speech; 3) age-appropriate evaluation and management of communication needs; 4) development of appropriate intervention strategies relative to amplification systems, conversational management strategies, auditory training, speech reading and other aspects of communication need; and 4) emerging and alternative technology (i.e., Assistive devices, implantable devices, computer-based systems, and so on.) (Lecture 3 hours.)

**709. Principles of Counseling (3)**

Prerequisites: CD 440 and consent of instructor. This course entails a detailed review of various counseling approaches introduced in Aural Rehabilitation. In addition, participants are

instructed in active listening, as well as the identification of various communication styles, stages of grieving, and stress indicators that may signal a need for further referral. Participants will be involved in both classroom discussion and guided role-playing that will provide an opportunity to recognize their own interpersonal counseling style, as well as the intrapersonal style and needs of the client. (Lecture 3 hours.)

**710. Business, Legal, and Forensic Aspects of Audiology (3)**

Prerequisite: consent of instructor. This course will address the essentials of planning, establishing, and operating/managing an audiology practice. Related to that, it will also address the legal arena as a potential market place for the specific practice of forensic audiology, including the process of deposing and/or testifying as an expert witness. (Lecture 3 hours.)

# COMMUNICATION STUDIES

*College of Liberal Arts*

Chair

Sharon D. Downey

Department Office

McIntosh Humanities Building (MHB), Room 717

Telephone

(562) 985-4301 or 985-4302

Faculty

Professors

Karl W. E. Anatol

Nancy E. Briggs

Sharon D. Downey

Patricia Kearney

G. Bruce Loganbill

Valerie C. McKay

Timothy G. Plax

Richard E. Porter

Karen Rasmussen

James S. Saucedo

Craig R. Smith

Fathi S. Yousef

Associate Professor

Terre Allen

Assistant Professors

Aaron Cargile

José Rodriguez

Rob Tucker

Students desiring information about the communication studies program at CSULB should contact the department undergraduate advisor or the graduate advisor.

Located within the College of Liberal Arts, the Department of Communication Studies provides students with a solid liberal arts education in communication arts and sciences with specialized training in communication skills and practices at the baccalaureate and graduate levels. The Department of Communication Studies maintains a tradition of liberal education which traces the world's heritage of humanistic tradition in its multicultural diversity. The communication studies curriculum focuses on issues of ethics, creative thought, historical and scientific inquiry, critical thinking, understanding of communication phenomena, aesthetic expression, and the development of excellent human communication skills. To this end, the Department of Communication Studies provides two major services to the University community. First, through specialized curricula, the Department stresses inquiry, analysis, and critical evaluation to students who seek to apply a comprehensive background of communication theory and practice in business, industry, professional fields, or education. Second, through its general education and service offerings, the department provides a variety of courses stressing critical thinking, and oral and written communication designed to give all students experiences in the traditions of the liberal arts and to prepare them for responsible citizenship in a pluralistic society.

The various degree options in the Department of Communication Studies are intended to provide students with the opportunity to emphasize an area of communication studies which will best suit their personal and career goals. Each student is required to consult with the department undergraduate or graduate advisor as appropriate for advisement. Student advising is available during the Fall and Spring semesters only.

NOTE: Lower division 100 and 200 level classes taken through California Community Colleges satisfy CSULB Communication Studies requirements.

## Bachelor of Arts Degree in Speech Communication

The Department of Communication Studies offers three undergraduate degree programs in Communication arts and sciences: The Bachelor of Arts Degree in Speech Communication, the Option in Interpersonal and Organizational Communication, and the Option in Rhetorical Studies.

All majors shall complete:

1. 12 units of lower division coursework drawn from 130,131 with 131W, 132, 210\*, 220\*, and 271 and;  
\*210 is a prerequisite for 410; \*220 is a prerequisite for 420
2. complete an upper division core consisting of 300, 301, 305, 306, and 309, and;
3. complete one of three upper division options.
4. Speech Communication majors will not be permitted to take any class in the major on a credit/non-credit basis. Speech Communication majors will not be permitted to drop a class in the major after the third week of classes unless they

present acceptable evidence of a change of work schedule that causes a conflict between their work hours and their class schedule, or unless they are totally withdrawing from the University.

5. Six of the lower division units may be applied to meet General Education requirements in oral communication and critical thinking.

### Option in General Speech (code 2-6841) (124 units)

The General Speech option, as the title implies, is concerned with all the dimensions found in the communication field. It requires course work in both the rhetorical and behavioral dimensions of the field and then permits the student to elect additional work in communication theory, rhetoric and public address.

#### Requirements

(This major consists of 42 units of which 30 are upper division.) In addition to the core above, students must complete:

1. three units required from COMM 331, 333, 334, 335, and 344;
2. six\* units required from COMM 330, 400, 410, 412, 414, 420, 432, 449, 450, and 452;
3. six\* units required from COMM 433, 436, 437, 4411, and 4421.

\*three units of COMM 490 may be substituted in either (2) or (3).

Only courses in which adequate ("C" or above) grades have been earned may be applied to satisfy upper division requirements in the major. Classes taken in which less than adequate grades are received must be repeated until an adequate grade is achieved.

### Option in Interpersonal and Organizational Communication (code 2-6838) (124 units)

The Interpersonal and Organization Communication option is designed for students who wish to prepare themselves for careers in public and private organizations requiring well-developed communication skills and a knowledge of interpersonal and organization behavior. Students choosing this option will study the theoretical and applied aspects of interpersonal and organizational communication as they function in complex organizations. They will also develop a wide range of communication skills useful in organizational environments. Six of the lower division units may be applied to meet General Education requirements in oral communication and critical thinking.

#### Requirements

(This option consists of 54 units of which 42 are upper division.) In addition to the core listed above, students must complete:

1. nine units from COMM 344, 410, and 420
2. three units required from COMM 331 or 335
3. three units required from COMM 333 or 338
4. six units required from COMM 400, 411, 412, 414, 421, 432, or 450
5. six units required from COMM 330, 334, 337, 4411, 4421, 449, 452, 490 or 492A-B.

Only courses in which adequate ("C" or above) grades have been earned may be applied to satisfy upper division requirements in the major. Classes taken in which less than adequate grades are received must be repeated until an adequate grade is achieved.

### Option in Rhetorical Studies (code 2-6840) (124 units)

The Rhetorical Studies option is designed for students who wish to approach the study of human communication from a cultural or historical-critical perspective. In this option, students will give particular attention to the historical development of rhetoric, the study of persuasion, popular culture, media culture, and political and public affairs. Six of the lower division units may be applied to meet General Education requirements in oral communication and critical thinking.

#### Requirements

(This option consists of 46 units of which 34 are upper division.) In addition to the core listed above, students must complete:

1. Ten units required from COMM 331, 335, 336, and either 333 or 338
2. Nine units required from COMM 433, 436, 437, 4411, 4421, and 449. Three units of COMM 490 in the area of rhetoric and public address may substitute for a course in this category.

Only courses in which adequate ("C" or above) grades have been earned may be applied to satisfy upper division requirements in the major. Classes taken in which less than adequate grades are received must be repeated until an adequate grade is achieved.

### Minor in Speech Communication (code 0-6841)

A minimum of 21 units in Communication Studies, of which at least 15 must be upper division, chosen in consultation with the Department Undergraduate Advisor.

### Master of Arts in Speech Communication

The Department of Communication Studies at California State University, Long Beach offers two tracks leading to the Master of Arts degree. The Option in Speech Communication involves advanced work in communication studies. A student may construct a personalized program that draws from the following areas: rhetorical, interpersonal, organizational, or intercultural communication, performance studies, forensics, or instructional communication.

The second option, Communication and Human Information Systems, is limited to college graduates who have at least two years of management or managerial-type experience in the public or private sector. The focus in this option is on the knowledge of and skills in interpersonal, organizational, and intercultural communication that are necessary to enhance one's ability to function and lead effectively in different organizational settings.

#### Admission

1. Application for Admission to the University. The office of Enrollment Services processes applications to the University (forms available through that office) and forwards those meeting University criteria to the Department.

2. Application to the Department. Upon receipt of the University application and that required by the Department, the Graduate Advisor and Graduate Committee determine whether to admit an applicant. Students meeting the Department's minimum standards (a bachelor's degree from an accredited university with a minimum 3.00 GPA) receive automatic admission. Those not meeting the criteria may petition the Graduate Committee for regular or probationary admission to the program. Persons admitted on a probationary basis will achieve regular admission status after completion of at least six units of graduate core coursework with a 3.00 GPA or better (COMM 541, 546, 640, and 646 for the Option in Speech Communication or COMM 534, 546, 610, 620, and 630 for the Option in Communication and Human Information Systems).
3. Transcripts. Every student must provide the Graduate Advisor with a copy of transcripts documenting all undergraduate and graduate work completed at institutions other than California State University, Long Beach.
4. Graduate Record Examination. The Department requires that applicants complete the Graduate Record Examination, preferably prior to admission.
5. Teaching Associateships and Graduate Assistantships. Employment as a Teaching Associate or Graduate Assistant falls under the jurisdiction of the Personnel Committee of the Department. The positions pay approximately \$800.00 per month. Tuition is not waived. Interested students should send letters of application, transcripts, GRE scores, and three letters of recommendation to: Chair, Department of Communication Studies, California State University, Long Beach, 1250 Bellflower Blvd., MHB-717, Long Beach, CA 90840-2407.
6. Advising: Consult the Graduate Advisor to plan a program of study and to receive information regarding Department procedures prior to enrollment. The Graduate Advisor and/or a faculty mentor will guide students through their programs.

### Prerequisites and Requirements

#### General Considerations

1. Requirements
  - A. All requirements date from the time at which a student receives approval for Advancement to Candidacy, not from when a student begins graduate study.
  - B. The Department requires a minimum of thirty semester hours (including four thesis credits in the Thesis Option) for the Master's Degree. The University requires a minimum of twenty-four graduate credits be completed in residence.
  - C. Students must either pass the Department's comprehensive examination or write an acceptable thesis.
  - D. The Department expects its graduate students to possess the writing skills necessary for advanced study. The University mandates that students pass the Graduate Writing Proficiency Examination or its equivalent. Persons who have passed the CSULB University Writing Examination do not need to take the test again. If you believe you have taken an equivalent examination, consult the Graduate Advisor. Students should pass an acceptable writing examination no later than the end of the first semester of graduate study.

2. Prerequisites
  - A. Units obtained fulfilling prerequisites or deficiencies do not count toward the minimum of thirty semester hours needed to complete the Master's degree.
  - B. Students must meet all prerequisites before enrolling in graduate courses, except for COMM 541 or 546. Individuals may petition for waiver of this rule prior to registering for courses if compelling reasons warrant such a waiver.
3. Students must comply with all University regulations outlined in the CSULB Catalog.

### Option in Speech Communication (code 5-6841)

#### Prerequisites

1. Individuals with a Bachelor's degree in Speech Communication (or its equivalent) from a fully-accredited college or university must have approved coursework in:
  - A. Survey of Rhetorical Theory (COMM 300)
  - B. Communication Criticism (COMM 301)
  - C. Measurement in Communication Research (COMM 305)
  - D. Communication Theory (COMM 306)
  - E. Language and Behavior (COMM 309)
2. Persons with a Bachelor's degree from a fully-accredited college or university in a different discipline must complete a minimum of twenty-four upper division units in Communication Studies, including COMM 300, 301, 305, 306, and 309 courses.

#### Requirements

1. A minimum of thirty hours of graduate work in Speech Communication distributed as follows:
 

These requirements are those listed in the 1996-97 University Catalog and thus are relevant to students advancing to candidacy during or after Fall 1995. For requirements applicable to students advancing to candidacy prior to Fall 1995, consult appropriate University Catalog.

  - A. COMM 541 and 546 to be completed prior to advancement to candidacy and preferably within the first semester of graduate work (6 units);
  - B. twelve units consisting of:
    - (1) COMM 640 and 646 (6 units),
    - (2) one course selected from COMM 633, 635, 636, 637, or 638 (3 units), and
    - (3) one course selected from COMM 600, 610, 611, 620, 630, 632, 648, or 649 (3 units).
  - C. twelve elective units of 500 or 600 level coursework approved by the student's advisor and the Graduate Committee, including four thesis units (COMM 698) if the student elects the thesis option.
2. A minimum of six graduate units taken from one or any combination of the following areas:
  - A. graduate courses from within the Department of Communication Studies,
  - B. graduate courses from outside the Department of Speech Communication (maximum of six units)
    - (1) classes taken outside the discipline in a department at California State University, Long Beach require prior approval by the Graduate Committee,

- (2) classes taken outside the discipline in a department at another university require approval by the Graduate Committee, or
  - (3) classes taken within the discipline in a department at another university.
3. Completion of the Department's Comprehensive Examination or of an acceptable thesis.
  4. Please note the following restrictions on course selection:
    - A. Students may apply only one dual-numbered course (e.g. 410/510) toward the degree. Dual-numbered courses selected may not include classes taken in undergraduate programs, except in the case of 490/590 when the course titles and/or course content are different.
    - B. Holders of the Bachelor of Arts degree from CSULB should be aware that they cannot earn credit in dual-numbered courses if they have taken these classes when they were slightly different "400" level courses – e.g., a student who has taken COMM 420 (Communication in the Organizational Setting) may NOT take COMM 520 (Advanced Concepts in Organizational Communication). If in doubt, check with the Graduate Advisor.
    - C. Internships and student teaching cannot be included in the required thirty units.

### Option in Communication and Human Information Systems (code 5-6848)

#### Prerequisites

1. Candidates must possess a bachelor's degree from a fully-accredited college or university.
2. Individuals must have a minimum of two years of full-time management or management-type experience in public and/or private organizations. Candidates must have experience in two of the following categories:
  - A. LEADING--managing in close, day-to-day contact with employees or work groups,
  - B. PLANNING--defining missions, goals, and objectives of an organization,
  - C. ORGANIZING--structuring tasks and authority; e.g., defining job specifications, dividing work loads, supervising group activities, recruiting and hiring employees, and delegating authority, and
  - D. CONTROL--setting and implementing work standards and evaluating employees' performance.

(Documentation of management experience should accompany the application to the program. The Graduate Advisor and the Graduate Committee determine whether a candidate meets the experiential criteria for admission into the program. The Graduate Advisor informs candidates of their status).
3. Students must complete the following courses or their equivalents:
  - A. Measurement in Communication Research (COMM 305)
  - B. Communication Theory (COMM 306)
  - C. Language and Behavior (COMM 309)
  - D. Advanced Concepts in Interpersonal Communication (COMM 510)
  - E. Advanced Concepts in Organizational Communication (COMM 520)

#### Requirements

1. Candidates must complete the following core curriculum: COMM 534, 546, 610, 620, and 630.
2. Students must complete a minimum of fifteen units drawn from the following: COMM 550, 600, 611, 632, 646, 648, 650, and 697.
3. Individuals may petition to substitute COMM 541 or a 600-level course within the Department's graduate offerings for one of the optional courses. Such substitution will be approved only if accompanied by a rationale arguing that it is integral to the student's program of study.
4. Candidates must pass a written Comprehensive Examination. The restrictions governing selection of 500-level courses in the Option in Speech Communication also apply to the Option in Communication and Human Information Systems.

#### Enrollment in Communication Studies 697

COMM 697 (Directed Research) should enable students to study topics and methods not normally available through regular coursework. Persons who choose the Thesis Option MAY NOT use COMM 697 to complete any part of the thesis project; however, COMM 697 may function to develop research proficiencies relevant to the thesis. The policy regarding COMM 697 is:

1. The Graduate Committee will approve inclusion of COMM 697 in a graduate program only if:
  - a. the research topic is not available through regular coursework during the student's tenure in graduate study,
  - b. the student has completed 6 units from the graduate core courses,
  - c. the student has been advanced to candidacy or has submitted her or his Graduate Program to the Graduate Advisor.
2. Students may take a maximum of three units of COMM 697.
3. Candidates must secure approval for COMM 697 before taking the course. Prior to the semester of enrollment, students must submit two forms to the Graduate Committee:
  - a. a "Petition for Directed Research,"
  - b. an "Agreement for Independent Study Course" signed by the graduate faculty member directing the independent research (obtain this form from the Department office)
4. The Graduate Committee will determine whether the proposed study conforms to the purposes of COMM 697. The faculty member directing the research has the responsibility of judging the student's ability to complete the research and also assigning the grade for the project.
5. Students must file their final 697 projects with the Department Chair.
6. Only members of the Department graduate faculty may direct COMM 697.

#### Advancement to Candidacy

Advancement to Candidacy defines a candidate's program of study and establishes her or him as an official graduate student in the University. Programs must meet the requirements in effect at the time of advancement. Candidates must submit the form for advancement required by the College of Liberal Arts (forms available in the Department office) to the Graduate Committee. Individuals are eligible for Advancement to Candidacy in the Option in Speech Communication after completing COMM 541 and 546. In the Option in Communication and Human Infor-

mation Systems, students are eligible for Advancement to Candidacy after completing six units from the core requirements. In both options, students should have an average of "B" or better to be advanced to candidacy. Candidates considering the thesis option should submit a list of ten or more courses, starring (\*) the class or classes to be omitted if the thesis option is selected.

1. To qualify for advancement, a person must:
  - a. be enrolled in the University during the semester or session he or she requests advancement,
  - b. have removed all deficiencies,
  - c. have earned a minimum cumulative grade point average of 3.0 (B) for work taken – i.e., graduate courses and undergraduate prerequisites,
  - d. have completed six units of graduate core courses with an average of "B" or better,
  - e. have passed the Graduate Writing Proficiency Examination or completed its equivalent.
2. If the student fails to petition for Advancement to Candidacy at the recommended time, he or she must do so at least one semester prior to the semester in which she or he intends to graduate. The deadline each semester is exactly four weeks before the last day of instruction. Do not wait for the deadline! The Graduate Committee may require the student to resubmit a program. Students can neither take the Master's Comprehensive Examination nor enroll in COMM 698 until a program is approved.
3. All submitted programs should indicate the semester in which courses were or will be taken and should report ALL grades in courses completed. No grades of Incomplete (I) or Satisfactory Progress (SP) can appear on the program.
4. If a program contains courses taken outside the Department, a student must obtain approval from the Graduate Advisor and the Graduate Committee before including such classes in her or his course of study. This restriction applies to courses taken at CSULB and to ones transferred from other colleges or universities. Failure to obtain Graduate Committee approval for including such courses prior to enrollment may result in students' taking classes which cannot be included in their programs of study. Candidates must submit the appropriate petition to the Graduate Committee to obtain the necessary approval.
5. After receiving the appropriate form, "Petition for Advancement to Candidacy," the Graduate Advisor will seek approval of the Graduate Committee and the Graduate Dean of the College of Liberal Arts.

#### Change in Graduate Program

If a student desires to amend her or his program of study after its approval, he or she must submit the College of Liberal Arts "Change of Program" (available in the Department office) to the Graduate Committee for approval. Approval must be given prior to enrollment in any courses involved in the change; otherwise, the course will not be considered part of the minimum thirty units needed to complete the degree.

#### Comprehensive Examination Option

1. Comprehensive Examinations are given during the third weeks of November and April for the Fall and Spring semesters, respectively. Students may not take their Comprehensive Examinations during either the Winter or Summer sessions.
2. The following provisions govern election of the Comprehensive Examination Option:
  - A. If a student elects the Comprehensive Examination option at the time of approval of her or his Graduate Program, the student may not change to the thesis option except with a special permission from the Graduate Committee.
  - B. Eligibility: Candidates may take the Comprehensive Examination if they have:
    - (1) been advanced to candidacy, and
    - (2) maintained a grade point average of at least 3.0 (B) in courses in the Master's degree program (i.e., graduate classes and prerequisites).
3. Description and Preparation
  - A. Description. The Examination consists of two sections:
    - (1) a written section spanning three, three-hour sessions during a single week,
    - (2) an oral defense, generally held within two weeks of writing the examination. The oral defense permits the student to elaborate on written answers and to answer questions that may develop out of those answers. Other discussions may arise from issues that occur to the examining committee during the oral segment of the Comprehensive Examination.
  - B. Preparation. Students should prepare for the Examination by beginning their study well before the actual assignment of an examining committee. Once the Graduate Committee appoints that group, a candidate should meet with his or her Committee Chair to discuss procedures relevant to the Examination. Individuals are responsible for the subject matter of their courses regardless of whom the instructor is. The persons on their committees may or may not be those who have taught the actual seminars taken by the candidates. Professors writing questions are under NO obligation to discuss them with the students. The professors may, however, choose to provide candidates with general guidelines to aid in preparation for the Examination. Students should be familiar with all relevant literature integral to a particular area. Because the Examination is "closed book," no notes may be taken into the examination room. Students may obtain bibliographies from individual instructors or from the Graduate Advisor.
4. Student Petitions, Committee Formation, Guidance, and Facilities/Supervision
  - A. Petitioning. Students must petition to take the Comprehensive Examination no later than the end of the semester prior to the term in which they will write the Examination. Students may not petition to take the Comprehensive Examination until all grades of Incomplete (I) and/or Satisfactory Progress (SP) have been removed.
  - B. Committee Assignment. The Graduate Committee will consider petitions and assign committees during the last week of the first month of each semester. The examining

committee consists of three examiners with one member serving as chair. Each member will compose questions for one of the three sessions of the examination.

C. Guidance. Graduate students taking the Comprehensive Examination should understand that faculty are free to develop questions from the subject areas in which students take courses, including the undergraduate core. Candidates are responsible for the subject matter in those areas whether or not such material is addressed in a particular class. Faculty may, but are not required to, provide guidance about the content for which the student is responsible. Faculty may, but are not required to, provide sample questions, reading lists, and/or assign open-ended questions for study. Furthermore, graduate students should understand that questions normally require integration of material in original ways.

D. Facilities/Supervision

(1) The Department will provide rooms in which candidates can write the examination.

(2) Students wishing to use computers may bring their own computers, or make arrangements with a specific faculty member to use that person's computer.

(3) The Graduate Advisor or his/her designee will be available on each day of the Examination to answer questions and cope with difficulties.

5. Defense, Decision, and Appeal Procedure

A. Each Comprehensive Examination Oral Defense will begin by giving candidates the opportunity to explain any revisions they feel will strengthen their written responses.

B. Decisions of the Comprehensive Examination Committees

(1) A Comprehensive Examination Committee may render one of the following decisions:

Pass: Three votes to pass

Fail: Three votes to fail

Rewrite: Two pass, one fail

Fail: One pass, two fails

(2) If two members of the committee vote to pass and one votes to fail, the student shall be given the opportunity to rewrite once in the area of deficiency. Students must receive question(s) for revision within three working days of the oral examination. The student must respond in writing to the faculty member(s) by the final day of instruction of the semester as specified by the University calendar. The committee will reconvene during the final examination week to review the student's work and to decide whether the candidate passes or fails the Comprehensive Examination.

(3) If the Committee's decision is that the candidate failed the Examination, members shall make themselves available to the candidate to explain their decisions and to facilitate his or her preparation to retake the Examination. A student may petition to retake the Examination no earlier than the semester following that in which she or he has first taken the test. The Examination may be retaken only once.

C. The Department will use the following procedure if a student appeals the decision of a Comprehensive Examination Committee:

(1) The Graduate Committee of the Department will serve as the review board to determine whether the appeal has merit on procedural grounds.

(2) Members of the Graduate Committee will be ineligible to serve on the review board if they are part of the original examining committee.

(3) If such eligibility reduces the membership of the Graduate Committee to fewer than three persons, a replacement will be selected by lottery from among remaining eligible members of the Department faculty.

## Thesis Option

1. Electing the Thesis Option

A. This option requires a candidate to include four units of COMM 698 (Thesis) in her or his program. Students may not enroll in COMM 698 until after Advancement to Candidacy or, in rare cases, when advancement occurs in the same semester as the initial enrollment. Note that the Department facilitates timely Advancement to Candidacy of persons writing a thesis by allowing them to submit an advancement form listing ten courses (30 units) or more and starring (\*) the course or courses to be omitted if the thesis option is selected.

B. The "Petition for Permission to the Elect the Thesis Option"

(1) The candidate must submit the petition to the Graduate Committee through the Graduate Advisor. The form provides space for the signatures of the proposed committee members certifying their willingness to serve on the committee and their approval of the candidate's prospectus. Acceptance of the prospectus by the Thesis Committee certifies both the acceptability of the thesis topic and the willingness of the Committee to direct the student's thesis.

(2) The Graduate Committee will not approve the petition until the student completes all requirements in COMM 541 and 546.

C. The Thesis Committee

(1) The student is responsible for securing faculty to serve on her or his Thesis Committee. At least two members of a three-person committee or three members of a five-person committee must be tenure-track or tenured faculty from the Department of Communication Studies. Faculty holding parallel status in other departments at CSULB or in other Communication Studies departments in the CSU system may fill the other slots on the committee.

(2) The Committee Chair must be a member of the Department's graduate faculty.

D. The candidate shall prepare a prospectus in consultation with the Thesis Committee Chair and other committee members. The project should be more than a minor extension of a seminar project. It should constitute an original contribution to literature in communication studies and should develop a student's research abilities. Candidates must submit a completed, approved prospectus to the Graduate Committee no later than the semester prior to that in which the thesis is to be completed.

2. Completing the thesis

A. COMM 698

(1) If the "Petition for Permission to Elect the Thesis Option" is approved by the Graduate Committee, a student may not change to the Comprehensive Examination Option except

by special permission of the Graduate Committee. If a student has been enrolled for a semester or more in COMM 698, he or she cannot change options under any condition.

(2) If a candidate does not demonstrate satisfactory and continuous progress on the thesis after enrolling in COMM 698, the Graduate Committee, on the recommendation of the Thesis Committee and/or the Graduate Advisor, may terminate the student's graduate program and, if the student is enrolled in COMM 698 at the time, will assign an "F" for the semester.

(3) The Department may endorse a petition for one semester of concurrent enrollment in COMM 698 and in another graduate or professional school only if the candidate's Thesis Committee presents evidence that a draft of the thesis requiring only mechanical revision has been submitted.

B. Neither the Thesis Committee nor the Department is responsible for advising or supervising thesis candidates when they are not enrolled in the graduate program.

C. For thesis specifications and deadlines consult:

(1) The University Thesis Reviewer whose office is in the Library;

(2) the official thesis document: Master's Thesis and Projects: Guide to Style and Format;

(3) the Thesis Committee;

(4) thesis guidelines available in the following manuals:

(a) typing requirements (e.g., formatting, table of contents, appendices, etc.): Turabian, Kate. *A Manual for Writers of Term Papers, Theses, and Dissertations*, latest edition

(b) style sheets for technical requirements:

(i) Publication Manual of the American Psychological Association, latest edition or

(ii) MLA Handbook for Writers of Research Papers, latest edition

D. Approval of the completed thesis

(1) Upon completion of an acceptable thesis, the student will defend the thesis before the Thesis Committee. Other departmental faculty and students may choose to attend. The Chair of the Thesis Committee will make all necessary arrangements for the oral defense and announce its time and place to the Department. The decision of the examining committee is by secret ballot and requires a majority vote. The Committee will notify candidates of their decision immediately after the oral defense. A candidate whose thesis and/or defense does not receive approval may revise and resubmit the thesis and/or defend it no sooner than the following semester. Resubmission or redefense, however, may take place only once.

(2) The completed draft of the thesis must meet the approval of the University Thesis Reviewer.

(3) Candidates must deposit the thesis in the University Library. Copies are given to the Department Library and to the Chair of the Thesis Committee if requested.

## To Graduate

The 1997-1998 CSULB Catalog states: "All requirements of the degree program must be completed within seven years of the date . . . when the first course appearing on the student program was completed. . . . A graduate student who expects to receive a degree at the end of any semester or summer session must be enrolled during that . . . [term] and must complete the Request to Graduate Form within the first three weeks of classes in the prior semester. Students completing their degrees in May or in the following summer session should file the application by the preceding October 1. Students completing their degrees January should file by the preceding February 15 at the Admissions and Records Office. . . . Graduate Studies 700 may be used to fulfill the enrollment requirement if the applicant has completed all degree program coursework prior to the semester of graduation."

## Graduate Student Honors

Several honors for graduate students are awarded each year at commencement. In accordance with the Department policy, such honors shall be awarded to deserving students using criteria such as the following:

1. grade point average
2. papers published or presented at professional conferences
3. conventions attended
4. professional community service not a part of a student's employment
5. Graduate Communication Association involvement
6. Student Communication Association involvement
7. Departmental service — e.g., volunteer forensic assistant, class lecturer, committee membership

## Financial Assistance

Refer to the University Catalog for information regarding financial assistance which is available on a University-wide basis.

## Forms and Petitions

Sample forms and petitions relevant to enrolled graduate students appear in the Appendix of the Graduate Handbook available ONLY to students registered in the Graduate Program.

## Questions

Any questions not answered in these pages should be directed to the Department Graduate Advisor.

## Graduate Courses in Communication Studies

Students may apply the following graduate courses in Communication Studies toward the Master's Degree:

510, 511, 520, 521, 531, 532, 533, 534, 536, 537, 541 (646), 546, 549, 550, 552, 590, 600, 610, 611, 620, 630, 632, 633, 635, 636, 637, 638, 640 (540), 646 (696), 648, 649, 650, 697, 698

## Undergraduate Core Courses

300 (440), 301 (435), 305 (230), 306 (446), 309 (448)

Course numbers in parentheses are old course numbers.

## Graduate Faculty

Terre H. Allen, Nancy E. Briggs, Aaron C. Cargile, Sharon D. Downey, Valerie C. McKay, Patricia Kearney, G. Bruce Loganbill, Timothy Plax, Karen Rasmussen, José Rodríguez, James S. Saucedo, Craig R. Smith, Rob Tucker, Fathi S. Yousef



## Courses (COMM)

### Lower Division

#### 130. Essentials of Public Speaking (3)

Composition and delivery of speeches to inform and persuade. Logical organization is stressed. (CAN SPCH 4)

#### 131. Argumentation (2)

Co-requisite: Concurrent enrollment in COMM 131W workshop is required. Theory of argumentation. Includes examination of forms and sources of evidence, inductive and deductive arguments, construction of case briefs, and refutation. (Lecture 1 hour.) (131+131W, CAN SPCH 6)

#### 131W. Argumentation Workshop (1)

Prerequisites: Concurrent enrollment in COMM 131 lecture is required. Two hour workshop develops critical thinking abilities with planned exercises and speeches including construction and presentation of arguments, cases, and refutation. (Workshop 2 hours.) (131+131W, CAN SPCH 6)

#### 132. Small Group Discussion (3)

Basic principles and techniques of discussion. Relationship of discussion to democratic processes and contemporary society including a study and practice of critical thinking and problem-solving techniques in various group discussion settings. (CAN SPCH 10)

#### 210. Interpersonal Communication (3)

Prerequisite: Concurrent enrollment in 210 Workshop. LECTURE: Basic characteristics of the processes underlying the formation, maintenance and termination of interpersonal relationships; theoretical and practical implications of these characteristics in various forms of interpersonal communication. WORKSHOP: Planned exercises and activities designed to develop interpersonal communications skills. (Lecture 2 hours, Workshop 2 hours). (CAN SPCH 8)

#### 220. Elements of Organizational Communication (3)

Role of communication in achieving organizational goals; theory and practice of communication in private and public organizations; techniques to enhance understanding in organizations.

#### 236. Forensic Activity (1-3)

Prerequisite: Consent of instructor. Participation in intercollegiate forensic activities. Any student who expects to participate in such activities during the semester should enroll. The student's specific assignments will be determined in consultation with the staff. Maximum credit, 4 units.

#### 271. Speech Communication, Voice and Applied Speaking (3)

Application of speaking clarity and proficiency, voice quality and pacing, and related communication modification objectives. Speaking process is applied to realize personal, social, and professional verbal communication skills.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 300. Survey of Rhetorical Theory (3)

Major rhetorical contributions from Classical to Modern Period. Special emphasis on relationship between rhetoric, history, and philosophy.

#### 301. Communication Criticism (3)

Prerequisite: COMM 300. The analysis and criticism of public communication events including speeches, editorials, advertisements, and mass media from a variety of rhetorical perspectives.

#### 305. Measurement in Communication Research (3)

Prerequisite: Completion of the University GE requirement in mathematics. Application of the scientific method to the study of speech communication; examination of the role empirical methodologies play in communication research; fundamental statistical processes.

#### 306. Communication Theory (3)

Prerequisite: COMM 305 or consent of instructor. Conceptual perspectives and studies of coding, meaning, thinking, information, and persuasion within interpersonal, group and organizational contexts; theoretical contributions from other disciplines.

#### 309. Language and Behavior (3)

Symbolic basis of human communicative behavior; relationship between language and behavior; investigation and analysis of discourse and behavioral effects.

#### 330. Intercultural Communication (3)

Study of the relationship between culture and communication with emphasis given to social, psychological, linguistic and nonverbal variables; problems in the practice of intercultural communication.

#### 331. Argumentation and Debate (3)

Techniques of argumentation and their application to debate; logic, reasoning and fallacies of reasoning; experience in various forms of formal argument and debate; techniques of debate program administration.

#### 333. Interpretive Communication of Literature (3)

Derivation of meaning in various literary forms and its communicative interpretation to specific audiences.

#### 334. Business and Professional Communication (3)

Prerequisite: COMM 130 or consent of instructor. Skills and technologies related to the assessment, strategic planning, development, implementation, and evaluation of effective communication in the business and professional setting.

#### 335. Persuasive Speaking (3)

Prerequisite: Consent of instructor. Audience behavior; theories of motivation, attention, interest; an understanding and analysis of types of audiences; methods of audience adaptation.

#### 336. Forensic Activity (1-3)

Prerequisite: Consent of instructor. Participation in intercollegiate forensic activities. Any student who expects to participate in such activities during the semester should enroll. Student's specific assignments will be determined in consultation with the staff. Max. credit, 4 units.

#### 337. Conference Management (3)

Organization and direction of professional, business and political conferences or conventions; program simulation; leadership of and participation in decision making and parliamentary sessions.

#### 338. Ensemble Interpretive Reading (3)

Programming and presentation of prose, poetry and drama by an ensemble of readers. Emphasis is placed on experimental presentations and on the development of analytical insight into literary forms.

#### 344. Theory and Techniques of Interviewing (3)

Theory and techniques of oral communication in the process of interviewing. Practical application in employment, information gathering and persuasive interviews.

#### 352. Story Telling (3)

Cultural heritage in story telling; analysis of story types for oral presentation; techniques of preparation, presentation and listening.

#### 355. Communication in the Classroom (3)

Designed primarily for prospective elementary, secondary, and community college teachers, this course focuses on communication theories, principles, and skills applicable to teaching more generally, and to the teaching of speech communication specifically. Because effective teaching relies on effective communication, this course focuses on those communication variables and strategies that contribute to greater student learning. Moreover, students, will develop an instructional package for teaching specific units in speech communication.

#### 358. Speech Arts for Children (3)

Use of creative dramatics, improvisations, puppetry, choral speech, radio, television and group discussion for the purpose of developing fluency, responsiveness and imagination in children. Integration of speech arts activities with curricular subjects will be stressed. Opportunity to apply the theories in actual situations.

400. Nonverbal Communication (3)

Prerequisites: COMM 210 Lecture and Lab; ENGL 100. Basic characteristics of the nonverbal elements of human communication in the oral communication setting.

410./510. Advanced Concepts in Interpersonal Communication (3)

Prerequisites: COMM 210 and 305. Systems and symbolic interaction approaches to interpersonal communication, consideration of interpersonal needs, self disclosure, understanding, interpersonal perception, interpersonal attraction, and social conflict; rule and performance-centered theories of interpersonal communication.

411./511. Communication in Conflict Resolution (3)

Prerequisites: COMM 210 and 305. An analytical investigation of the nature and dynamics of interpersonal conflict; approaches to the study and understanding of conflict management as examined from intrapersonal, interpersonal, intragroup, organizational, and international perspectives.

412. Gender and Communication (3)

Survey of theories and research literature with the objective of increasing students' understanding of, and familiarity with, major issues regarding communication between men and women in various contexts.

414. Communication in Families (3)

Prerequisites: COMM 305, 306, and consent of instructor. A survey course emphasizing the role of communication in families; theoretical perspective of family interaction, current family issues, intercultural aspects of family interaction, effects of changing career/family roles and intergenerational interaction.

420./520. Advanced Concepts in Organizational Communication (3)

Prerequisites: COMM 220 and 305. Philosophy, methods and designs for studying the communication systems of complex organizations; organizational communication-needs assessment, methods for developing and improving communication in organizations are examined and studied.

421./521. Communication in Bargaining & Negotiation (3)

Prerequisites: COMM 220 and 305. Role of communication in the decision-making process of negotiation and bargaining. Emphasis on the functions of communication in resolving disputes through bargaining.

430./530. Advanced Concepts in Intercultural Communication (3)

Prerequisites: COMM 330 or consent of instructor. Continued study of communication processes involved in interaction between people from different cultural groups. Exploration of culturally variable means of thinking and behaving, and study of social psychological processes affecting all forms of intergroup interaction. Traditional grading only.

432./532. Communication Leadership (3)

Development of leadership skills in problem-solving communication environments; leadership theories, strategies and techniques of problem-solving and decision making.

433./533. Trends in Interpretive Communication (3)

Trends and issues in the theoretical and historical development of oral interpretation as applied to current times.

436./536. Communication Strategies of American Speakers (3)

Prerequisites: COMM 300 and 301. Comparison and contrast of famous American speakers and their techniques, effects and environments from the colonial period to present.

437./537. Communication Strategies of International Speakers (3)

Prerequisites: COMM 300 and COMM 301. Comparison and contrast of famous International speakers and their techniques, effects, and environments from Demosthenes and Churchill to Hitler and Gandhi. Traditional grading only. Course is not repeatable.

441I. Issues in Freedom of Communication (3)

Prerequisites: ENGL 100 and upper division standing. An examination of the evolution and impact of First Amendment rights on

American society and its political system. The course emphasizes the evolution of the First Amendment from the colonial period to its adoption in 1791, significant Supreme Court cases interpreting First Amendment law, the First Amendment and electronic media, and the rhetoric of social protest. The course is recommended for pre-law students.

442I. Campaign Persuasion (3)

Prerequisites: ENGL 100 and upper division standing. An examination of persuasive communicative strategies in political campaigns inclusive of campaign speeches, commercials, news media coverage, image-building, audience analysis through polling, and fund raising.

449./549. Studies in Oral Persuasion and Attitude Change (3)

Attitude formation and change through oral communication; factors in persuasion; problems in determining the effects of persuasive messages; source credibility, message variables; and personality factors in the process of persuasion.

450./550. Communication Training in Organizations (3)

Prerequisite: Major or minor in speech communication or consent of instructor. The nature and role of communication training in a variety of social, educational, and business organizations are investigated and analyzed. Communication effectiveness programs are examined and studied in terms of goals, structure, and impact. Use of audiovisual aids and communication training techniques are emphasized.

451./551. Intercultural Communication (3)

Study of the relationship between culture and communication with emphasis given to social, psychological, linguistic and nonverbal variables; problems in the practice of intercultural communication.

452./552. Communication in the Multinational Organization (3)

Study and analysis of communication patterns in multinational and multicultural organizational settings; the nature and impact of different organizational structures, value systems and cultural norms considered and examined in relation to productivity, employee and organizational obligations and expectations.

490./590. Special Topics in Speech Communication (1-3)

Topics of current interest selected for intensive study in speech communication. May be repeated with different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

492A-B. Internship (3-3)

Prerequisite: "PERMIT" required to enroll with consent of instructor; open only to senior majors. At least 120 hours with cooperating organizations on or off-campus. Work to be directed and evaluated by the instructor in consultation with supervisor of the participating organizations. Assignments will be varied. Credit/No Credit grading only. COMM 492A is for unpaid Internship. COMM 492B is for paid internship.

499. Special Studies (1-6)

Prerequisites: "Permit" required to enroll. Open to upper division students or graduate standing and consent of instructor. An approved "Agreement for Independent Study" must be on file with the Department prior to enrolling in this course. Individualized laboratory or library research selected in consultation with instructor. Written report of the research is required. Not acceptable for graduate credit toward the master's degree.

## Graduate Division

510./410. Advanced Concepts in Interpersonal Communication (3)

Prerequisites: COMM 210 and 305. Systems and symbolic interaction approaches to interpersonal communication, consideration of interpersonal needs, self disclosure, understanding, interpersonal perception, interpersonal attraction, and social conflict; rule and performance-centered theories of interpersonal communication.

- 511./411. **Communication in Conflict Resolution (3)**  
Prerequisites: COMM 210 and 305. An analytical investigation of the nature and dynamics of interpersonal conflict; approaches to the study and understanding of conflict management as examined from intrapersonal, interpersonal, intragroup, organizational, and international perspectives.
- 520./420. **Advanced Concepts in Organizational Communication (3)**  
Prerequisites: COMM 220 and 305. Philosophy, methods and designs for studying the communication systems of complex organizations; organizational communication needs assessment, methods for developing and improving communication in organizations are examined and studied.
- 521./421. **Communication in Bargaining and Negotiation (3)**  
Prerequisites: COMM 220 and 305. Role of communication in the decision-making process of negotiation and bargaining. Emphasis on the functions of communication in resolving disputes through bargaining.
- 530./430. **Advanced Concepts in Intercultural Communication (3)**  
Prerequisites: COMM 330 or consent of instructor. Continued study of communication processes involved in interaction between people from different cultural groups. Exploration of culturally variable means of thinking and behaving, and study of social psychological processes affecting all forms of intergroup interaction. Traditional grading only.
531. **Administering the Forensic Program (3)**  
Prerequisite: "PERMIT" required to enroll with consent of instructor. Principles of constructing and administering a forensic program, including recruiting, squad direction, budgeting, tournament policies and current literature on forensics direction.
- 532./432. **Communication Leadership (3)**  
Development of leadership skills in problem-solving communication environments; leadership theories, strategies and techniques of problem-solving and decision making.
- 533./433. **Trends in Interpretive Communication (3)**  
Trends and issues in the theoretical and historical development of oral interpretation as applied to current times.
534. **Communicating Professionally (3)**  
The planning and practice of written and oral communication skills applicable to complex organizational environments. Written message preparation will emphasize writing memoranda, letters, proposals, reports, evaluations, and position descriptions. Oral message preparation will focus on presenting briefs, arguments, and position papers; conducting performance appraisals, interviews, and meetings; managing the media, stockholders, and the public at large.
- 536./436. **Communication Strategies of American Speakers (3)**  
Prerequisites: COMM 300 and 301. Comparison and contrast of famous American speakers and their techniques, effects and environments from the colonial period to present.
- 537./437. **Communication Strategies of International Speakers (3)**  
Prerequisites: COMM 300 and 301. Comparison and contrast of famous International speakers and their techniques, effects, and environments from Demosthenes and Churchill to Hitler and Gandhi. Traditional grading only. Course is not repeatable.
541. **Rhetorical Theory and Criticism I (3)**  
Introduction to research in rhetorical studies. Examination of major figures and schools of thought on rhetorical theory and criticism from the Pre-socratics through the modern British era.
546. **Issues in Communication Studies (3)**  
Prerequisite: Consent of instructor. Investigation and evaluation of intrapersonal and sociocultural communication systems; nonverbal communication; language and symbolic systems; persuasion and attitude change; contributions to human communication theory from other disciplines; and current trends and directions in communication research.
- 549./449. **Studies in Oral Persuasion and Attitude Change (3)**  
Attitude formation and change through oral communication; factors in persuasion; problems in determining the effects of persuasive messages; source credibility, message variables, and personality factors in the process of persuasion.
- 550./450. **Communication Training in Organizations (3)**  
Prerequisite: Major or minor in speech communication or consent of instructor. The nature and role of communication training in a variety of social, educational, and business organizations are investigated and analyzed. Communication effectiveness programs are examined and studied in terms of goals, structure, and impact. Use of audiovisual aids and communication training techniques are emphasized.
- 551./451. **Intercultural Communication (3)**  
Study of the relationship between culture and communication with emphasis given to social, psychological, linguistic and nonverbal variables; problems in the practice of intercultural communication.
- 552./452. **Communication in the Multinational Organization (3)**  
Study and analysis of communication patterns in multinational and multicultural organizational settings; the nature and impact of different organizational structures, value systems and cultural norms considered and examined in relation to productivity, employee and organizational obligations and expectations. Traditional grading only.
- 590./490. **Special Topics in Speech Communication (1-3)**  
Prerequisite: Consent of instructor. Investigation of topics of current interest and concern to students in speech communication and allied areas. Topics will be announced in the Schedule of Classes. May be repeated for credit with different topics, but no more than three units may count toward the master's degree in speech communication.
600. **Seminar in Nonverbal Communication (3)**  
Prerequisite: COMM 546 or consent of instructor. Review and analysis of theoretical writings and critical studies in nonverbal communication; the relationship of nonverbal behavior to oral communication.
610. **Seminar in Interpersonal Communication (3)**  
Prerequisite: COMM 546 or consent of instructor. Current theories and research in interpersonal communication.
611. **Seminar in Negotiation and Conflict Resolution (3)**  
Prerequisites: COMM 411 or 421 and 546 or consent of instructor. Investigation, analysis, and criticism of the nature, development, and dynamics of conflict and the role of negotiation in interpersonal, group, organizational, and international and intercultural communication; study and understanding of conflict management.
620. **Seminar in Organizational Communication (3)**  
Prerequisite: COMM 546 or consent of instructor. Theories and models of communication in large organizations; design and management of organizational communication systems.
630. **Seminar Intercultural Comm**  
Prerequisites: COMM 541 and 546 or consent of instructor. Analysis of cultural influences on interpersonal communication; emphasis given to cultural values, perception, social organization, language and nonverbal codes; development of strategies of effective intercultural communication in both international and domestic settings.
632. **Seminar in Small Group Communication (3)**  
Prerequisite: COMM 546 or consent of instructor. Research in small group discussions.
633. **Seminar in Interpretive Communication (3)**  
Prerequisite: COMM 541 or consent of instructor. Theories of communicative interpretation of literature, with emphasis upon the theory and evaluation of oral presentation of literature as an art form and a pedagogical instrument.

635. Seminar in Communication Criticism (3)  
Prerequisite: COMM 541 or consent of instructor. Critical theories of rhetoric and major systems of communication criticism; development of criteria and approaches for the evaluation of select communication acts and contexts.
636. Seminar in American Public Communication (3)  
Prerequisite: COMM 541 or consent of instructor. Studies of American rhetorical events and their social, political and intellectual settings, application of rhetorical theory in the analysis of these events.
637. Seminar in British Public Communication (3)  
Prerequisite: COMM 541 or consent of instructor. Studies of British rhetorical events and their social, political and intellectual settings, application of rhetorical theory in the analysis of these events.
638. Seminar in Greek and Roman Public Communication (3)  
Prerequisite: COMM 541 or consent of instructor. Studies of Greek and Roman rhetorical events and their social, political and intellectual settings, application of rhetorical theory in the analysis of these events.
640. Rhetorical Theory and Criticism II (3)  
Prerequisite: COMM 541. Examination of major figures and themes in rhetorical theory and criticism in the contemporary era.
646. Communication Theory and Research II (3)  
Prerequisites: COMM 305 (or equivalent) and 546. Empirical research methodologies applied to communication research. Theory and design of scientific research; analysis of findings; computer applications. Research report required.
648. Seminar in Language and Behavior (3)  
Prerequisite: COMM 546 or consent of instructor. Contemporary theories and models in linguistic, psycholinguistic and sociolinguistic research; communication discourse and speech acts analysis.
649. Seminar in Persuasion and Attitude Change (3)  
Prerequisite: COMM 546 or consent of instructor. Contemporary theories and models of persuasion; structure and relationships of beliefs, values and attitudes; methods of assessing persuasive effects; analysis of research literature.
650. Seminar in Instructional Communication (3)  
Prerequisites: COMM 541 and 546 or consent of instructor. Designed for either beginning or experienced teacher/trainers, the course will identify those communication variables and strategies which contribute to greater student/client learning as well as greater satisfaction with the learning process. Students will develop an instructional/training package.
697. Directed Research (1-6)  
Prerequisites: COMM 541 and 546; authorization of the department Graduate Advisor, Agreement for Independent Study Course form, consent of instructor. Directed research leading to the definition and discussion of a selected problem or issue in speech communication and the presentation of research results in a formal paper submitted to the department. Course may be repeated for a maximum of 6 units with different topics. (Independent Study)
698. Thesis (2-4)  
Prerequisites: COMM 541, 546, 640 and 646, authorization of the department Graduate Advisor, Agreement for Independent Study Course form, consent of instructor. Preparation, completion and submission of an acceptable thesis in partial fulfillment of the requirements for the master's degree. Credit/No Credit grading only. Course may be repeated for a maximum of 4 units.

# COMPUTER ENGINEERING AND COMPUTER SCIENCE

*College of Engineering*

Department Chair  
Sandra Cynar

Department Office  
ECS - 552

Telephone  
(562) 985-4285

## Faculty

### Professors

Joel Carissimo  
Sandra Cynar  
Wayne Dick  
Edward Evans  
Sheila Foster  
Arthur Gittleman  
Shui Lam  
John Lane  
Dar-Biau Liu  
Michael K. Mahoney  
Carl Maltz  
Tracy Bradley Maples  
Thinh Nguyen  
Morton Schwartz  
Dennis Volper  
Robert Wilson

### Associate Professors

Mary Eshaghian  
Tom Johnson

### Undergraduate Advisor

Joel Carissimo

### Graduate Advisors

Dar-Biau Liu  
Mary Eshaghian

### Department Secretary

Janet Leimer

Students desiring detailed information should contact the department for referral to one of the faculty advisors.

## Accreditation

The Bachelor of Science, Option in Computer Engineering, is accredited by the Accreditation Board for Engineering and Technology (ABET) (Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710). The Bachelor of Science, Option in Computer Science, is accredited by the Computer Science Accreditation Board (CSAB) (Computer Science Accreditation Board, Two Landmark Square, Suite 209, Stamford, CT 06901, phone: 203-975-1117).

Students are strongly advised to contact an undergraduate advisor as early as possible to get information about the ABET and CSAB requirements in the math/sciences, humanities and social sciences areas.

## Advisory Board

The Department of Computer Engineering and Computer Science is supported by an Advisory Board composed of engineers, computer scientists, and business executives in the Southern California area. This liaison helps the department keep its curricula up-to-date and responsive to the needs of the community.

## Bachelor of Science in Computer Science

The Computer Engineering and Computer Science department offers a Bachelor of Science in Computer Science degree with either an Option in Computer Engineering (3-4010) or an Option in Computer Science (3-4011). The goal of both options is to prepare graduates for a wide variety of computer-related careers by integrating the theoretical foundations of the discipline with practical applications. The Computer Engineering Option focuses on computer hardware (design, construction and operation of computer systems), and the Computer Science Option places more emphasis on computer software (programming). The high school student planning to enter either option is advised to pursue a strong program in science and mathematics.

The College of Engineering requires that all majors must receive a grade of "C" or better in any course which is a prerequisite for a required course in an engineering program.

### Option in Computer Engineering (code 3-4010) (132 units)

The option in Computer Engineering has a two-part objective. The first is to provide the student with a strong background in mathematics, physics and engineering science. The curriculum includes a core of standard electrical engineering courses as well as courses in digital systems, computer organization, programming languages, and software including operating systems, compiler theory and software engineering. The second objective of the program is to provide the student with the skills necessary to be an effective contributor in a

quality-oriented, customer-focused environment. Courses throughout the program, especially those in the junior and senior years, emphasize an open-ended, design-oriented approach to engineering problems. Teamwork, communication skills, and an interdisciplinary approach to problem solving are integrated into the senior, computer engineering design course.

#### Requirements

Lower Division: CECS 174, 175, 201, 228, 271, 274; CHEM 111A; EE 211, 211L; MATH 122, 123, 224; PHYS 151, 152.

Upper Division: CECS 301, 325, 326, 346, 347, 440, 443 or 444, 446; MATH 370A; EE 310, 331 (or 332), 380 (or MATH 380); plus nine units from the following Computer Engineering list of approved electives: CECS 321, 328, 405, 406, 421, 422, 426, 448, 449, 451, 470, 472, 475, 476, 497, EE 386, ENGR 350. A total of at least 132 units is required.

#### Option in Computer Science (code 3-4011) (135 units)

The option in Computer Science is designed to prepare graduates for a variety of professional careers in the computer field. The curriculum is designed to provide students with both breadth and depth in computer science. Breadth is achieved through a series of core courses that stress a balance between the theoretical and practical aspects of computer science. The topics covered in these courses include the following: the basics of programming languages, software design and analysis, data structures, algorithms, digital systems, computer organization, computer architecture and operating systems. Extensive laboratory time is required for these courses, and design and analysis experiences are emphasized. Depth is achieved through courses (both required and elective) on advanced computer science topics. These courses provide students with in-depth knowledge of the material covered in the breadth portion of the curriculum.

#### Requirements

Lower Division: CECS 174, 175, 201, 228, 271, 274; MATH 122, 123, 224, 247; PHYS 151, 152; two approved courses in science or with strong emphasis in quantitative methods; ENGL 101 or 317.

Upper Division: CECS 321, 325, 326, 328, 424, 440, 443, 444; ENGR 350; MATH 380 (or EE 380); plus nine units from the following Computer Science list of approved electives: CECS 405, 406, 419, 421, 426, 428, 448, 449, 451, 470, 471, 472, 475, 476, 481, 497. A total of at least 135 units is required.

#### Minor in Computer Science (code 0-4011)

The minor in Computer Science is designed to prepare students in other majors for careers in a wide variety of fields which require computer science expertise.

#### Requirements

A minimum of 22 units, of which at least 11 units must be upper division. Students must complete one of the course sequences listed below plus two additional approved upper division CECS courses. (ENGR 350 may be used as an approved upper division course.) A maximum of 4 units may be transferred from another educational institution.

1. CECS 242, 342, 174, and 274 (recommended for Math, Physics, and Engineering majors); or
2. CECS 174, 175, 274 and 325 (recommended for Business majors and all others.)

#### Master of Science in Computer Science

The Master of Science in Computer Science is offered by the Department of Computer Engineering and Computer Science, College of Engineering. Two options are offered:

1. Option in Computer Engineering
2. Option in Computer Science

The Option in Computer Engineering offers advanced study in the theory, analysis, design and applications of both computer hardware and software. The Option in Computer Science offers advanced study in modeling software systems, operating systems, compiler construction, and analysis of algorithms.

#### Prerequisites

##### Option in Computer Engineering (code 6-4010)

1. A bachelor's degree in computer science, engineering, or other appropriate discipline from an accredited college or university, with a minimum grade point average (GPA) of 2.7 in the last 60 semester units attempted.
2. Credit in the following courses or their equivalents: CECS 228, 271, 274, 326, 346, 347, 440, 446 and 443 or 444; EE 310.
3. Students must consult with the program graduate advisor prior to enrolling in any course for the program.

##### Option in Computer Science (code 6-4011)

1. A bachelor's degree in computer science, engineering, or other appropriate discipline from an accredited college or university, with a minimum grade point average (GPA) of 2.7 in the last 60 semester units attempted.
2. Credit in the following courses or their equivalents: CECS 228, 271, 274, 325, 326, 328, 424, 440, 443, and 444.
3. Students must consult with the program graduate advisor prior to enrolling in any course for the program.

#### Advancement to Candidacy

Students applying for advancement to candidacy must:

1. have completed all undergraduate deficiencies with grades of C or better;
2. have attained an overall grade point average (GPA) of 3.0;
3. have completed at least 12 units applicable to the degree with a GPA of at least 3.0;
4. have passed the University Writing Proficiency Examination;
5. and have their program of studies approved by the CECS department graduate advisor.

#### Requirements for the Option in Computer Engineering (code 6-4010)

Students must complete a minimum of 30 graduate and approved upper-division course units including the following:

1. at least 18 units of CECS courses;
2. at least 18 units at the graduate level of instruction;
3. CECS 526, 530, 531, and 546;
4. All students must complete either:

- A. a comprehensive examination, or
- B. a thesis with oral defense which requires a total of 6 units of CECS 697 or 698, of which at least 4 units must be CECS 698.

### Requirements for the Option in Computer Science (code 6-4011)

Students must complete a minimum of 30 graduate and approved upper division course units including the following:

1. at least 18 units of CECS courses;
2. at least 18 units at the graduate level of instruction;
3. CECS 526, 528, 530, and 543
4. All students must complete either:
  - A. a comprehensive examination, or
  - B. a thesis with oral defense which requires a total of 6 units of CECS 697 or 698, of which at least 4 units must be CECS 698.

## Courses (CECS)

### Lower Division

#### 110. Introduction to the Internet (3)

Prerequisite: Some computer experience. Provides a general overview of computer systems, networking, and the Internet. World-Wide Web, email, telnet, ftp, newsgroups, finding information on the Internet, and basic Web page creation. Considers legal, ethical, privacy and security issues on the Internet. (Lecture 2 hours, laboratory 3 hours.)

#### 126. Introduction to the UNIX Operating System (3)

Prerequisite: Consent of instructor. UNIX operating system's user interface. File and directory commands, editor commands, communication commands and other UNIX utilities. UNIX access permissions and security, I/O redirection, pipes, metacharacters, and full-screen editing with vi. Electronic communication, simple shell programming, and using the Xwindow System. (Lecture 2 hours, laboratory 3 hours.)

#### 172. Object-Oriented Pascal for Beginners (3)

Prerequisite: Some computer experience. An introduction to object-oriented Pascal programming. Data types, decision structures, loops, procedures, and structured programming features such as encapsulation and data abstraction. (Lecture 2 hours, laboratory 3 hours.)

#### 174. Programming and Problem Solving I (3)

Prerequisite: MATH 117 (or equivalent). Introduction to the basic concepts of computer science and the fundamental techniques for solving problems using the Ada programming language. Structured problem solving, systematic programming methodologies, programming style. Applications to numerical and non-numerical problems. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 175. Introduction to Object-Oriented Programming with C++ (3) F,S

Prerequisite: CECS 174 or another programming course. An introduction to the C++ programming language. C++ data types, selection and repetition statements, input/output, arrays, functions and pointers. Object-oriented programming concepts including data abstraction and encapsulation. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 201. Digital Logic Design (3)

Prerequisite: MATH 117 (or equivalent). Basic topics in combinational and sequential switching circuits with applications to the design of digital devices. Laboratory projects with Small Scale Integration (SSI) implementations using Computer Aided Design (CAD). (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 228. Discrete Structures with Computer Science Applications I (3)

Prerequisites: CECS 174 and MATH 122. The specification, development and analysis of algorithms. Sets, relations and functions. Logic and mathematical structures used in computer science. Introduction to combinatorics. Programming projects to exemplify these concepts. (Lecture 2 hours, laboratory/problem session 3 hours.) Traditional grading only.

#### 242. Computer Methods I (3)

Prerequisite: MATH 122. Introduction to computer programming using FORTRAN. Structured programming with applications to scientific and engineering problems. (Lecture-problems 2 hours, laboratory 3 hours.)

#### 271. Introduction to Numerical Methods (3)

Prerequisites: CECS 174 and MATH 123. An introduction to numerical methods and the FORTRAN programming language. Analysis of computational errors; iterative methods for finding roots and for solving systems of equations. Numerical techniques for evaluating integrals, determining derivatives, and solving ordinary differential equations. FORTRAN programming projects will be assigned. Not open to students with credit in CECS 342. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 274. Programming and Problem Solving II (3)

Prerequisite: CECS 174. Disciplined methods of design, coding and testing using the Ada programming language. Data abstraction, object-oriented design. Introduction to data structures (linked lists, stacks, queues and trees.) Recursion. Sorting and searching. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 275. Programming in C (3)

Prerequisite: A previous course in programming or consent of instructor. Fundamentals of the C programming language and its application in problem solving. Topics included are structured programming, types, control statements, arrays, structures, pointers, files, the pre-processor, and the C library. Computer projects in C. (Lecture-problems 2 hours, laboratory 3 hours.)

### Upper Division

#### 301. Digital Logic Design II (3)

Prerequisite: CECS 201. Sequential logic, programmable logic design, basic Arithmetic Logic Unit (ALU) design and memory devices. Laboratory projects with Medium Scale to Very Large Scale Integration (MSI to VLSI) implementations and Computer Aided Design (CAD). (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 321. Introduction to File Processing (3)

Prerequisites: CECS 175, 228 and 274. Introduction to file processing, file organization and data management systems. Computer projects in the design and implementation of such systems using C/C++. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 325. Computer Organization and Assembly Language Programming (3)

Prerequisites: CECS 174 or 175 and CECS 201. Basic computer organization, representation of information and instruction, addressing techniques, input/output, assembly language programming, macros and macro processing. Introduction to software systems, including assemblers, linkage editors and loaders. Programming assignments in assembly language. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 326. Operating Systems (4)

Prerequisites: CECS 274, 325 and consent of instructor. The structure and functions of operating systems. Interrupt handling, processes and interprocess communication, memory management, resource scheduling, information sharing and protection. Project implementation in C/C++. (Lecture 3 hours, laboratory 3 hours.) Traditional grading only.

328. Discrete Structures with Computer Science Applications II (3)  
Prerequisites: CECS 175, 228 and 274. A broad view of data structures and the structure-preserving operations on them. Abstract data types, algorithms, complexity. Programming projects to exemplify these concepts. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
342. Computer Methods II (3)  
Prerequisites: CECS 242 and either MATH 364A or 370A. Introduction to the C programming language and continuation of applications of computers to the solution of engineering and scientific problems. (Lecture 2 hrs, lab 3 hrs.)
346. Microprocessors and Applications (3)  
Prerequisite: CECS 325. Study of microprocessor and micro-computer elements. Design of microprocessor-based systems to solve practical problems. Laboratory projects using CAD implementations and hardware design languages for simulation of designs. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
347. Microprocessor Hardware Design (3)  
Prerequisites: CECS 301 and 346 and either EE 330 or 331. Study of embedded processor applications and interfacing. Embedded systems design, control of external devices, embedded programming in C and assembly. Laboratory in implementation of embedded designs and hardware assisted debugging. A materials fee will be charged. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*405. Special Topics in Computer Science (3)  
Prerequisite: Senior standing in a computer science major. Selected topics from recent advances in computer science and technology. Course content will vary from year to year and course may be repeated once for credit with the consent of the department. (Lec-problems 3 hrs)
- \*406. Special Topics in Computer Science (3)  
Prerequisites: Senior standing in a computer science program. Each offering is based on an area in computer science and technology in which recent advances have been made. The course may be repeated once for credit with the consent of the department. Specific topic will be recorded on student's transcript. A materials fee may be charged. (Lecture-problems 2 hours, laboratory 3 hours.) Repeatable to a maximum of 6 units with different topics.
- \*419. Theory of Computation (3)  
Prerequisite: CECS 328. Finite automata and regular expressions. Pushdown automata and context-free languages. Turing machines and computability. Computational complexity. (Lecture-problems 3 hours.)
- \*421. Database Management (3)  
Prerequisites: CECS 228 and 274. Introduction to database concepts, data models, data definition/manipulation languages and relational database design. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*422. CAD and Semicustom IC Design (3)  
Prerequisites: CECS 301 and 325. CAD design methodologies as they apply to board level and semicustom integrated circuit design. Topics include schematic entry, available part libraries, simulation, routing fabrication and testing. Individual design projects are required using CAD software tools. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.
- \*424. Organization of Programming Languages (4)  
Prerequisites: CECS 274 and 325. Comparison of programming languages (C, C++, Ada, Java, etc.) in their design and structure regarding features such as data types, control structures and run-time considerations. Includes computer projects illustrating some of these concepts. (Lecture 3 hours, laboratory 3 hours.) Traditional grading only.
- \*426. Topics in Operating Systems (3)  
Prerequisite: CECS 326. Advanced operating system analysis and design. Topics of current interest. Project implementation. (Lecture 2 hours, laboratory 3 hours.)
- \*428. Analysis of Algorithms (3)  
Prerequisite: CECS 328. Applications of standard combinatorial techniques to applied programming problems. Rigorous analysis of the correctness and complexity of algorithms. Tree and graph algorithms are emphasized. Topics include depth-first search algorithm with related applications, sorting, union find problem, divide-and-conquer technique and weighted-edge problem. (Lecture 2 hrs, lab/problem session 3 hrs.)
440. Computer Architecture (3)  
Prerequisites: CECS 201 and 325. Review of logic design. Register transfer and micro-operations. Basic computer organization. Central processor organization. Microprogram control organization. Arithmetic processor design. Arithmetic algorithms. Input-output organization. Memory organization. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*443. Software Engineering (3)  
Prerequisite: CECS 326. Software life cycle. Functional decomposition, data flow and object-oriented development. Reusability and portability. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*444. Compiler Construction (4)  
Prerequisites: CECS 228 and 325. Syntax directed compiler study. Organization of a compiler and overall design: parsing, semantic analysis, optimization and code generation. (Lecture 3 hours, laboratory 3 hours.) Traditional grading only.
- \*446. Microprocessor Systems Design (3)  
Corequisites: CECS 347 and 440. Computer system design using microprocessors including the use of multiple CPUs and RISC processors. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.
- \*448. User Interface Design (3)  
Prerequisite: CECS 274. Evaluation, design and programming of user interface systems. Human-computer interaction. Components of interactive systems. Tools for building user interfaces. (Lecture 2 hours, laboratory 3 hours.)
- \*449. Computer Graphics (3)  
Prerequisites: MATH 247, CECS 175 and 274. Basic software and hardware of 2-D computer graphics. Applications. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*451. Artificial Intelligence (3)  
Prerequisites: CECS 228 and 274. Introduction to the principles and programming methods of artificial intelligence. Topics include symbol manipulation, knowledge representation, searching, expert systems and logic programming. Project implementation in LISP or Prolog. Not open to students with credit in CECS 420 or 450. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*470. World-Wide Web Development (3)  
Prerequisite: CECS 326 and consent of instructor. World-Wide Web page and program development and the underlying networking technology. Development tools include the HyperText Markup Language (HTML), the Common Gateway Interface (CGI), and the Perl, Java and JavaScript programming languages. Web page style and design, multimedia, performance issues and ethics. Future directions. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*471. Internet Applications Using Java (3)  
Prerequisites: CECS 175 and 274. Fundamentals of the Java programming language. Classes and interfaces. Java applets and the World-Wide Web. Networking and client-server applications. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- \*472. Computer Networking (3)  
Prerequisite: CECS 326 and consent of instructor. Client-server programming. Concepts of computer networking including network design and management. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.



\*475. Object-Oriented Programming and C++ (3)  
Prerequisite: CECS 175 or 275. An overview of object-oriented programming and C++. Classes. Constructors and destructors. Operator overloading. Inheritance. Input/Output. Techniques of object-oriented design. Survey of class libraries. Comparison of object-oriented languages. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

\*476. System and Network Administration (3)  
Prerequisite: CECS 326 and consent of instructor. Introduction to the management and administration of Unix systems and TCP/IP networks. Managing users, local and network file systems, electronic mail, print queues. Establishing and managing a network. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

\*481. Event Driven Programming (3)  
Prerequisite: CECS 326. A rigorous introduction to Graphical User Interface (GUI) programming as provided in a number of popular software development products. Topics include Windows API (Application Programming Interface) using C and C++, Visual Basic and other development tools. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

\*497. Directed Studies (1-3)  
Prerequisite: Consent of instructor. Assigned study in topics in current computer literature or computer-related projects with a final report. May be repeated for a total of 6 units with written permission of the Department Chair.

## Graduate Courses

521./621. Advanced Database Management (3)  
Prerequisite: CECS 421. (Master's students register in CECS 521 or 621; Ph.D. students register in CECS 621.) Relational database design theory—a rigorous approach. Security, recovery, transaction management, distributed databases and query optimization. Additional projects required for CECS 621. (Lecture-problems 3 hours.) Traditional grading only.

524./624. Advanced Topics in Programming Languages (3)  
Prerequisite: CECS 424. (Master's students register in CECS 524 or 624; Ph.D. students register in CECS 624.) Intensive study of languages of current interest which support object-oriented, client-server, and multimedia applications (e.g. JAVA). Additional projects required for CECS 624. (Lecture-problems 3 hours.) Traditional grading only.

526./626. Advanced Operating Systems (3)  
Prerequisites: CECS 228 and 326. (Master's students register in CECS 526 or 626; Ph.D. students register in CECS 626.) Theoretical foundations of concepts applied in the design of operating systems. Control of concurrent processes, deadlocks, mutual exclusion, virtual memory, resource management and scheduling. Additional projects required for CECS 626. (Lecture-problems 3 hours.) Traditional grading only.

528./628. Advanced Analysis of Algorithms (3)  
Prerequisite: CECS 428. (Master's students register in CECS 528 or 628; Ph.D. students register in CECS 628.) Theoretical analysis of algorithms. Divide and conquer, dynamic programming and greedy algorithms; basic search and traversal techniques including search trees; sorting; matrix manipulations; NP-completeness. Additional projects required for CECS 628. (Lecture-problems 3 hours.) Traditional grading only.

529./629. Advanced Compiler Design (3)  
Prerequisite: CECS 444. (Master's students register in CECS 529 or 629; Ph.D. students register in CECS 629.) Real-world and theoretical problems encountered by the compiler writer. Error handling, table management, the symbol table, run-time problems, code optimization, code generation and register allocation. Additional projects required for CECS 629. (Lecture-problems 3 hours.) Traditional grading only.

530./630. Advanced Computer Architecture I (3)  
Prerequisite: CECS 440. (Master's students register in CECS 530 or 630; Ph.D. students register in CECS 630.) Fundamentals of computer architecture. Description of architecture and description languages. Basic computer design and central processor

implementation. Memory hierarchy and input/output. Pipelining. Vector processor, multiprocessor systems and dataflow machines. Additional projects required for CECS 630. (Lecture-problems 3 hours.) Traditional grading only.

531./631. Advanced Computer Architecture II (3)  
Prerequisite: CECS 530. (Master's students register in CECS 531 or 631; Ph.D. students register in CECS 631.) Advanced computer architecture with emphasis on parallel processing. Vector processors and multiprocessor systems. Dataflow computation. RISC/CISC. Hypercube. Parallel software. Applications in artificial intelligence, signal/image processing, neural network and optical computing. Additional projects required for CECS 631. (Lecture-problems 3 hours.) Traditional grading only.

543./643. Advanced Software Engineering (3)  
Prerequisite: CECS 443. (Master's students register in CECS 543 or 643; Ph.D. students register in CECS 643.) Study of software engineering as a broad, problem-solving discipline. Includes structured programming and software project management. Additional projects required for CECS 643. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

546./646. Fault Tolerant Computing Systems (3)  
Prerequisite: CECS 530. (Master's students register in CECS 546 or 646; Ph.D. students register in CECS 646.) Fault tolerant techniques are studied as tools to assure the reliability and continuous availability of computing systems. Case studies of modern fault tolerant systems reviewed. Software fault tolerant systems studied as alternatives to verification and validation approaches to software reliability. Additional projects required for CECS 646. (Lecture-problems 3 hours.) Traditional grading only.

549./649. Advanced Computer Graphics (3)  
Prerequisite: CECS 449. (Master's students register in CECS 549 or 649; Ph.D. students register in CECS 649.) Three-dimensional representations, transformations and viewing. Color models and modeling methods. Hidden-line and hidden-surface removal. Lighting and shading. Visual realism. Topics of current interest. Additional projects required for CECS 649. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

551./651. Advanced Artificial Intelligence (3)  
Prerequisite: CECS 451. (Master's students register in CECS 551 or 651; Ph.D. students register in CECS 651.) Advanced concepts in artificial intelligence. Topics include knowledge acquisition and representation, fuzzy logic, logical reasoning, multi-sensor integration, Dempster-Shafer's theory of evidential reasoning, real-time expert systems and neural networks. Additional projects required for CECS 651. (Lecture-problems 3 hours.) Traditional grading only.

552./652. Computer Simulation and Modeling (3)  
Prerequisites: E E 380 (or MATH 380) and CECS 342. (Master's students register in CECS 552 or 652; Ph.D. students register in CECS 652.) Studies of general purpose and special simulation software. Model verification including graphical models Applications in various areas. Additional projects required for CECS 652. (Lecture-problems 3 hours.) Traditional grading only.

553./653. Machine Vision (3)  
Prerequisite: Graduate standing in engineering or computer science. (Master's students register in CECS 553 or 653; Ph.D. students register in CECS 653.) Discussion and laboratory implementation of current research in vision and image understanding. Topics include image formation, early processing, segmentation, relational structures in 2-D and 3-D, motion, stereo, 3-D reconstruction, morphological methods and computer architecture for machine vision. Additional projects required for CECS 653. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

570./670. Concurrent Parallel Programming (3)  
Prerequisite: CECS 428 or 440. (Master's students register in CECS 570 or 670; Ph.D. students register in CECS 670.) An introduction to concurrent and parallel programming for multiprocessing as well as distributed systems. Computational models and paradigms. Parallel programming languages and programming tools. Portable parallel programming and mapping techniques.

Heterogeneous concurrent programming. Concurrent programming on local networks on workstations and personal computers. Additional projects required for CECS 670. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**572./672. Distributed Computing Systems and Networking (3)**

Prerequisite: CECS 472. (Master's students register in CECS 572 or 672; Ph.D. students register in CECS 672.) Advanced concepts in distributed computing systems and computer networking. Distributed architectures, computer network standards and design, and computer network performance issues. Additional projects required for CECS 672. (Lecture-problems 3 hours.) Traditional grading only.

**575./675. Object-Oriented Analysis and Design (3)**

Prerequisite: CECS 475 and either CECS 443 or 543. (Master's students register in CECS 575 or 675; Ph.D. students register in CECS 675.) An object-oriented approach to software development based on modeling objects from the real world and then using the model to build a language-independent design organized around those objects. Object-oriented methodology from problem statement through analysis, system design, and object design. Implementation of object-oriented designs in various target environments. Case studies. Additional projects required for CECS 675. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

**590./690. Special Topics in Computer Science (3)**

Prerequisites: Graduate standing and consent of instructor. (Master's students register in CECS 590 or 690; Ph.D. students register in CECS 690.) Each offering is based on an area in computer science and technology in which recent advances have been made. Additional projects required for CECS 690. (Lecture-problems 3 hours.) Repeatable to a maximum of 6 units with consent of department. Traditional grading only.

**621./521. Advanced Database Management (3)**

Prerequisite: CECS 421. (Master's students register in CECS 521 or 621; Ph.D. students register in CECS 621.) Relational database design theory—a rigorous approach. Security, recovery, transaction management, distributed databases and query optimization. Additional projects required for CECS 621. (Lecture-problems 3 hours.) Traditional grading only.

**624./524. Advanced Topics in Programming Languages (3)**

Prerequisite: CECS 424. (Master's students register in CECS 524 or 624; Ph.D. students register in CECS 624.) Intensive study of languages of current interest which support object-oriented, client-server, and multimedia applications (e.g. JAVA). Additional projects required for CECS 624. (Lecture-problems 3 hours.) Traditional grading only.

**626./526. Advanced Operating Systems (3)**

Prerequisites: CECS 228 and 326. (Master's students register in CECS 526 or 626; Ph.D. students register in CECS 626.) Theoretical foundations of concepts applied in the design of operating systems. Control of concurrent processes, deadlocks, mutual exclusion, virtual memory, resource management and scheduling. Additional projects required for CECS 626. (Lecture-problems 3 hours.) Traditional grading only.

**628./528. Advanced Analysis of Algorithms (3)**

Prerequisite: CECS 428. (Master's students register in CECS 528 or 628; Ph.D. students register in CECS 628.) Theoretical analysis of algorithms. Divide and conquer, dynamic programming and greedy algorithms; basic search and traversal techniques including search trees; sorting; matrix manipulations; NP-completeness. Additional projects required for CECS 628. (Lecture-problems 3 hours.) Traditional grading only.

**629./529. Advanced Compiler Design (3)**

Prerequisite: CECS 444. (Master's students register in CECS 529 or 629; Ph.D. students register in CECS 629.) Real-world and theoretical problems encountered by the compiler writer. Error handling, table management, the symbol table, run-time problems, code optimization, code generation and register allocation. Additional projects required for CECS 629. (Lecture-problems 3 hours.) Traditional grading only.

**630./530. Advanced Computer Architecture I (3)**

Prerequisite: CECS 440. (Master's students register in CECS 530 or 630; Ph.D. students register in CECS 630.) Fundamentals of computer architecture. Description of architecture and description languages. Basic computer design and central processor implementation. Memory hierarchy and input/output. Pipelining. Vector processor, multiprocessor systems and dataflow machines. Additional projects required for CECS 630. (Lecture-problems 3 hours.) Traditional grading only.

**631./531. Advanced Computer Architecture II (3)**

Prerequisite: CECS 530. (Master's students register in CECS 531 or 631; Ph.D. students register in CECS 631.) Advanced computer architecture with emphasis on parallel processing. Vector processors and multiprocessor systems. Dataflow computation. RISC/CISC. Hypercube. Parallel software. Applications in artificial intelligence, signal/image processing, neural network and optical computing. Additional projects required for CECS 631. (Lecture-problems 3 hours.) Traditional grading only.

**643./543. Advanced Software Engineering (3)**

Prerequisite: CECS 443. (Master's students register in CECS 543 or 643; Ph.D. students register in CECS 643.) Study of software engineering as a broad, problem-solving discipline. Includes structured programming and software project management. Additional projects required for CECS 643. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

**644./744. Software Verification and Validation (3)**

Prerequisite: CECS 543. (Master's students register in CECS 644; Ph.D. students register in CECS 744.) Overview of software verification and validation. Testing strategies, special testing problems, automated testing. Verification of validation activities. Formal verification. Additional projects required for Ph.D. students. (Lecture-problems 3 hours.) Traditional grading only.

**646./546. Fault Tolerant Computing Systems (3)**

Prerequisite: CECS 530. (Master's students register in CECS 546 or 646; Ph.D. students register in CECS 646.) Fault tolerant techniques are studied as tools to assure the reliability and continuous availability of computing systems. Case studies of modern fault tolerant systems reviewed. Software fault tolerant systems studied as alternatives to verification and validation approaches to software reliability. Additional projects required for CECS 646. (Lecture-problems 3 hours.) Traditional grading only.

**649./549. Advanced Computer Graphics (3)**

Prerequisite: CECS 449. (Master's students register in CECS 549 or 649; Ph.D. students register in CECS 649.) Three-dimensional representations, transformations and viewing. Color models and modeling methods. Hidden-line and hidden-surface removal. Lighting and shading. Visual realism. Topics of current interest. Additional projects required for CECS 649. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

**650./750. Pattern Recognition Using Artificial Intelligence (3)**

(Master's students register in CECS 650; Ph.D. students register in CECS 750.) General concepts of pattern recognition and trainable classifiers, decision theory, supervised learning, non-parametric techniques, rule-based systems and neural networks. Additional projects required for Ph.D. students. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**651./551. Advanced Artificial Intelligence (3)**

Prerequisite: CECS 451. (Master's students register in CECS 551 or 651; Ph.D. students register in CECS 651.) Advanced concepts in artificial intelligence. Topics include knowledge acquisition and representation, fuzzy logic, logical reasoning, multi-sensor integration, Dempster-Shafer's theory of evidential reasoning, real-time expert systems and neural networks. Additional projects required for CECS 651. (Lecture-problems 3 hours.) Traditional grading only.

**652./552. Computer Simulation and Modeling (3)**

Prerequisites: E E 380 (or MATH 380) and CECS 342. (Master's students register in CECS 552 or 652; Ph.D. students register in CECS 652.) Studies of general purpose and special simulation software. Model verification including graphical models Applications in various areas. Additional projects required for CECS 652. (Lecture-problems 3 hours.) Traditional grading only.

653./553. Machine Vision (3)

Prerequisite: Graduate standing in engineering or computer science. (Master's students register in CECS 553 or 653; Ph.D. students register in CECS 653.) Discussion and laboratory implementation of current research in vision and image understanding. Topics include image formation, early processing, segmentation, relational structures in 2-D and 3-D, motion, stereo, 3-D reconstruction, morphological methods and computer architecture for machine vision. Additional projects required for CECS 653. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

670./570. Concurrent Parallel Programming (3)

Prerequisite: CECS 428 or 440. (Master's students register in CECS 570 or 670; Ph.D. students register in CECS 670.) An introduction to concurrent and parallel programming for multiprocessing as well as distributed systems. Computational models and paradigms. Parallel programming languages and programming tools. Portable parallel programming and mapping techniques. Heterogeneous concurrent programming. Concurrent programming on local networks on workstations and personal computers. Additional projects required for CECS 670. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

672./572. Distributed Computing Systems and Networking (3)

Prerequisite: CECS 472. (Master's students register in CECS 572 or 672; Ph.D. students register in CECS 672.) Advanced concepts in distributed computing systems and computer networking. Distributed architectures, computer network standards and design, and computer network performance issues. Additional projects required for CECS 672. (Lecture-problems 3 hours.) Traditional grading only.

673./773. Topics in Distributed Computer Systems (3)

Prerequisite: CECS 572 or 672. (Master's students register in CECS 673; Ph.D. students register in CECS 773.) Network operating systems vs distributed operating systems, research and design issues of distributed operating systems, resources and resource management in distributed systems, communication security and user authentication. Additional projects required for Ph.D. students. (Lecture-problems 3 hours.) Traditional grading only.

675./575. Object-Oriented Analysis and Design (3)

Prerequisite: CECS 475 and either CECS 443 or 543. (Master's students register in CECS 575 or 675; Ph.D. students register in CECS 675.) An object-oriented approach to software development based on modeling objects from the real world and then using the model to build a language-independent design organized around those objects. Object-oriented methodology from problem statement through analysis, system design, and object design. Implementation of object-oriented designs in various target environments. Case studies. Additional projects required for CECS 675. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

690./590. Special Topics in Computer Science (3)

Prerequisites: Graduate standing and consent of instructor. (Master's students register in CECS 590 or 690; Ph.D. students register in CECS 690.) Each offering is based on an area in computer science and technology in which recent advances have been made. Additional projects required for CECS 690. (Lecture-problems 3 hours.) Repeatable to a maximum of 6 units with consent of department. Traditional grading only.

694. Seminar in Computer Science (3)

Prerequisite: Six units of 500 or 600 level CECS courses. Intensive study of a broad selection of conceptual and theoretical problems in computer science. A written student research project and an oral presentation are required. Traditional grading only.

697. Directed Research (1-3)

Prerequisite: Classified Graduate standing. Theoretical and experimental problems in computer science and engineering requiring intensive analysis. (Independent Study.) Traditional grading only.

698. Thesis (2)

Prerequisite: Advancement to candidacy. Planning, preparation and completion of a thesis in computer science and engineering. (Independent Study.) May be repeated to a total of 6 units.

744./644. Software Verification and Validation (3)

Prerequisite: CECS 543. (Master's students register in CECS 644; Ph.D. students register in CECS 744.) Overview of software verification and validation. Testing strategies, special testing problems, automated testing. Verification of validation activities. Formal verification. Additional projects required for Ph.D. students. (Lecture-problems 3 hours.) Traditional grading only.

750./650. Pattern Recognition using Artificial Intelligence (3)

(Master's students register in CECS 650; Ph.D. students register in CECS 750.) General concepts of pattern recognition and trainable classifiers, decision theory, supervised learning, non-parametric techniques, rule-based systems and neural networks. Additional projects required for Ph.D. students. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

773./673. Topics in Distributed Computer Systems (3)

Prerequisite: CECS 572 or 672. (Master's students register in CECS 673; Ph.D. students register in CECS 773.) Network operating systems vs distributed operating systems, research and design issues of distributed operating systems, resources and resource management in distributed systems, communication security and user authentication. Additional projects required for Ph.D. students. (Lecture-problems 3 hours.) Traditional grading only.

# COMPUTER STUDIES

*College of Liberal Arts*

The Computer Studies Program operates the Social Science Computer Laboratory in SPA 206, and offers several of the certificate program courses.

## Certificate in Computer Applications in the Liberal Arts (code 1-8050)

This program offers a broad background in applications of computers to prepare students to be effective computer users. It involves 24 to 27 units of coursework covering a variety of areas of computer use. Skills to be acquired include:

Knowledge of computers and information systems sufficient to permit graduates to communicate effectively with computer experts.

Ability to serve as a liaison between colleagues who lack computer expertise and technical computer personnel.

Ability to run applications programs and explain the results to colleagues.

Skills in the use of information systems.

Ability to identify needs for and benefits derived from implementation of computer systems in an applications area.

### Requirements

1. A bachelor's degree (may be completed concurrently);
2. Completion of at least 8 approved computer applications courses (with a grade of "C" or better);
3. Approval from the Director of the Certificate Program for the student's course selections.

The coursework for this Certificate is organized into several categories.

The first four categories contain required courses and students must complete all of the courses in the first four categories for a total of 15 or 16 semester units. The remaining categories include elective courses. Students must take 4 of these courses, including at least one from each category, for a total of 12 semester units. May substitute upper division courses on computer applications which apply directly to the student's major area of study (or a directed studies course for this purpose) for one of the elective categories. Such substitutions require prior approval of the Director of the Program.

Most students will take 9 courses (27-29 units) in order to obtain the Certificate. Students entering the program with sufficient prior computer experience may omit introduction to computers course if they receive approval from the Director of the Program. Thus, these students will only need to complete 8 courses. Students seeking the Certificate in conjunction with a bachelor's degree may also count courses taken to complete the Certificate toward completion of major (or general education requirements) where applicable.

### Required Course Categories

Students must complete all courses in these categories for a total of 15 or 16 semester units.

1. Introduction to Computers and Computer Programming: C/ST 200 or equivalent (3 units);
2. Social Impact of Computers: CSE 345 (3 units);
3. Seminar in Computer Applications;
4. Information Systems: EDST 452 (3 units)

### Elective Course Categories

Students must complete four of the following courses, one of which must be taken from each category, for a total of 12 or 13 semester units:

1. Human/Computer Interface: C/ST 312, ENGL 317, or EDST 551 (3 units each);
2. Data Analysis: ECON 380, or GEOG 490 (Quantitative Methods), or PSY 310 (3 units each);
3. Specialized Applications: ECON 486 (3 units) or ENGL 427 (4 units), or PSY 418, or EDST 451 (3 units each).

NO NEW STUDENTS ADMITTED DURING  
THE 1998-1999 YEAR.

# COOPERATIVE EDUCATION

## *University Academic Programs*

Associate Vice President, Academic Affairs and  
Dean, University Academic Programs

Marilyn Jensen

Office

Academic Affairs

Coordinator

Orlantha Nin

Office

SS/AD 250

Telephone

(562) 985-8550

The Cooperative Education Office serves as a link between the University's academic programs and those public and private employers interested in the Cooperative Education program (Co-Op), the Educational Participation in Communities program (EPIC), and the Summer Internship program. Each of these programs is designed to offer students academic credit for participation in monitored part-time or full-time practical and professional work experience that is directly related to their academic major or career goal.

The programs offered by the Cooperative Education Office are also designed to assist students in gaining a deeper understanding of the relationship between theory and practical application. Through on-the-job experience, students can assess their capabilities, clarify values, and explore career goals.

The accompanying Co-Op internship courses (see below) provide students with up to 6 units of elective academic credit based on the work experience and required course assignments. Course discussions include relevant topics such as, work ethics, communication skills, conflict resolution, and employer-employee relations. Written assignments enable students to review and process the learning that takes place in the hands-on environment.

### *Cooperative Education (Co-Op) Internships*

Cooperative Education internships offer students paid work experience in business, industry, government and the non-profit sector. Co-Op students may choose from two types of work experience. Students may alternate full-time work periods with full-time academic periods or they may work part-time while simultaneously attending the University. Upper-division Co-Op courses are available for up to 6 units of elective academic credit.

### *Educational Participation in Communities (EPIC)*

The (EPIC) program provides volunteer internship opportunities for students who wish to participate in career-related field experiences that complement their classroom study. EPIC internships are available with organizations and agencies in the not-for-profit sector. Upper-division Co-Op courses are available for up to 6 units of elective academic credit.

### *Summer Internships*

The Summer Internship Program offers students the opportunity to gain career or academically related work experience during summer months. Summer placements are paid, full-time positions and are available locally and nationally to all majors.

## Curriculum

### C/LA 492A. Internship in Liberal Arts (3)

Prerequisites: Upper division standing consent of instructor, and a formally declared major in one the programs included in the College of Liberal Arts. EPIC field experience. Students qualifying can be placed in major or career-related volunteer assignments in private industry or public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. (Minimum 120 hours work per semester for three units of credit.) May be repeated to a maximum of six units. No more than six units total in 492A and B. Traditional grading only.

### C/LA 492B. Internship in Liberal Arts (3)

Prerequisites: Upper division standing, consent of the instructor, and a formally declared major in one of the programs included in the College of Liberal Arts. Co-Op field experience. Students who qualify can be placed in major or career-related, community-based, preprofessional experiences as employees in private industry or in public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. (Minimum 120 hours work per semester.) May be repeated to a maximum of six units. No more than six units total in 492A and B. Traditional grading only.

### ED P 492. Internship in Human Services (3)

Prerequisite: Consent of instructor. Students in any major are placed in agencies and organizations to engage in volunteer or paid work in human services/mental health. The required fifteen hour seminar shall focus on personal values, interpersonal communications skills, critical thinking, and problem solving as they relate to the students' field placement. Development of knowledge and skills transferable to future careers will be stressed. A minimum of 120 hours field experience is required for the semester.

### ENGR 492B. Internship In Engineering (3)

Prerequisite: Upper division standing and permission of the instructor. A Co-Op field experience. Students who qualify can be placed in a major - or career related, pre-professional experience as an employee in private industry or in public agencies. May be repeated to a maximum of six units. (Lecture-problems 3 hours).

### HHS 492. Field Studies and Career Exploration (1-3)

Prerequisites: Consent of the instructor and a minimum GPA of 2.0. Provides a student with a career-related experience by allowing the student to work in the field or profession related to his or her major. Students qualifying may work in either a major or career-related volunteer or paid assignment in private industry, a non-profit agency, or a public agency. In addition to the practical experience, students will attend a series of seminars designed to complement this field experience by focusing on common issues to the work setting.

### NSCI 492. Internships In Natural Science (3)

Prerequisites: Upper division standing and consent of instructor prior to registration. Students who qualify will be placed in a major or career-related assignment in private industry and public agencies. All participants utilize learning agreements. A final written report is required. Class attendance to be arranged by instructor. (9 hours experience per week). May be repeated for a maximum of six units. Credit/No Credit grading only.

### CBA 493. Business Internship (1-3)

Prerequisites: Classified business major and Instructor consent. Qualifying students will be placed in career-related paid assignments in private or public agencies or businesses. An organized plan utilizing a series of seminars and learning agreements is required along with selected reading and writing assignments. A minimum of 120 hours paid experience per semester is required. (May be repeated for a maximum of six units.)



# CREDENTIAL PROGRAMS

## Credentials

Public school teaching and service credentials in the State of California are regulated by the State Legislature and administered by the California Commission on Teacher Credentialing (CCTC). Credential programs offered at CSULB have been developed to meet current requirements which are complex and continually reviewed and changed by legislative action. Candidates for all credentials must meet legal requirements in effect when completing credential programs. It is the responsibility of the student to be familiar with the program requirements contained in this Catalog and to obtain current information from departments offering individual programs. For information regarding admission, academic requirements and field work, contact the specific credential program coordinator. For information on general credential requirements, regulations, pending changes and new legislation, contact the Credential Processing Center, ED 1 Room 42.

The overall grade-point average required for admission to teacher credential programs varies every two years, and is by major area of study and by institution where the degree was received. See the Teacher Education or Single Subject Teacher Education Office.

## Basic Credentials

There are two types of basic teaching credentials. The Single Subject credential authorizes one to teach within a specified subject-matter category. A teacher authorized for single subject instruction may be assigned to teach this subject at any grade level — pre-school, kindergarten, grades 1 through 12, or in classes for adults. In practice, most teachers with a single subject authorization teach departmentalized classes in middle, junior high or senior high schools. CSULB offers CCTC-approved Subject Matter Programs in Art, English, Foreign Language (French, German, Japanese, Spanish), Health Science, Home Economics, Life Science, Mathematics, Music, Physical Education, Physical Science, and Social Science.

The Multiple Subject Credential authorizes the holder to teach all subjects in a self-contained classroom, generally in an elementary school. A teacher authorized for multiple subject instruction may be assigned to teach in any self-contained classroom — pre-school, kindergarten, grades 1 through 12, or in classes for adults. CSULB offers the Multiple Subject Teaching Credential with subject matter met by either a program of coursework (Liberal Studies) or examination (Multiple Subject Assessment for Teachers [MSAT]). Programs leading to a Multiple Subject Teaching Credential with an emphasis in Crosscultural, Language and Academic Development (CLAD) and a Multiple Subject Teaching Credential with an emphasis in Bilingual Crosscultural, Language and Academic Development (BCLAD) have been approved by the California Commission on Teacher Credentialing and were made available beginning Fall 1995.

Elementary and secondary teachers wishing to diversify their teaching authorizations may do so by fulfilling certain requirements to qualify for supplementary authorizations and/

or add-on authorizations. Further information is available in the Credential Processing Center, ED 1 – 42.

## Specialist Credentials

CSULB offers specialist teaching credential programs in Early Childhood Education, Learning Handicapped, Severely Handicapped, the Resource Specialist Certificate of Competence, and the Adapted Physical Education Certificate. All specialist teaching credentials require a valid basic teaching credential.

## Service Credentials

Service credential programs are available in the following areas: Preliminary Administrative Services, Professional Administrative Services, Library Media Teacher Services, Health Services (School Nurse), School Counseling, School Psychology, Clinical Rehabilitative Services – Language, Speech and Hearing, Clinical Rehabilitative Services – Language, Speech and Hearing with Special Class Authorization, Clinical Rehabilitative Services – Audiology, and School Social Work and Child Welfare and Attendance. Both the Preliminary Administrative Services and Library Media Teacher credentials require a valid basic teaching credential.

## Designated Subjects Credentials

CSULB offers CCTC-approved programs leading to Designated Subjects, Adult, Vocational, and Designated Subjects Supervision credentials. Contact the Department of Occupational Studies, ET – 233 for information.

## Obtaining a Credential

Current credentialing law provides for a two-step program for basic teaching credentials, the Preliminary credential and the Professional Clear credential. The Preliminary credential requires:

1. a bachelor's degree from an accredited institution,
2. an approved professional preparation program, including the teaching of reading and student teaching,
3. verification of subject matter competence (program or examination),
4. passage of CBEST (California Basic Educational Skills Test), and
5. completion of an approved course or examination in the U.S. Constitution. The Preliminary credential is valid for five years from date of issuance, and is not renewable.

The Professional Clear credential requires an approved fifth year of study (30 post-graduate semester units), including statutory requirements of Health Education, Special Education (Mainstreaming), and Computer Education, and must be recommended by a California college or university with a CCTC-approved program. To obtain CSULB recommendation for the Professional Clear credential, the candidate must establish a fifth-year program, complete all statutory requirements, and take a minimum of 15 of the 30 post-graduate units at CSULB. The Professional Clear credential can be issued as the first teaching credential (bypassing the Preliminary credential) if all requirements are completed as part of



the initial credential program. Information on Professional Clear credential programs is available at the Credential Processing Center, ED 1 – 42.

### Entry Levels for Basic Credential Programs

Students may begin credential programs at three different levels:

1. Junior level – With a carefully planned program, initial education courses may be taken at the junior level with completion of the program within the four-year degree program, culminating with a Preliminary teaching credential. This permits the teacher a maximum of five years to complete the fifth-year approved program for the Professional Clear credential.

2. Senior level – Part of the credential program may be taken as an undergraduate to complete electives toward degree requirements and the remaining credential requirements then completed at the post-baccalaureate level. The Preliminary credential is issued after completion of the credential program.

Note: By petition only, up to twelve units of course work taken in the final undergraduate semester (not needed to meet major or degree requirements) may be counted as postgraduate credit toward fulfillment of the fifth-year program. The petition must be filed prior to completion of the course(s). Petitions submitted after completion of the course will not be approved. Criteria and petition forms are available in the Single Subject Program Office, ED 1 – 54, and the Multiple Subject Program Office, ED 1 – 13.

3. Graduate level – The entire credential program may be completed at the post-baccalaureate level.

### Application to Credential Programs

Information on application to credential programs is available from the appropriate department or program coordinator. Students planning to enroll in credential programs must also file an application for admission to the University.

### Application for Field Work and Student Teaching

Candidates for field work and student teaching for the Summer or Fall term of any year must apply by March 1. Spring candidates must apply by October 1.

### Appeal Process

A student has the right to address an appeal to the appropriate committee regarding any policy related to admission and continuation in a basic teacher preparation program. Petition forms and assistance are available through the credential program coordinator or the department office.

### For More Information

General Information		985-5710
Single Subject Credential	ED 1 – 54	985-5325
Multiple Subject Credential	ED 1 – 13	985-4506
Clinical Rehabilitative Services	LAB – 102	985-4594
Early Childhood Education	ED 1 –13	985-4506
Health Services	NUR – 17	985-4463
Library Media Teacher	LA 1 – 201	985-1764
School Counseling & School Psychology	ED 1 –10	985-4517
Special Educ. & Administrative Services	ED 1 –10	985-4517
Adapted Physical Education	AS 2 – 214	985-4077
Designated Subjects Credential	ET – 233	985-5631
Credential Processing Center	ED 1 – 42	985-4109

# CRIMINAL JUSTICE

*College of Health and Human Services*

Department Chair

Ronald E. Vogel

Department Office

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Faculty

Professors

Harold K. Becker

Bruce Berg

Judy H. Kaci

Harvey N. Morley

George Rush

Paul M. Whisenand

Associate Professors

Elizabeth Deschenes

Sam Torres

Undergraduate Advisor

Judy H. Kaci

Graduate Coordinator

Harold K. Becker

Office Manager

Trevor Rodriguez

The program in criminal justice offers the bachelor of science degree to individuals interested in seeking a comprehensive education leading to a professional career in criminal justice. The program is designed to accommodate the needs of the continuing student, the transfer student and the experienced criminal justice practitioner. Unfortunately, it is not possible to guarantee that sufficient courses will be offered in the evenings so that a person can obtain a degree without attending day classes.

Students intending to transfer from community colleges to this University for a bachelor of science degree in criminal justice are advised to complete general education requirements while attending the community college. A course equivalent to CRIM 101, The Criminal Justice System in Society, should be taken while attending community college. Other criminal justice courses taken at community colleges will be accepted as lower division electives provided the college where they were taken designated them as transferable to CSU. These courses can not be substituted for upper division criminal justice courses.

## Bachelor of Science in Criminal Justice (code 3-1031) (124 units)

### Requirements

All students are required to take a minimum of 42 units of criminal justice course work to meet the department requirements for a bachelors degree in criminal justice: 27 units are CORE, 3 units are prerequisite to the CORE, and 12 units are upper division electives in the major.

CRIM 101 is a 3-unit prerequisite to the CORE. CRIM 101 (or its equivalent at another college or university) must be successfully completed before taking a CORE course. The 27 units of required courses that constitute the CORE are: CRIM 301, 303, 331, 351, 404, 468, 480, 483, and 495. Students with upper division transfer units should consult the undergraduate advisor regarding substitutions for CORE classes. Courses taken at a two-year college may not be substituted for CORE courses. All CORE courses must be passed with a grade of "C" or better. Specifically, every CORE course in which a student receives a final grade of "D" or "F" must be repeated until a grade of "C" or higher is achieved.

In addition to the CORE classes, students are required to complete 12 units of upper division criminal justice electives which may be taken before, concurrently, or after the CORE courses. Any criminal justice course in the CSULB Catalog numbered 300 to 499 that is not a CORE class may be used as a criminal justice elective. Students with upper division transfer units should consult the undergraduate advisor regarding substitutions. Courses taken at a two-year college may not be used to meet this requirement.

## Minor in Criminal Justice (code 0-1031)

### Requirements

A minimum of 18 units which must include: CRIM 301, 404; three units selected from CRIM 351, 353; and the completion of an additional nine units of upper division criminal justice classes.

## Master of Science in Criminal Justice (code 6-1031)

Graduate study in criminal justice provides the requisite knowledge and opportunity for individuals to (1) fill community college teaching positions in criminal justice, (2) fill research positions in criminal justice agencies, and (3) become competitive for administrative positions in the courts, corrections, law enforcement, private security, probation and parole.

The master of science degree in criminal justice will expand and increase individual competency, develop and mature thought processes, aid in gaining insights into professional leadership and knowledge, permit an exchange between students and faculty and further the spirit of research and scholarship to enhance professional and personal development.

In addition to being admitted by the Office of Admissions and Records, applicants also must be accepted for admission by the Criminal Justice Department before their program for a master's degree can be formulated. Students are not allowed to take graduate course work in criminal justice before being accepted to the program. The following factors are considered:

1. A graduate application must be completed. The original must be sent to the Office of Admissions and Records and a copy to the department.
2. Scholastic achievement as represented by official transcripts of all undergraduate course work must be submitted. Each applicant should request that official transcripts be sent to both the graduate advisor in the Criminal Justice Department and the Office of Admissions and Records;
3. Graduate Record Examination scores (sent directly to the Department of Criminal Justice Graduate Coordinator);
4. Resume and statement of goals must be sent to the Department's Graduate Coordinator and University Enrollment Services;
5. Three letters of recommendation from persons able to testify to the student's academic ability. These letters should only be sent to the Department of Criminal Justice Graduate Coordinator.

### Prerequisites

1. A bachelor's degree with a major or minor in criminal justice or a related discipline. Other undergraduate preparation shall be determined by the Department Graduate Committee;
2. A student must have an undergraduate average of 3.0 (B) or better;
3. The student's two highest scores on the three general portions of the Graduate Record Examination (verbal, quantitative and analytical) must add to a minimum of 1000.

## Advancement to Candidacy

1. Students must satisfy the general University requirements for advancement to candidacy, as specified in this bulletin.
2. Each student's graduate program must be approved by the Department Graduate Coordinator and Director of Graduate Studies and Research, College of Health and Human Services.
3. Students must have successfully complete CRIM 581, CRIM 582, CRIM 583 and have passed the Graduate Writing Proficiency Examination before to advancing to candidacy.

### Requirements

#### Thesis Option

Complete a minimum of 30 units of upper division and graduate courses. CRIM 581, 582, 583, 695 and 698 are required courses. Remaining courses are to be selected after consultation with the graduate advisor. Students must take a minimum of 18 units of 500-600 level work in Criminal Justice. A maximum of 12 units may be taken from 400-level courses designated with a \* in CSULB Catalog. Undergraduate courses that are not designated with a \* may not be applied toward the master's degree. Up to six units of graduate work may be transferred from another accredited university. Transfer credit must be a "B" or better. All students must earn a grade of "A" or "B" for each required course. Students may not have more than 6 units of "C" grades apply toward the master's degree. Advancement to candidacy is necessary before Thesis I can be taken.

#### Comprehensive Examination Option

Complete a minimum of 36 units of upper division and graduate courses. CRIM 581, 582, 583, 691, 697 and 699 are required. Remaining courses are to be selected after consultation with the graduate advisor. Students must take 24 units of 500-600 level work in Criminal Justice at CSULB. Up to six units of graduate work may be transferred from another accredited university. A maximum of 12 units may be taken from 400-level courses designated with a \* in the CSULB catalog. Undergraduate courses that are not designated with a \* may not be applied toward the master's degree. All students must earn a grade of "A" or "B" for each required course. Students may not have more than 6 units of "C" grades apply toward the master's degree. Advancement to Candidacy is necessary before CRIM 699 can be taken.

#### Comprehensive Examination

All coursework must be completed.

Each student will be required to answer one question in each of the following areas: theories of crime; research design; synthesis of criminal justice; and statistics.

Comprehensive examinations will be given on two days each year. Students taking comprehensive examinations for the first time must take two examination questions each day; students will be allowed 2 hours to respond to each question.

At the discretion of the Department of Criminal Justice Graduate Committee, a student may retake the examination once. The Department of Criminal Justice Graduate Committee has the discretion to exempt a student from re-taking por-

tions of the examination that were passed the first time. A student must re-take all necessary portions of the comprehensive examinations on the same day. Repeat examinations must be taken no later than one year from the end of the semester in which the original examination was taken.

Students will be notified of their scores within three weeks after taking the examination. Students who fail any portion of the examination will be given a critique of their work on the questions failed and counseled by the graduate advisor on retaking the examination.

## Courses (CRIM)

### Lower Division

#### 101. The Criminal Justice System in Society (3)

History and philosophy of the criminal justice system; survey of theories of crime, punishment and rehabilitation; study of ethical issues in social control. The functions and role expectations of the criminal justice system will be explored. Interaction between the citizen and the components of the system will be examined. (CAN AJ 2)

#### 151. Basic Concepts of Criminal Law (3)

Historical development, philosophy of law and constitutional provisions; definitions, classification of crime and their application to the system of administration of justice; legal research study of case law, methodology and concepts of law as a social force. (CAN AJ 4)

#### 155. Basic Concepts of Criminal Law (3)

Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. (CAN AJ 6)

#### 157. Principles and Procedures of the Justice System (3)

In-depth study of the role and responsibilities of each segment within the administration of the justice system: law enforcement, judicial, corrections. A past, present and future exposure to each subsystem procedure from initial entry to final disposition and the relationship each segment maintains with its system members.

#### 161. Introduction to Investigation (3)

Prerequisites: CRIM 101. Fundamentals of investigation; collection and preservation of physical evidence; sources of information; interview and interrogation; follow-up investigation. (CAN AJ 8)

### Upper Division

#### 301. Contemporary Issues in Criminal Justice (3)

Prerequisite: CRIM 101. Criminal justice studied as a total interacting system: police, corrections, parole, probation and the judiciary. Special emphasis is placed on current issues and problems.

#### 302. Communication for Criminal Justice (3)

Prerequisites: ENGL 100; upper division standing; open only to Criminal Justice majors. Written communication principles and practice in the criminal justice profession.

#### 303. Statistics for Criminal Justice Administrators (3)

Prerequisite: CRIM 101 and completion of GE math requirement. This course will explore statistical procedures used for the analysis of data by criminal justice administrators in decision-making situations. Emphasis is placed upon understanding and satisfying the restrictions placed upon the most commonly used statistical procedures, both descriptive as well as inferential. A discussion of frequently used statistical programs for the computer analysis of data sources will also be covered, including a "hands-on" approach to computer applications. Traditional grading only.

#### 305. Ethical Concerns in Criminal Justice (3)

Identifies and explores ethics, values definitions and applications in criminal justice system: police, courts, probation, parole, corrections and private security organizations. Discusses remedial strat-

egies and behavior relating to unethical behavior from an individual and group perspective. Traditional grading only.

315. Organizational Behavior in Criminal Justice Systems (3)  
Theoretical, analytical, and practical coverage of the reasons and consequences pertaining to behavior of employees in criminal justice organizations; methods for increasing worker satisfaction and organizational productivity; means for improving individual, group and organizational performance; shaping and building the worker growth potential.

#### 325. Police Management (3)

Program approach to the study of police administration. Overview of administration of the police function in the United States. Organization, management and operation of policing agencies. Traditional grading only.

#### 331. Security and the Criminal Justice System (3)

Prerequisite: CRIM 101. A study of the differences in the theoretical and actual association between security functions and the criminal justice system. Major topics that are explored include the historical and contemporary relationship between private security and sworn law enforcement, institutional culture, terrorism, computer technology, forensics and physical/operational security. Traditional grading only.

#### 332. Crisis Management (3)

Prerequisite: CRIM 331 or approval of the instructor. The study and use of Crime Prevention Through Environmental Design (CPT-ED), planning techniques and vulnerability analysis as applied to both civilian and criminal justice environments. Consideration is given to the application of local, state and federal regulations. Traditional grading only.

#### 351. Adjudication Process in Criminal Justice (3)

Prerequisites: CRIM 101. Topics related to the adjudication process in criminal cases are covered including: arraignments and preliminary hearings; suppression hearings; sanity hearings; trials; sentencing in capital and non-capital cases; juvenile court proceedings; and revocation of probation and parole. Civil Rights Act cases and other civil suits involving criminal justice personnel are discussed.

#### 353. Advanced Criminal Procedure and Evidence (3)

Prerequisite: CRIM 351. A study of criminal procedures mandated by the U.S. Constitution with emphasis on search and seizure, confessions, and the right to counsel. Course also includes coverage of evidentiary rules necessary for the introduction of testimony and physical evidence in a court proceeding. Traditional grading only.

#### 356. Legal Aspects of Corrections (3)

A study of the emerging individual rights and issues in corrections, which affect both correctional employees and offenders. The course focuses on statutory law and legal decisions; their impact on administration in the specialized areas of probation, parole and correctional institutions. Traditional grading only.

#### 358. Legal Aspects of Security Systems (3)

A study of legal problems facing the security manager including: employment, discrimination, affirmative action, privacy of records, special requirements of government contracts, etc. Attention will also be given to the role of security in the corporate structure.

#### 359. Drug Abuse and the Law (3)

Various drug abuses from an historical, sociological, psychological and legal perspective. The legal relationship of drug abuse to law enforcement and the criminal justice system with legal sanctions is explored; implications of and alternatives to the criminal sanctions are developed.

#### 361. Forensic Science and Investigative Techniques (3)

The study of basic principles of all types of investigations utilized in criminal and non-criminal matters. Analysis of current investigative procedures necessary for handling crime scenes, interviews, evidence, surveillance, follow-up, technical resources and case principles. Exploration of theories, philosophies and concepts related to prevention, apprehension, suppression of crime and crisis intervention utilizing both reactive and proactive patrol procedures.

**369. Correctional Environments (3)**

Forces and stress produced by correctional environments will be examined from a total institution perspective. Field trips to both adult and juvenile institutions will be required. Not available to students with credit in CRIM 469.

**404. Theories of Crime Causation, Prevention and Control (3)**

Prerequisite: CRIM 101. Explores social, political, economic, religious, and emotional characteristics of criminal justice problems; historical perspectives; objectives and methods of social control by individuals and institutions; and psychological characteristics of offenders and the types of problems they encounter. Not available to students with credit in CRIM 403.

**405. Job Stress and the Criminal Justice System (3)**

Theoretical foundations of stress based on current research findings with emphasis on individual assessment, signs and symptoms, and causes and effects. In addition, specific stress management skills such as relaxation, meditation, self hypnosis, pain control, biofeedback, nutrition, and exercise will be covered. Not available to students with credit in CRIM 499: Job Stress and the Criminal Justice System.

**421. Contemporary Issues in Law Enforcement (3)**

Policy and procedure in specialized situations; labor-management disputes; minority group relations; crowd, public gathering, mob and riot control; mental cases; subversives; civil defense and disaster planning. Special problems involved in licensing, inspections, animal regulation, ambulance service and other specially assigned police activities. Integration of public safety functions. Problems of organized crime.

**423. Supervising Criminal Justice Employees (3)**

Techniques utilized in the supervision of criminal justice employees: instructional and disciplinary methods; supervisory investigations and reports; performance ratings. Traditional grading only.

**424. Management of Human Resources in Criminal Justice (3)**

Concepts, issues, and applications of management styles and strategies within an organizational setting; leadership approaches; goal setting; career development and selection; motivation; communications and changes; efficiency and effectiveness in measuring individual and group performance.

**425. Resource Management and Budgeting for Criminal Justice Agencies (3)**

This course will examine resource allocation, budgeting and strategic planning used by criminal justice agencies. Traditional grading only.

**437. Contemporary Issues in Security (3)**

Prerequisite: CRIM 331. A study of the impact current trends have on security operations and management. An analysis of conflicting expectations and principles. Traditional grading only.

**451./551. Criminal Justice Legal Systems (3)**

Prerequisite: CRIM 351 with grade of "A" or "B". Study of current trends and their impact on areas of legal systems affecting criminal justice agencies, criminal courts, juvenile courts, mental health commitments, civil courts and the role of the U.S. Constitution. State and federal court systems will be explored. Traditional grading only.

**468. Correctional Systems (3)**

Prerequisite: CRIM 101. Historical, sociological and philosophical development of societal reactions to law violators. Theories of punishment, traditional and innovative treatment methods, and correctional models will be examined. Attention will also be focused on the correctional institution as a complex organization and on issues relevant to administrative problems. Not available to students with credit in CRIM 340 or CRIM 365.

**\*470. Alternatives to Incarceration (3)**

Historical and philosophical overview of the theories behind diversion from the criminal justice system; the legal framework; critical appraisal of impact of alternative community treatment programs; analysis and evaluation upon the correctional process.

**475. Contemporary Issues in Corrections (3)**

Prerequisite: CRIM 468. Issues relating to recent changes in correctional theory and practices which affect convicted offenders and correctional staff will be discussed. These include violence in prisons, prison gangs, rape in prison, homosexuality, special problems of women and minorities in prison, concerns of parolees and probationers, as well as correctional staff. Special problems such as child abuse and spouse beating will be discussed.

**477. Correctional Counseling (3)**

Theories and techniques of counseling useful to the corrections counselor. Includes abnormal reactions with appropriate responses, crisis intervention, community mental health and the use of mental health reports. Not available to students with credit in CRIM 383.

**480. Research Methods in Criminal Justice (3)**

Prerequisite: CRIM 101. This course examines research design (e.g., survey, evaluation, content analysis, and field research). The techniques of sampling, questionnaire construction, interview techniques and participant observation will be explored. Traditional grading only.

**481. Community Relations in Criminal Justice (3)**

Individual and group study of relationships between criminal justice agencies and the public. Exploration of areas of conflict and cooperation.

**\*482. Crime, Criminal Justice Systems and the Political Process (3)**

Crimino-political power; relationships between specific organized crimes and political entities; political functions of criminal groups; the police as a political instrumentality.

**483. Enforcement Systems (3)**

Prerequisite: CRIM 101. A study of the foundations of police development and present organizational philosophy, environment, and community interaction. The role of the police, organization and personnel in a democratic society, crime control, and community participation will be examined.

**485. The Role of Police in Society (3)**

Historical development of the police as an institution for social control; policing in urban and rural areas; political and socio-economic factors affecting the changing role of police in modern society.

**487. Juvenile Justice Systems (3)**

Juvenile delinquency prevention and control programs; delinquency theories; police, court and correctional agencies' roles and responsibilities.

**490. Independent Study (1-3)**

Prerequisite: Consent of instructor. Individual research and study approved by major professor. May be repeated for credit not to exceed a total of 3 units.

**\*492. Criminal Justice Response to Domestic Violence (3)**

Domestic violence is studied as a phenomenon that impacts the criminal justice system. Spouse abuse, child abuse and elder abuse are studied. Strategies for criminal justice personnel handling these cases are stressed. Traditional grading only.

**493. Computer Applications in Criminal Justice (3)**

Prerequisite: CRIM 101. The course will focus on computer technology and its application to criminal justice. The use of data processing in training, research, field operations, supervision, and administration will be examined. Federal, state, local and private applications; issues concerning civil liberties; and bank security policy options are also discussed. Traditional grading only.

**\*495. Internship (3)**

Prerequisite: Consent of instructor and CRIM 101. Supervised work experience in criminal justice agency in the immediate area. May be repeated for a maximum of six units. (Not open to employed criminal justice officials.)

499. Special Topics in Criminal Justice (3)

Prerequisite: Consent of instructor. Topics of current interest in the field of criminal justice selected for intensive development. Topics are announced in the Schedule of Classes. May be repeated for a maximum of 9 units with change of topic.

D. Justice and Gangs

E. Readings in Criminology and Criminal Justice

Graduate Division

512. Problems in Urban Criminal Justice (3)

Control and prevention of crime in urban settings; inter-agency relationships; the changing law enforcement processes.

531. Analysis of Security Systems (3)

Prerequisites: Consent of instructor. An examination of current issues as they relate to the interaction of contemporary society and security. Traditional grading only.

541. Correctional Counseling and Case Management (3)

Issues, problems and situations confronting the correctional counselor/caseworker with suggestions for counselor strategies and reactions. The personal counseling or treatment role of the counselor/caseworker in the correctional milieu is emphasized. Referral strategies and suggestions for effective use of correctional resources in program design are included.

551./451. Criminal Justice Legal Systems (3)

Prerequisite: One upper division law course. Study of current trends and their impact on areas of legal systems affecting criminal justice agencies, criminal courts, juvenile courts, mental health commitments, civil courts and the role of the U.S. Constitution. State and federal court systems will be explored.

581. Theories of Crime Causation and Prevention (3)

Relationship and interaction between social structure and crime. Investigation into the classical and behavioral theories of crime and crime prevention.

582. Advanced Statistics for Criminal Justice Research (3)

Prerequisites: one undergraduate social science statistics and research methods course. Statistical inference in normally distributed populations. Regression and multivariate analysis of research data. Utilization of non-parametric statistics. (Lecture 3 hours). Traditional grading only.

583. Research Methodology (3)

Prerequisites: One undergraduate research and statistics course. Scientific method of research; variations in research design and methodology; application of research findings to problem solution. Not available to students with credit in CRIM 696. Traditional grading only.

590. Independent Study (1-3)

Prerequisite: Consent of instructor. Individual research and study approved by graduate advisor. May be repeated for credit not to exceed a total of three units.

599. Special Topics in Criminal Justice (3)

Group investigation of selected topics in criminal justice. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units.

D. Computers and Criminal Justice Research

E. Computer Security Systems

621. Seminar in Criminal Justice Administration (3)

Criminal justice policy development and implementation; administrative organization theories; examination of current issues and changes taking place.

622. Seminar in Administration of Criminal Justice

Information Systems (3)

Special study and original research in automatic data processing applications in the administration of criminal justice; technological and other developments; equipment and methods; staff studies and potentialities.

623. Seminar in Comparative Criminal Justice

Administration (3)

Advanced study of the theories, philosophies and techniques of criminal justice worldwide and nationwide. Intensive review of the literature, recent developments and individual research.

624. Seminar in Criminal Justice Problems (3)

Intensive study and individual research of the problem areas in the broad spectrum of criminal justice.

630. Seminar on Organized Crime (3)

Historical development of organized crime; its criminology; various techniques used against it and detailed consideration of the political, social and economic conditions of its evolution. Not available to students with credit in CRIM 599 on the topic "Organized Crime."

640. Seminar in Police Administration (3)

Theories, concepts and issues related to the administration, organization and management of the police function. Research into changes and modification taking place.

641. Seminar in Correctional Administration (3)

Theories, concepts and issues related to the administration, organization and management of probation, parole and institutional programs. Research into changes and modifications taking place.

650. Seminar in Juvenile Justice (3)

Study of juvenile justice programs administered by the police, court and correctional agencies; analysis of theories of delinquency causation and prevention; current issues.

691. Professional Literature (3)

Critical analysis and comparative review of professional literature in criminal justice practice, theory and research. Required for students taking comprehensive examination; may be taken concurrently with CRIM 699. (Seminar 3 hours). Traditional grading only.

694. Design and Implementation of Criminal Justice Field Research (3)

Prerequisites: CRIM 582 and CRIM 583. Identification of unique problems facing field research in criminal justice agencies. Implementation of viable research methodologies designed to address situations frequently encountered in the field. (Seminar 3 hours). Traditional grading only.

695. Thesis I (2)

Prerequisites: Advancement to candidacy. Comprehensive review of the literature on thesis topic must be completed. Student acts under direct faculty supervision to develop appropriate research methodology for the thesis project. Not available to students in comprehensive examination option. (Supervision 2 hours.) Traditional grading only.

697. Directed Research (1-3)

Extensive independent research on assigned topics addressing theoretical criminology and synthesis of literature on current issues in criminal justice. Work produced in CRIM 697 will be presented in CRIM 699. Not available to students in thesis option. Traditional grading only.

698. Thesis II (4)

Prerequisites: CRIM 695. Student conducts research to complete thesis project; data is analyzed and thesis completed. Student must orally defend thesis. CRIM 698 is not available to students in comprehensive examination option. Traditional grading only.

699. Integrated Analysis of Criminal Justice (3)

Prerequisite: CRIM 697. Integration and synthesis of key concepts and issues related to the administration of criminal justice. Project is required. Not available to students in thesis option. Traditional grading only.

# DANCE

*College of the Arts*

Department Chair  
Judy Allen

Department Office  
Dance Center

Telephone  
(562) 985-4747

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Faculty

Professors  
Judy Allen  
Pat Finot  
Tryntje Shapli  
Jeff Slayton

Associate Professor  
Susan McLain

Assistant Professor  
Keith Johnson

Administrative Coordinator  
Debbie Swiderski

Students desiring information should contact the department office for referral to one of the faculty advisors. The Dance Department provides an in-depth major including history, music, notation, production, theory, choreography, technique (emphasis on modern dance technique), composition and performance, with supporting coursework in ballet, jazz, and tap. The curriculum is designed to give students a basic dance background which prepares them as performers in concert dance companies, television or in films; as choreographers; or as a teacher at the secondary or community college level in both public and private schools. The curriculum also prepares students for graduate programs in dance, and gives the general education student and the student in closely related areas, experience in dance as an art form.

Non-major studio classes in ballet, modern dance, jazz and tap are open to all students on campus. Several courses are offered which meet the General Education requirements in categories C, D, E and IC.

The CSULB dance major is the only BFA and MFA approved in the CSU system. A large number of part-time faculty members supplement the expertise of the full-time faculty.

Dance concerts with faculty, students, and visiting choreographers are held in the Martha B. Knoebel Dance Theater. Dance majors and minors are encouraged to participate in activities of the Dance student organization, "Off 7th Dancers."

Students wishing to major or minor in dance must audition for placement prior to starting the program. Auditions are held four times per year. Applicants should contact the Department of Dance in advance of enrollment. Non-major studio classes are open to all students with no audition.

The department is an accredited institutional member of the National Association of Schools of Dance (National Association of Schools of Dance, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700).

## Bachelor of Arts in Dance (code 2-5230) (124 units)

### Requirements

Units required: 61 units

Lower Division: DANC 100, 112A, 112B, 114A, 114B, 120, 131, 152, 220, 252; A/P 208.

Upper Division: DANC 320, 331, 350A, 360, 442A, 442B, 485, 488, 470 or 475, 380A or 380B, 381A or 381B, 480A or 480B, 481A or 481B, COTA 450.

## Bachelor of Fine Arts in Dance (code 4-5230) (132 units)

The Bachelor of Fine Arts in Dance is the only professional degree in Dance in the CSU. The primary objective of the degree program is to prepare graduates for positions as performers and/or choreographers in dance companies, musical theatre, film, and television. The program also will prepare students for entry into Master of Fine Arts programs in Dance. Preparation: All students wishing to pursue the BFA in Dance must demonstrate intermediate/advanced technical skill in dance by audition.

## Requirements

11 unit Composition requirement: DANC 120, 220, 320, 420.

25-26 unit theory requirement: DANC 131, 331, 442A, 442B, 475 or 470, 247 or 361, 350 or 445; six units from 488, 491A, or 491B.

7 unit performance/production requirement: two units from 181A, 181B, 381A, 381B, 481A, or 481B; five units from 180A, 180B, 295, 380A, 380B, 480A, 480B, or 495.

25 unit technique requirement: fifteen units from DANC 152, 252, 312A, 312B, 412A, or 412B; 3 must be earned from 412A or 412B. Ten units from DANC 154, 254, 314A, 314B, 316A, 316B, 414A, or 414B; 4 must be earned from 314A, 314B, 414A, or 414B.

6 General Education units: DANC 373I and one from the following: ART 115B, 115C, 335I, C/LT 161, 261, 232, 324I, 412I, 454I, MUS 180, 190, 363I, 364I, 375I, 390, 490, PHIL 361, THEA 124.

## Minor in Dance (code 0-5230)

### Requirements

Lower Division: DANC 120, 152, 154, 180A or 180B, 181A or 181B, 220, 252.

Upper Division: DANC 320, 331, 442B, 488.

### Teaching Credential

See Single Subject Teacher Education - Physical Education in this Catalog.

## Master of Arts in Dance

### Option in Dance Education (code 5-5231)

The Master of Arts Degree in Dance with an option in Dance Education, is designed for experienced dance faculty in high schools and community colleges.

### Prerequisites

1. A Bachelor's Degree from an accredited institution with a degree in dance or a related field.
2. A minimum of 3.0 GPA in the last 60 semester units of the BA or BFA.
3. Minimum of three years experience teaching dance in a high school or minimum of three years part or full-time experience teaching dance in a community college.

### Retention Criteria

1. Maintain a GPA of 3.0 in all graduate work completed at CSULB.
2. Continue satisfactory progress toward the degree objective.

### Advancement to Candidacy

1. Satisfy the general university requirements for advancement to candidacy and departmental criteria for admission.
2. Satisfactory completion of the CSULB Writing Proficiency Examination.
3. Maintain a minimum of a 3.0 GPA in all work undertaken for the graduate program.
4. Completion of a minimum of six units of graduate work.

5. Removal of any incompletes.

6. Filing of the student's graduate program form for the Master of Arts in Dance, signed by the student's graduate committee and approved by the Associate Dean for graduate accountability.

## Requirements

A minimum of 30 units with 24 units in DANC 510A, 512A, 520A, 525, 590, 591A, 597, 605; 6 units in DANC 699.

## Master of Fine Arts in Dance (code 7-5230)

CSULB offers the only authorized MFA in the CSU.

The Master of Fine Arts degree in Dance is the terminal degree in dance and offers professional training preparatory for careers in performance and choreography.

### Criteria for Admission to the Program

1. For acceptance into the degree program students must have completed a bachelor's or master's degree in dance (or equivalent) from an accredited institution with a 3.0 G.P.A. in upper division courses, meet University admission requirements, and demonstrate ability in performance and/or choreography.
2. When an undergraduate program is completed in a program which has different requirements than those of the dance major at CSULB, additional preparation may be required before the student can be considered for classified status in the degree program. Up to 24 units of credit from an M.A. degree program may be acceptable, with approval of a faculty committee.
3. Admission to the degree programs in performance and choreography is through audition and interview.
4. In order to obtain full classified status, a committee of graduate faculty will evaluate academic progress and professional accomplishment at the end of the student's first full year in residence.
5. Advancement to Candidacy
  - a. Attain fully classified status
  - b. Remove all undergraduate deficiencies
  - c. Submit a program for the approval of the student's departmental faculty advisor, the department chair, the graduate advisor, and the Dean of Graduate Studies
  - d. Pass the Writing Proficiency Exam
  - e. 3.0 minimum G.P.A.

### Requirements

The M.F.A. degree in Dance is a 60 unit degree. Concentrations are in Performance, Choreography or Performance/Choreography.

#### Performance Concentration

45 to 47 units to include: DANC 412A, 412B, 414A, 414B, 512A, 512B, 514A, 514B, 580A, 580B, 585A, 585B, 589, 595, 597, 642, 696, 699;

Electives: 13 to 15 units selected from DANC 518, 528, 520B, 520C, 520D, 525, 545, 583A, 583B, 591A, 591B, 599 or up to 15 units selected from other departments with approval of advisor.



## Choreography Concentration

47 to 49 units to include: DANC 510A, 510B, 520A, 520B, 520C, 520D, 525, 580A, 580B, 585A, 585B, 589, 591A, 591B, 597, 642, 696, 699;

Electives: 11 to 13 units selected from DANC 510C, 510D, 514A, 514B, 518, 545, 595, 599 or up to 13 units selected from other departments with approval of advisor.

## Performance/Choreography Concentration

48 to 50 units to include: DANC 412A, 412B, 414A, 414B, 520A, 520B, 525, 580A, 580B, 585A, 585B, 589, 591A, 591B, 595, 597, 642, 696, 699;

Electives: 10 to 12 units selected from DANC 512A, 512B, 514A, 514B, 518, 520C, 520D, 545, 599 or up to 12 units selected from other departments with approval of advisor.

## Courses (DANC)

### Dance Technique

Note: Dance majors must take technique courses and composition in sequence and screen for level placement in all technique classes. Screening will take place the previous semester and the first day of class. (Non-major technique classes are not screened. They are open to all students.)

### Lower Division

#### 100. Orientation to Dance (2)

Corequisite: DANC 112A. Introductory information, degree requirements, career opportunities, current problems and issues in the field. Student identification of personal learning needs and goals. Credit/No Credit grading only.

#### 110. Viewing Dance (3)

Introduction to contemporary dance theatre through viewing dance films (modern dance, ballet and ethnic), dance performances, and lecture/discussions on dance.

#### 111A. Beginning Modern Dance (2)

Basic skills and techniques of modern dance. Not open to dance majors. (4 studio hours.)

#### 112A,B. Modern Dance Technique I, II (3,3)

Prerequisites: DANC 111A or consent of instructor. Open to Non-majors. Increased skills and techniques of modern dance. Repeatable to a maximum of 6 units. (6 studio hours.)

#### 113A. Beginning Ballet (2)

Basic skills and techniques of ballet. Not open to dance majors. (4 studio hours.)

#### 114A,B. Ballet Technique I, II (3,3)

Prerequisites: DANC 113A or consent of instructor. Open to non-majors. Increased skills and techniques of ballet. Repeatable to a maximum of 6 units. (6 studio hours.)

#### 115A. Beginning Jazz (2)

Not open to dance majors. Basic skills and techniques of jazz. May be repeated once for credit. (4 studio hours.)

#### 116A-B. Jazz Technique I, II (2-2)

Prerequisite: Open to dance majors only. Basic theory and practice of modern jazz dance. May be repeated once for Credit/No Credit grading. (4 studio hours.)

#### 117. Tap Dance I (2)

Basic technique in the tap dance idiom, time steps, stylistic patterns, rhythmic patterns and tap combinations. Traditional grading only. Course may be repeated to a maximum of 4 units. (4 studio hours.)

#### 120. Improvisation I (2)

Use of improvisation as an introduction to structural form; individual and group problems. (4 studio hours.)

#### 131. Introduction to Music for Dance (2)

Basic music notation, simple and complex rhythmic patterns, poly-rhythms, skill in the use of percussion instruments and a brief survey of the historical periods of music for dance. (4 studio hours.)

#### 152. Intermediate Modern Technique I (3)

Prerequisites: Dance Major or Minor, and placement screening. Corequisite: DANC 181A or B. Intermediate skill in modern technique. Traditional grading only. Repeatable to a maximum of 6 units. (6 studio hours.)

#### 154. Intermediate Ballet Technique I (3)

Prerequisites: Dance Major or Minor, and placement screening. Corequisite: DANC 181A or B. Intermediate skill in ballet technique. Traditional grading only. Repeatable to a maximum of 6 units. (6 studio hours.)

#### 180A. Dance Performance (1)

Prerequisites: Audition, dance major or minor. Participation in dance productions. Traditional grading only. Repeatable to a maximum of 4 units. (2 studio hours.)

#### 180B. Dance Performance (1)

Prerequisites: Audition, dance major or minor. Participation in dance productions. Traditional grading only. Repeatable to a maximum of 4 units. (2 studio hours.)

#### 181A. Dance Production Technical (1)

Corequisite: DANC 152, 252, 154 or 254. Technical participation in Dance Department-sponsored productions. Repeatable to a maximum of 4 units. Traditional grading only. (2 studio hours.)

#### 181B. Dance Production Technical (1)

Corequisite: DANC 152, 252, 154 or 254. Technical participation in Dance Department-sponsored productions. Repeatable to a maximum of 4 units. (2 studio hours.)

#### 214. Ballet Pointe (1)

Prerequisite: DANC 114A or consent of Instructor. Development of the technique of dancing in pointe shoes. May be repeated once for credit. Traditional grading only. (2 studio hours.)

#### 220. Dance Composition I (3)

Prerequisite or Corequisite: Dance 131. Theory and practice in the basic elements of dance composition. (Lecture 1 hour, 4 studio hours.)

#### 247. Dance Conditioning (3)

Prerequisite or corequisite: DANC 152. Pilates-based conditioning program for dancer majors employs a prescribed series of exercises performed on the floor mat and augmented to Reformer use. Traditional grading only. (6 studio hours.)

#### 252. Intermediate Modern Technique II (3)

Prerequisites: Dance Major or Minor, and placement screening. Intermediate skill in modern technique. Traditional grading only. Repeatable to a maximum of 6 units. (6 studio hours.)

#### 254. Intermediate Ballet Technique II (3)

Prerequisites: Dance major or minor, and placement screening. Intermediate skill in ballet technique. Traditional grading only. Repeatable to a maximum of 6 units. (6 studio hours.)

#### 279. Exploring Dance: The Language of Movement (3)

Prerequisites: Open to all Liberal Studies Majors, open to others with permission of the instructor based on availability. Exploration of the movement language of dance: as it relates to the creative process in producing dance; to historical and cultural aspects of dance; as the basis for critical thinking and aesthetic valuing in dance; and to activities geared to the developmental aspects of children, 5-12 years, as outlined in the California State Framework for the Visual and performing Art, and guidelines, Dance Component, grades k-8. (Lecture 1 hr, 4 studio hours.)

#### 295. Repertory (1-3)

Prerequisites: Audition, dance major. Experience in rehearsal and performance practice in an intensive format. Traditional grading only. Course may be repeated for a maximum of 6 units. (2-6 studio hours.)

## Upper Division

### 312A,B. Advanced/Intermediate Modern Technique (3,3)

Prerequisites: Dance Major or Minor, and placement screening. Advanced/intermediate skill in modern technique. Traditional grading only. Repeatable to a maximum of 6 units. (6 studio hours.)

### 313. Modern Dance Workshop (2)

Prerequisite: Dance major or minor. Exploration of the techniques of modern dance. Must be taken the first time for a grade and may be repeated once for credit/no credit. (4 studio hours.)

### 314A,B. Advanced/Intermediate Ballet Technique (2,2)

Prerequisites: Dance major or minor, and placement screening. Advanced/intermediate skill in ballet technique. Traditional grading only. Repeatable to a maximum of 4 units. (4 studio hours.)

### 315. Ballet Workshop (2)

Prerequisites: Dance major or minor. Exploration of the techniques of ballet. The first time taken will be for a letter grade. May be repeated once for credit/no credit. (4 studio hours.)

### 316A,B. Advanced Jazz Technique (2)

Prerequisites: DANC 116B or consent of instructor. Advanced theory and practice of jazz technique. Traditional grading only. Repeatable to a maximum of 4 units. (4 studio hours.)

### 318. World Dance (1-3)

Theory and technique of various world dance forms. May be repeated up to 12 units, provided it is with a different instructor each time. (Lecture 1 hour, 2-4 studio hours.)

### 319. Dance Laboratory (1)

Participation in dance technique projects. Consent of instructor and department chair. (2 studio hours.)

### 320. Dance Composition II (3)

Prerequisite: DANC 220. Development of theme and style in small group studies. (Lecture 1 hour, 4 studio hours.)

### 321. Directed Choreography (1-3)

Prerequisites: DANC 120, 220 or permission of Instructor. Independent choreographic projects finalized in a performance venue under supervision of a faculty member. Traditional grading only. Repeatable to a maximum of 6 units. (2-6 studio hours.)

### 331. Music for Dance (3)

Prerequisite: DANC 131 or consent of instructor. Theoretical and practical analyses of music form and style as appropriate for use in dance classes and performance. Includes a brief survey of historical periods and the development of music repertoire for dance. (Lecture 1 hour, 4 studio hours.)

### 350. Dance Notation I (3)

Prerequisite: DANC 131. Theory and practice of notating movement through Labanotation. Traditional grading only.

### \*360. Prevention and Care of Dance Injuries (3)

Prerequisite: DANC 247 or 361. Factors in injury prevention. Principles of injury care. Traditional grading only.

### \*361. Body Placement for the Dancer (2)

Prerequisites: Open to Dance Majors and Minors. Body Placement and corrective exercises for modern dance and ballet classes. Credit/No Credit grading only. (4 studio hours.)

### 362. Dramatic Concepts for Dancers (2)

Prerequisite: Dance major or minor. Use of acting techniques to provide dramatic content to dance movements. (4 studio hours.)

### 373I. Nonverbal Communication: Interaction of Mind and Body (3)

Prerequisites: ENGL 100 and upper division status. History and theories of the development of mind/body integration. Enhancement of personal and interpersonal relations through lectures, discussion, films and movement experiences. Analysis and synthesis of the interdependence of the psychological and physical processes in non-verbal communication. Same course as ED P 373I.

### 380A,B. Dance Performance (1,1)

Prerequisite: Open to Dance Majors and Minors only. Participation as a performer and/or choreographer in Dance Department productions. Concert participation is by audition only. A combination of 380A,B and 480A,B may be repeated for a total of eight units. (3 or more studio hours.)

### 381A,B. Dance Production Technical (1,1)

Technical production participation in Dance Department sponsored productions. A combination of 381A,B and 481A,B may be repeated for a total of eight units. (3 or more studio hours.)

### 398. Fieldwork in Dance Elementary (1-3)

Prerequisite: DANC 475. Supervised teaching experience in dance in an off-campus setting. Practical experience working with students in kindergarten through 6th grade. Credit/No Credit grading only. May be repeated to a maximum of six units.

### 399. Fieldwork in Dance Secondary (1-3)

Prerequisite: DANC 470. Supervised teaching experience in dance in an off-campus setting. Practical experience working with students in grades 7 through 12 or community college. Credit/No Credit grading only. May be repeated for a maximum of six units.

### 412A,B. Advanced Modern Technique (3,3)

Prerequisites: Dance Major or Minor, and placement screening. Advanced skill in modern dance technique. Traditional grading only. Repeatable to a maximum of 6 units. (6 studio hours.)

### 414A,B. Advanced Ballet Technique (2,2)

Prerequisites: Dance Major or Minor, and placement screening. Advanced skills in the technique of ballet. Traditional grading only. Repeatable to a maximum of 4 units. (4 studio hours.)

### \*416. Ballet Variations (2)

Prerequisite: DANC 254. Covers modern and classical variations and how to "score" the work. Teaches the dancer how to look at the work and appropriately interpret its style, technique, musicality, focus, special content and phrasing. Stresses the interpretation and analysis of what the variation means artistically. Helps students approach all work with creative visualization. Traditional grading only. (4 studio hours.)

### 420. Advanced Composition (3)

Prerequisite: DANC 320 or consent of instructor. Approaches to the development of choreographic materials of extended structure and content. (Lecture 1 hour, 4 studio hours.)

### 435I. Dance in Film (3)

Prerequisites: ENGL 100 and upper division status. Examination of the relationship between dance and film; study of historical and theoretical connections placed in both aesthetic and cultural contexts.

### 442A. History of Dance to 1900 (3)

Development of dance from Aboriginal to 20th Century. Traditional grading only.

### 442B. Twentieth Century Dance History (3)

Prerequisite: DANC 442A. Development of Ballet and Modern dance in the 20th Century. Traditional grading only.

### 445./545. Movement Analysis (3)

Prerequisites: Open to Dance Majors and Minors only. Study of the principles underlying movement and their application to all areas of movement study. Traditional grading only. (Lecture 2 hours, 2 studio hours.)

### 470. Dance Methodology (3)

Prerequisites: DANC 312A or 312B and 331, or consent of instructor. Methods for teaching dance in order to prepare for teaching in studios, recreation departments, companies, institutions, public schools, colleges and universities. (Lecture 1 hour, 4 studio hours.)

### 475. Dance for Children (3)

Prerequisites: DANC 120, 331, 312A,B or consent of instructor. Practical experience in teaching dance to elementary school children employing improvisational approaches to basic elements of dance as integrated into the total elementary curriculum; as a basic form of communication, as an instrument for the development of individual creativity, as identification of dance as an art form. Traditional grading only.

**480A,B. Dance Performance (1,1)**

Prerequisite: Open to Dance Majors and Minors only. Participation as a performer and/or choreographer in Dance Department approved University-sponsored production. Most concert participation is by audition only. A combination of 380A,B and 480A,B may be repeated for a total of 8 units. (3 or more studio hours.)

**481A,B. Dance Production – Technical (1,1)**

Technical participation in Dance Department-sponsored productions. A combination of 381A,B and 4381A,B may be repeated for a total of 8 units. (3 or more studio hours.)

**\*485. Contemporary Dance and the Fine Arts (3)**

Prerequisite: DANC 331 or consent of instructor. Advanced theory and practice relating contemporary dance to the fine arts.

**487./687. CSU Summer Arts (1-6)**

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units. (2-12 studio hours.)

**488. Organization of Dance Production (3)**

Prerequisite or Corequisite: DANC 312A or 312B. Analysis and practice in the production elements of dance concerts. Course is coordinated with a department concert. Traditional grading only.

**489. Special Topics in Dance (1-3)**

Prerequisite: Consent of instructor. Topics of current interest in the field of dance selected for special presentation and development. Topics will be announced in the Schedule of Classes. (2-6 studio hours.)

**490. Special Topics in Dance (1-3)**

Prerequisite: Consent of instructor. Topics of current interest in the field of dance selected for special presentation and development. May be repeated for credit to a total of 12 units provided it is a different topic, or with consent of department chair. Topics will be announced in the Schedule of Classes. (2-6 studio hours.)

**491A. Design for Dance Lighting (3)**

Prerequisites: Upper division status or permission of instructor. Techniques of designing lighting for dance. Practical applications include designing and executing lighting for dance for concerts in various settings. (6 studio hours.)

**491B. Design for Dance Costuming (3)**

Prerequisites: Upper division status or permission of instructor. Designing and constructing costumes for dance. (6 studio hours.)

**493. Computers for Dance (3)**

Prerequisites: Dance major or minor. Theory and practice in the basic techniques of computer usage in the art form of dance. Traditional grading only. Course may be repeated for a maximum of 6 units. (6 studio hours.)

**495. Repertory (1-3)**

Prerequisite: Audition. Students learn and perform works of distinguished choreographers. Leads to concert performance. May be repeated for credit to a total of 18 units provided it is with a different instructor each time. (2-6 studio hours.)

**499. Directed Studies in Dance (1-3)**

Prerequisite: Consent of Instructor. Independent projects and research of advanced nature in any area of dance.

## Graduate Division

**505. Seminar in Dance Methodology (3)**

Prerequisite: Acceptance into the MA or MFA program or consent of advisor. Discussion specific to the teaching of dance in preparation for teaching in secondary and post-secondary education. Traditional grading only.

**510A,B,C,D. Technique Laboratory (3,3,3,3)**

MFA Choreography option students are required to take a technique class each semester. By registering for DANC 510, each will be assigned to an appropriate level technique class. Additional work will be required as appropriate to a graduate level course. (6 studio hours.)

**512A. Advanced Modern Technique (3)**

Prerequisite: Placement Screening. A course for graduate dance majors in the advanced skill of modern dance techniques. Traditional grading only. Course may be repeated for a maximum of 9 units. (6 studio hours.)

**512B. Advanced Modern Technique (3)**

Prerequisite: Placement Screening. A course for graduate dance majors in the advanced skill of modern dance techniques. Traditional grading only. Course may be repeated for a maximum of 9 units. (6 studio hours.)

**514A. Advanced Ballet Technique (2)**

Prerequisite: DANC 414B or equivalent. Graduate level skills in the technique of ballet. Traditional Grading Only. Course may be repeated for a maximum of 6 units. (4 Studio Hours.)

**514B. Advanced Ballet Technique (2)**

Prerequisite: DANC 514A. Graduate level skills in ballet technique. Traditional grading only. Course may be repeated for a maximum of 6 units. (4 studio hours.)

**518. World Dance II (3)**

For graduate dance majors to learn the techniques and styles of ethnic dance forms. A dancer from the culture will teach the class. A different culture will be studied each semester. Traditional grading only. Course may be repeated for a maximum of 6 units. (Lecture 1 hour, 4 studio hours.)

**520A. Choreography A (3)**

A course in advanced approaches to the development of choreographic materials and techniques. The class will include an introduction of video and other multi-media techniques as choreographic tools. Traditional grading only. (Lecture 1 hour, 4 studio hours.)

**520B. Choreography B (3)**

Prerequisite: DANC 520A. A course in advanced study of choreographic methods with an emphasis on the use of costumes, sets/props, and lighting for dance. Traditional grading only. (Lecture 1 hour, 4 studio hours.)

**520C. Choreography C (3)**

Prerequisite: DANC 520B. A course in advanced methods and techniques of choreography concentrating on the individual style of the students' work and in depth study in developing a full-length dance work. Class will involve choreographing works of substantial length using small and large numbers of dancers. Instruction will emphasize consistency in choreographic style and content. Traditional grading only. (Lecture 1 hour, 4 studio hours.)

**520D. Choreography D (3)**

Prerequisite: DANC 520C. A course in the advanced study of choreographic methods, with an emphasis on the use of costuming, lighting, music/sound and other production techniques in preparation for performance. The course involves presenting finished full-length costumed dance works, lighting designs for the work or works and learning the methods of directing dancers during the production run of a concert. Traditional grading only. (Lecture 1 hour, 4 studio hours.)

**525. Dance in Video/Film (3)**

Basic camera techniques. Exploration of movement within the confines of the camera. Perspective in filming/taping dance. (6 studio hours.)

**531. Music for Dance II (3)**

Prerequisites: DANC 331 or equivalent. This course is to provide dance students an opportunity for advanced, in-depth study of musical form and style as it applies to dance. Traditional grading only.

**545./445. Movement Analysis (3)**

Prerequisites: Open to Dance Majors and Minors only. Study of the principles underlying movement and their application to all areas of movement study. Traditional grading only. (Lecture 1 hour, 4 studio hours.)

**580A,B. Dance Performance (1)**

Prerequisite: Audition. Participation as a performer and/or choreographer in Dance Department approved University-sponsored production. Traditional grading only. Course may be repeated for a maximum of 2 units. (3 or more studio hours.)

585A,B. Dance Performance (1)

Prerequisite: Audition. Participation as a performer and/or choreographer in Dance Department approved University-sponsored production. Traditional grading only. Course may be repeated for a maximum of 2 units. (3 or more studio hours.)

589. Works in Progress (1-2)

Prerequisite: DANC 420A. Specialized individual performance projects. Preparation for MFA thesis/project. Traditional grading only. Course may be repeated for a maximum of 4 units. (2-4 studio hours.)

590. Special Topics (3)

Prerequisite: Acceptance into MFA program in dance. Topics of current interest to graduate students in dance will be selected for intensive study. Traditional grading only for Majors/Minors. Course may be repeated for a maximum of 6 units with different topics.

591A. Design for Dance Lighting II (3)

Provides students with advanced work in design lighting for dance, and offers the in-depth technical knowledge and practical experience necessary to the execution of complete lighting plots. Traditional grading only. (6 studio hours.)

591B. Design for Dance Costume II (3)

Provides graduate students with advanced coursework in designing costumes for dance, and with skills necessary to execute the designs. Traditional grading only. (6 studio hours.)

592. Special Topics (1-3)

Prerequisite: Acceptance into MFA program in dance. Topics of current interest to graduate students in dance will be selected for intensive study. Traditional grading only for Majors/Minors. Course may be repeated for a maximum of 6 units with different topics. (2-6 studio hours.)

595. Repertory (1-3)

Prerequisite: Audition. A course for graduate dance majors to learn more advanced works from the repertoire of noted choreographers or to have new works created on the students by distinguished choreographers. Instruction, rehearsal and performance gives the dance student a broader knowledge of the various methods used by professional choreographers and the experience of performing those works on stage before an audience with full theatrical production including music, sound, costumes and sets. Traditional grading only. Course may be repeated for a maximum of 6 units. (2-6 studio hours.)

597. Criticism and Analysis of Dance (3)

Students will analyze choreography and write critiques in order to learn how to look at and evaluate dance works. Traditional grading only.

599. Directed Studies (1-3)

Prerequisite: Consent of instructor. Individual research or project under the guidance of a faculty member. May be repeated for a maximum of six units. Traditional grading only.

605. Seminar in Dance (3)

Prerequisites: Acceptance into the MA or MFA in Dance. The course will be conducted as a seminar. Literature, including research appropriate to the particular topic of the course, will be examined and discussed. Traditional grading only.

642. Seminar in Dance History (3)

Intensive study of selected topics in the History of Dance. Traditional grading only. Course may be repeated for a maximum of 9 units with different topics.

687./487. CSU Summer Arts (1-6)

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units. (2-12 studio hours.)

696. Research Methods (3)

Prerequisite: Graduate level in Dance. Theory and practice in the basic techniques of information management and research methodology in dance. Traditional grading only.

699. Thesis/Project (1-6)

Prerequisite: Advancement to Candidacy. Planning, preparation, and completion of a thesis/project in dance. Traditional grading only. Course may be repeated for a maximum of 6 units.

# DESIGN

*College of the Arts*

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Herbert H. Tyrnauer (Emeritus, 1995)

Jerry W. Yates

Associate Professors

Mamdouh Fayek

Administrative Coordinator

Carolyn H. Sandusky

The Department of Design was established to provide an administrative and academic framework for professional design training in the fields of Industrial Design, Interior Architectural Design, and Display/Exhibition Design. The degree programs that may be pursued are the Bachelor of Fine Arts, the Master of Arts, the Master of Fine Arts, and the Bachelor of Science, offered in the Industrial Design curriculum.

The faculty of Design believe that an appropriate education for the professional designer must include a comprehensive body of technical knowledge. Such knowledge should include historical sources, tools, techniques, and materials; a methodology for encouraging the creative process; and the attainment of the requisite level of skill to express visual ideas with clarity. While being fully equipped to meet the objectives of the marketplace, today's designer must also achieve sufficient educational breadth to adapt successfully to the varying demands imposed on design work by economic, social, and psychological factors.

The academic programs of the Department of Design have been accredited by the National Association of Schools of Art and Design (National Association of Schools of Art and Design, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700). Student demand for these programs is high. Requirements for admission and degree requirements are given below.

## Bachelor of Fine Arts in Art

The Bachelor of Fine Arts in Art degree is offered as preparation for the student who will eventually seek the Master's degree or a position as a professional designer. The BFA program is a rigorous and competitive one. One hundred and thirty-two semester units are required for the degree, including 81 units for the major and 51 for General Education. Students are first admitted into pre-Interior Design (code 4-5454). Portfolio review is required for admission to the professional BFA program. Portfolios are reviewed in the spring semester for fall admission to junior standing and the upper division program.

### Option in Interior Design (code 4-5854) (132 units)

Lower Division: ART 115B, 115C; DESN 120A, 120B, 132A, 132B, 141, 142, 232, 241, 242, 243, 244, 245, 251.

Upper Division: DESN 341A, 341B, 342, 343, 350A, 367, 369, 440, 441A, 441B; 11 units of upper division design/art electives outside of interior design approved by the major advisor. Approved lower and upper division electives to total 132 units.

Students must achieve "C" or better in each required design course to progress in the sequence of study.

## Bachelor of Science in Industrial Design (code 3-5853) (132 units)

This degree program is concerned with the relationship between technology and the visual arts. It includes background courses in engineering and sciences. Students are first admitted into pre-Industrial Design (code 3-5354). Portfolio review is required for admission to the professional BS program. Portfolios are reviewed in the spring semester for fall admission to junior standing and the upper division program. Approved lower and upper division electives and required courses to total 132 units. Students must achieve "C" or better in each required design course to progress in the sequence of study.

### Requirements

Lower Division: ART 115B, 115C; DESN 120A, 120B, 132A, 132B, 232, 251, 252, 253, 254, 255, 280.

Upper Division: DESN 330A, 331A, 331B, 333A, 333B, 368, 431A, 431B; twelve units of design/art electives, nine units of which must be outside of Industrial Design. Approved lower and upper division electives to total 132 units.

## Master of Arts in Art (code 5-5850)

The Design Department Master of Arts in Art program provides professional specializations within the degree: Industrial Design, Interior Design, and Display/Exhibition Design.

### Prerequisites

1. A bachelor's degree from an accredited institution with a minimum of 24 upper division units in design/art comparable to those required of a major in Design at this University;
2. Completion of 16 units minimum of upper division course work in the area of specialization;
3. Completion of 12 units of design/ art history, six units of which must be upper division;
4. Successful completion of the Writing Proficiency Examination;
5. Presentation, to the student's specialization faculty, of a portfolio of representative studio work with emphasis in the area of specialization. Reviews are completed by the first week in October for the following spring semester, by the first week in March for the following fall semester;
6. A GPA of 3.0 or better in upper division design/art course work. Students who do not meet the minimum 3.0 GPA within the required 24 units as an undergraduate may count units taken as a post-baccalaureate student to meet this GPA. Course work taken as a graduate to validate undergraduate preparation may not be used to satisfy any requirement in the student's MA program.

All prerequisites must be fulfilled before a student can become classified in a graduate degree program.

### Advancement to Candidacy Requirements

1. Classified graduate standing. Completion of all prerequisites;
2. A graduate program approved by the student's committee, the Graduate Advisor, the Design Department Chairman, and the Dean of the College of the Arts;
3. A GPA of 3.0 or higher in all work undertaken for the program;
4. The removal of any Incompletes;

5. Successful completion of the Advancement Review;
6. Complete minutes of graduate committee meetings with the student which total a minimum of one meeting for each semester of program units.

### Requirements

Completion of all requirements established by the student's graduate advisory committee, including:

1. A minimum of 30 units of approved upper division and graduate-level courses; a minimum of 15 units at the 500- and 600-level; a minimum of 18 units in the specialization;
2. A minimum of six units of design history or related history beyond the twelve prerequisite units;
3. A thesis or studio project. All studio projects must be formally exhibited.

## Master of Fine Arts in Art (code 7-5850)

The Design Department Master of Fine Arts degree program provides specializations in: interior design and display/exhibition design.

### Prerequisites

1. A bachelor's degree from an accredited institution with a minimum of 24 units of upper division design course work comparable to those required for the BFA in Design at this University;
2. Completion of a minimum of 18 units of upper division course work in the area of specialization for the proposed MFA;
3. Completion of a minimum of 12 units of design/art history, six units of which must be upper division;
4. Successful completion of the Writing Proficiency Examination;
5. Presentation, to the student's specialization faculty, of a portfolio of representative studio work with emphasis in the area of specialization. Reviews are completed by the first week in October for the following spring semester, by the first week in March for the following fall semester. (See MA and MFA procedures, "Screening for Acceptance" for details);
6. A GPA of 3.0 or better in upper division design/art course work. Students who do not meet the minimum 3.0 GPA within the required 24 units as an undergraduate may count units taken as a post-baccalaureate student to meet this GPA. Course work taken as a graduate to validate undergraduate preparation may not be used to satisfy any requirement in the student's MA program.

All prerequisites must be fulfilled before a student can become classified in a graduate degree program.

### Advancement to Candidacy Requirements

1. Classified Graduate standing. Completion of all prerequisites;
2. A graduate program approved by the student's committee, the Graduate Advisor, the Design Department Chairman, and the Dean of the College of the Arts;
3. A GPA of 3.0 or higher in all work undertaken for the program;
4. The removal of any Incompletes;
5. Successful completion of the Advancement Review;

6. Complete minutes of graduate committee meetings with the student which total a minimum of one meeting for each semester of program units.

### Requirements

A minimum of 60 units of approved coursework including at least:

1. Thirty-six 36 units in the area of specialization. Thirty of these units must be in the 500- and 600-levels and must include 690A, 690B, 692, and 699;
2. Six units of approved upper-division or graduate coursework outside of design;
3. A comprehensive review, administered by the student's graduate advisory committee, after the completion of 21 units of studio coursework. This review is to determine whether the candidate will continue in the MFA program;
4. A minimum of 6 units of approved upper division or graduate design/ art history beyond that required as prerequisite work;
5. Twelve units of upper division or graduate level elective coursework in design;
6. A studio project, exhibited and described in a studio thesis.

### MFA Transfer and Residence Policy

1. Transfer credit allowable on the MFA is normally not to exceed 24 units;
2. MFA candidates must complete a minimum of 18 specialized units with graduate numbers in residence;
3. All transferred credit used in the MFA must be determined by the student's graduate committee and approved by the department Graduate Advisor;
4. The CSULB Master of Arts degree will normally count for a maximum of 30 units (18 in specialization) toward the M.F.A. degree. Exceptions up to an additional 6 units may be approved for outstanding students by the Art/Design Graduate Committee.

## Courses (DESN)

### Lower Division

#### 120A-B. Fundamentals of Design (3-3)

Prerequisites: for 120A: none; for 120B: 120A. A systematic approach to the process of designing two and three-dimensional objects including color theory, surface and volume investigation. (6 hours laboratory.) Traditional grading only.

#### 132A-B. Perspective and Rendering Systems (3-3)

Prerequisites: for 132A: none; for 132B: 132A. Fundamentals of drawing, perspective and rendering techniques used in the design disciplines for accurate and dramatic presentations. (6 hours laboratory.) Traditional grading only.

#### 141. Interior/Architectural Drafting (3)

Architectural drafting and graphic techniques used in light framing and commercial construction with emphasis on interiors. (6 hours laboratory.) Traditional grading only.

#### 142. Beginning Space Planning (3)

Prerequisites: DESN 141. Functional, human, and aesthetic factors of space planning for interiors. (Laboratory 6 hours.) Traditional grading only.

#### 220. Principles of Color (2)

Study of the physical, physiological and psychological aspects of color through lecture and studio projects. An investigation of the various methods used to catalog color. (4 hours laboratory.)

#### \*232. Visualization Techniques (3)

Prerequisites: DESN 120B, 132B, consent of instructor. Introduction to technical drawing and visual presentation of concepts using communication techniques employed by professional design studios. (6 hours laboratory.) Traditional grading only.

#### 241. Design Drawing and Processes (3)

Prerequisites: DESN 120B, 132B or permission of instructor. Introduction to Design Drawing and Design Processes. Sketching and solving limited scale interior and architectural problems. (Laboratory 6 hours.) Traditional grading only.

#### 242. Interior/Architectural Model Building (3)

Prerequisites: DESN 120B, 132B, 142, 251. Building of interior/architectural models for construction, design analysis and presentation. (Laboratory 6 hours.) Traditional grading only.

#### 243. Materials of Interiors (3)

Prerequisites: DESN 120B, 132B, or permission of instructor. Materials, processes and resources as they relate to interior architecture. Examination of technology and application through lecture, demonstration and field trips.

#### 244. Lighting Design for Interior Architecture (3)

Prerequisites: DESN 120B, 132B, 142. Use of conceptual and practical design problems. The nature and properties of light and color are studied. (Laboratory 6 hours.) Traditional grading only.

#### 245. Building Systems for Interior Architecture (3)

Prerequisites: DESN 142. Survey of design implications of typical building systems (structural, mechanical, plumbing, electrical, acoustical, energy conservation) as influences on interior architectural design. Traditional grading only.

#### 251. Exploratory Woodwork (2)

General woodworking designed to provide a broad background of information related to woodworking processes involving both hand and machine tools. Skills and safe work habits developed through individual solutions to given problems. Certification of safety instructions provided. (Laboratory included.)

#### 252. Exploratory Metalwork (2)

Metalworking in the areas of bench work, forging, casting, art metal, sheet metal and welding processes. Designed: (1) to give a broad background and understanding in the technology of materials; (2) to develop skills through individual solutions for given problems; and (3) to develop safe habits in working with metals and equipment associated with metal work. (Laboratory included.)

#### 253. Introductory Plastics (2)

Materials, processes and applications of industrial plastics and polymers. Basic operation in processing, fabricating and finishing of thermoplastics and thermoset plastics materials. (Laboratory included.)

#### 254. Production Techniques and Materials (3)

The study of production processes and common industrial materials utilized in manufacturing of products. Includes laboratory application in fabrication, machining, casting and joining processes. (Technical Activity-Laboratory 6 hours.)

#### 255. Machine Drawing (3)

Sketching and drawing of machine parts in detail and in assembly. Use of nomenclature standard tables and empirical formulae. (Discussion-Laboratory 4 hours.)

#### 280. Industrial Design Processes (3)

Prerequisites: DESN 232, 251, 252, or permission of instructor. Introductory course in the materials and processes of product development for mass production. (6 hours laboratory.)

### Upper Division

#### 330A-B. Computer-Aided Design (3-3)

Prerequisites: Upper division status in either Industrial, Graphic or Interior Design or permission of instructor. Introductory course in PC tools for use in the fields of Industrial, Graphic and Interior Design. Includes drafting, 3-D modeling and paint programs. (6 hours laboratory.)

**\*331A-B. Industrial Design (3-3)**

Prerequisites: for DESN 331A: DESN 280 or permission of instructor; for 331B: DESN 331A. Planning and design of useful products for industrial production. (6 hours laboratory.)

**\*333A-B. Industrial Design Methodology (3-3)**

Prerequisites: for 333A: Permission of instructor; for 333B: DESN 333A or permission of instructor. Examination of methods and techniques in design problem solving. (6 hours laboratory.)

**\*341A-B. Interior Design (3-3)**

Prerequisites: for 341A: DESN 232, 243; ART 115B, 115C; for 341B: DESN 341A. Design of interior environments emphasizing interrelationships between interior space, architectural form and human factors in design. (6 hours laboratory.)

**342. Interior/Architectural Presentations (3)**

Prerequisites: DESN 232, 241, and Junior standing in the professional program. Exploring and using various techniques and methods of visually and verbally presenting design concepts, ideas, and finished projects. (Laboratory 6 hours.) Traditional grading only.

**343. Advanced Drafting and Detailing (3)**

Prerequisites: DESN 143, 242, 245, and Junior standing in the professional program. Advanced drafting and detailing skills of architectural interior design related to light frame and other construction processes. (Laboratory 6 hours.) Traditional grading only.

**\*344A-B. Display and Exhibition Design (3-3)**

Prerequisites: ART 115B, 115C; DESN 120B, 232 or consent of instructor. Use of materials, processes, and design concepts in the planning and preparation of displays and exhibits. (6 hours laboratory.)

**350A. Computer Graphics for Interiors and Architecture (3)**

Prerequisites: DESN 241, 242, 245. Principles and methods of computer graphic applications. Specification writing, drafting, graphic illustrations, space planning, and perspective are included. Students will become proficient with plotters, programs and processing, color, 2-dimensional and 3-dimensional planning. Traditional grading only. (Discussion 2 hrs, Lab 3 hrs.)

**350B. Advanced Computer Graphics for Interiors (3)**

Prerequisites: DESN 343, 350A. Advanced work in computer aided design for interiors and architecture. (6 hours laboratory.) Traditional grading only.

**351A. Process of Architectural/Interior Lighting Design (3)**

Prerequisites: DESN 232, 142 or 255, 251 or 252, 244 or 254; or permission of instructor. Exploration of processes used to conceptualize, present and develop architectural lighting designs. Traditional grading only. (Laboratory)

**351B. Applications of Architectural/Interior Lighting Design (3)**

Prerequisites: DESN 351A, 330A or 350A. Exploration of the major categories of applications (e.g., residential, office, etc.) and the specific principles, conventions and codes that apply to them as well as the basic use of lighting equipment common to these applications. Traditional grading only.

**367. History and Theory of Architecture (3)**

Evolution of architecture relative to the human need to shape environment in accordance with governing concerns of specific periods in history. Not open to students with credit in ART 417.

**368. History and Theory of Design (3)**

Development of design as an independent creative activity including a consideration of both pre-technological and technological culture. Not open to students with credit in ART 418.

**369. History of Furniture and Decorative Arts (3)**

Study of the history of furniture, finish materials, and accessories. (Lecture-discussion 3 hrs.) Traditional grading only.

**370. Design in Contemporary Society (3)**

Discover the principles of design by examining the human relationship to the built environment through a sequence of scales: from the organization of cities, to public architecture and housing, the design of furniture and products. Emphasis will be on experiencing design through lecture, lab, field observations and projects. Traditional grading only.

**\*431A-B. Advanced Industrial Design (4-4)**

Prerequisites: DESN 331B, PHYS 100AB or consent of instructor. Advanced planning and design of projects in the area of mass produced objects, packaging, traffic, transportation, mechanical design and shelter. (8 hours laboratory.)

**\*432. Advanced Rapid Visualization (3)**

Prerequisites: DESN 232 or consent of instructor. Advanced idea generation and visualization for industrial design. (6 hours laboratory.)

**\*435A. Furniture Design (3)**

Prerequisites: DESN 232, 251, 252, 331A, 341A, or permission of instructor. Design of public and private interior furnishings with an in depth study of the potentials of contemporary production methods and materials. (6 hours laboratory.)

**435B. Advanced Furniture Design (3)**

Prerequisites: DESN 435A, or permission of instructor. Continuation of DESN 435A. Projects focus upon research and the impact of human factors on the design of furniture. Traditional grading only.

**440. Professional Practices for Interior Architecture (3)**

Prerequisites: Permission of instructor. Examination of professional practices for commercial (corporate) institutional/public interior architectural design. Traditional grading only.

**\*441A-B. Advanced Interior Design (4-4)**

Prerequisites: DESN 341B, 343 or consent of instructor. Advanced interior design and space planning problems emphasizing relationships between the built environment and human factors in design. (6 hours laboratory.)

**\*442G. Internship in Industrial Design (3)**

Prerequisite: Consent of instructor. Student internship experience in selected industrial design offices. Opportunity to work under supervision of industrial designers in the field to expand student understanding of the complexities, discipline and challenges in the practice of industrial design. May be repeated once for credit. (6 hours laboratory.)

**\*442H. Internship in Interior Design (3)**

Prerequisite: Consent of instructor. Student internship experience in selected interior design offices. An opportunity to work under supervision of interior designers and architects in the field to expand student understanding of the complexities, discipline and challenges in the practice of interior design. Limited to six units in one semester and a total of nine units. (6 hours laboratory.)

**451. Implementation of Architectural/Interior Lighting Design (3)**

Prerequisites: DESN 351A, 330A or 350A. Exploration of methods and techniques for documenting and organizing the entire lighting design process, including computer applications, manual applications and mock-up activities. Traditional grading only.

**452. Custom Fixture and Luminaire Design (3)**

Prerequisites: DESN 232, 142 or 255, 251 or 252, 244 or 254, or permission of instructor. Explorations of design and prototypical fabrication of custom fixtures or prototype production luminaires. Traditional grading only.

**488./688. CSU Summer Arts (1-6)**

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

**\*490. Special Topics in Design (1-3)**

Prerequisite: Consent of instructor. Special topics of current interest in design will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes. (2-6 hours lab.)

**\*491. Special Topics in Design (1-3)**

Prerequisite: Consent of instructor. Special topics of current interest in design will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes. (2-6 hours lab.)



**\*495. Field Studies in Design (1-6)**

An opportunity to study design movements, objects, theories, techniques at appropriate off-campus locations. Up to six units of cumulative credit may be earned in DESN 495.

**\*499C. Special Studies in Display and Exhibition Design (3)**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in display and exhibition design. Limited to six units in one semester and a total of nine units. (6 hours laboratory.)

**\*499G. Special Studies in Industrial Design (3)**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in industrial design. Limited to six units in one semester and a total of nine units. (6 hours laboratory.)

**\*499H. Special Studies in Interior Design (3)**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in interior design. Limited to six units in one semester and a total of nine units. (6 hours laboratory.)

**697. Directed Studies (1-3)**

Prerequisite: Consent of instructor. Independent studies in technical and historical aspects of design.

**698. Thesis or Project (1-6)**

Prerequisite: Advancement to candidacy. Planning, preparation and completion of a thesis or project. Required of all Master of Arts candidates.

**699. Thesis or Project (1-6)**

Prerequisite: Advancement to candidacy. Planning, preparation and completion of thesis or project. Required of all M.F.A. candidates and all candidates seeking a second M.A.

## Graduate Courses

**541. Design of Human Environments (3)**

Prerequisites: FCS 342, 344B. Evaluation of human perception, theories of human brain functioning, belief systems in relation to creativity and perception, and research methods in environmental design. (Sem 3 hrs.) Traditional grading only.

**590. Special Problems in Design (1-3)**

Prerequisite: Consent of instructor. Special problems of current interest in design will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes. (2-6 hours laboratory.)

**599. Studio Problems in Design (3)**

Prerequisite: Consent of instructor. Advanced individual graduate projects, with faculty supervision, in an area of design specialization. Limited to six units in one semester and a total of 12 units in any one area. Areas will be designated by letter at the time of registration. (6 hours laboratory.)

C. Display and Exhibition

G. Industrial Design

H. Interior Design

**688./488. CSU Summer Art (1-6)**

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

**690A. Seminar in Design (3)**

Prerequisite: Consent of instructor. Selected reading and writing concerning topics relevant to student's specific disciplines in design with an opportunity for interdisciplinary discussion.

**690B. Seminar in Design (3)**

Prerequisite: Consent of instructor. Professional preparation for designers stressing practical concerns as well as current trends in design practices, theory and criticism.

**692. Public Exhibition (2-3)**

Prerequisite: Consent of instructor. Planning, preparation and administration of a public exhibition of creative work related to the design field. Two units only for all M.A. candidates. Three units only for all M.F.A. candidates. The course will result in a public exhibition by each M.A. and M.F.A. candidate. (6 hours or more laboratory.)

**694. Directed Studies Studio (1-3)**

Prerequisite: Consent of instructor. Independent studies in creative studio.

**695. Field Problems in Design (1-6)**

Opportunity to study design movements, objects, theories, techniques or literature at appropriate off-campus locations. Up to six units of cumulative credit may be earned in DESN 695.

# ECONOMICS

*College of Liberal Arts*

Department Chair

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Darwin C. Hall

Tomotaka Ishimine

Joseph P. Magaddino

Marshall H. Medoff

Dennis D. Muraoka

Robert F. Rooney

Davinder Singh

Iva Lee Skov

Andrew Stern

Associate Professors

Peter B. Griffin

Lisa M. Grobar

Jack W. Hou

Students desiring information should contact the department office for referral to one of the faculty advisors:

Credential Advisor

Simeon J. Crowther

Undergraduate and Graduate Advisor

Dennis Muraoka

When resources are scarce, difficult choices must be made on how resources are to be divided among competing uses. Economics is a social science that addresses the allocation of scarce resources. When applied to individuals, economics attempts to understand the behavior of individuals as consumers, managers and government officials. When applied to society as a whole, economics attempts to explain and predict the economy's total output, level of employment and price level (inflation).

## Bachelor of Arts in Economics (code 2-8510) (124 units)

The bachelor of arts degree with a major in economics prepares students for a variety of careers in business and government. The degree also provides the foundation for teaching in elementary and secondary schools and for more advanced study in economics, business, law and other related fields.

### Requirements

Lower Division: ECON 201, 202, ACCT 201, and either Math 115 or 122. Students with upper division status declaring Economics as a major may substitute ECON 300 for ECON 201 and 202 with departmental consent.

Upper Division: 310, 311, 380, and six additional upper division courses in economics of which at least two must be at the 400-level. The following courses may not be used to satisfy the elective requirement in economics: ECON 300, 308, 309I, 495, and 499. Students may take up to two of the following courses in meeting the elective requirement in economics: ACCT 310, 410, FIN 362, 464, C E 406.

The department also requires a minimum of two courses outside of Economics (totaling six or more units). Students may take any upper division courses from the departments listed below, or any of the following lower division courses: ANTH 100; GEOG 100; HIST 131, 132; MATH 117, 122, 123, 224; POSC 201; PSY 100; S W 220; SOC 100.

### Advisory Information

While students may freely choose from the Department's upper division courses, exclusive of the courses listed above, the Department strongly recommends that students consult with the undergraduate advisor in planning their programs. The Department is especially concerned that students select a program of study that satisfies their intellectual curiosity and serves their career aspirations. The following program areas\* have been devised to aid students in selecting upper division courses.

\*Not all program areas are available for students enrolled exclusively in the evening. Evening students should seek counseling from the undergraduate advisor in planning their programs.

### Business Economics

Students interested in preparing for a career in business or government are advised to select at least two courses from Group I: Business Economics ECON 320, 333, 355, 422, 430,

432, 434; at least one course from Group II: Quantitative Economics ECON 420, 481, 486; and at least one course from Group III: Accounting-Finance ACCT 310, 410, ECON 433, FIN 362, 464, or C E 406.

#### Pre-Law Economics

Students interested in preparing for a career in law are recommended to choose from the following: ECON 313, 320, 355, 430, 432, 434, 450, and 451.

#### General Economics

Students interested in obtaining a general background in economics are encouraged to take at least one course from three of the following groups:

Group I: Economic History, Systems and Institutions: ECON 313, 360I, 361I, 368.

Group II: International Trade and Development: ECON 365, 369, 370, 372, 465, 472.

Group III: Human Resource Economics: ECON 441, 445.

Group IV: Public Economics: ECON 306I, 450, 451, 462, 463, 464.

Group V: Quantitative Economics: ECON 420, 422, 481, 403, 486.

#### Theoretical Economics

Students preparing for graduate training in economics are advised to select from ECON 313, 320, 403, 420, 481, and 486. In addition, students are recommended to enroll in the following mathematics courses: MATH 122, 123, 224, 247, 380, and 381. Students considering graduate study in economics should consult the undergraduate advisor early in their senior year.

### Minor in Economics (code 0-8510)

The economics minor is designed to provide students with a broad-based introduction to the methods of economic analysis. It is suitable for students planning careers in many fields including primary and secondary education, journalism, law, or government. A minimum of 24 units which must include:

Lower Division: ECON 201 and 202, and either MATH 115 or 122. Students with upper division status declaring the minor may substitute ECON 300 for ECON 201 and 202 with departmental consent.

Upper Division: ECON 310; ECON 311 or 320, and at least three additional upper division economics courses, of which at least one must be at the 400 level. The following courses may not be taken as upper division electives in economics: ECON 300, 308, 309I, 495, and 499

### Minor in Business Economics (code 0-2775)

The minor in business economics is equally suitable for students pursuing baccalaureate degrees in non-business and business fields. The minor provides students with a strong concentration in the techniques of economic analysis most closely related to business decision-making. A minimum of 24 units which must include:

Lower Division: ECON 201 and 202, and one of the following: ACCT 201, MATH 115 or 122. Students with upper division status declaring the minor may substitute ECON 300 for ECON 201 and 202 with departmental consent.

Upper Division: ECON 310 or 333, 311 or 320. The remaining 9 units (3 courses) may be selected from the upper division courses listed immediately above or any of the following courses: IS 310 or ECON 380, 372, 420, 422, 430, 432, 433, 434, 441, 462, 472.

### Minor in International Economics (code 0-8511)

The minor in international economics provides students with an introduction to the techniques of economic analysis and the application of those techniques to issues in the world economy. Students will learn about the economic history and institutions of other countries, issues associated with the economic growth of less developed countries, and international trade and finance.

The minor is suitable for students from all majors planning careers in a wide variety of fields including business, government, journalism and education. A minimum of 24 units is required and must include:

Lower Division: ECON 201 and 202, and either MATH 115 or 122. Students with upper division status declaring the minor may substitute ECON 300 for ECON 201 and 202 with departmental consent.

Upper Division: ECON 310 or 333 and ECON 311 or 320, and any three of the following courses: ECON 361I, 365, 368, 369, 370, 372, 465, or 472.

### Master of Arts in Economics (code 5-8510)

The master of arts degree in economics is designed to provide academic preparation for positions in industry, government, consulting agencies and teaching. The emphasis is on the immediate application of more advanced principles of analysis to business, management and government. Candidates are responsible for observing the general requirements stated in the Catalog as well as requirements specified by the Economics Department. Detailed information on requirements may be obtained from the department graduate advisor.

A limited number of graduate assistantships are available to qualified students.

#### Prerequisites

1. A bachelor's degree with a major in economics; or
2. A bachelor's degree with 24 units of upper division courses comparable to those required of a major in economics at this University. (Deficiencies will be determined by the Economics Department.);
3. A minimum undergraduate GPA of 3.0 (B) in upper division economics courses. (A student who fails to meet this requirement may submit Graduate Record Examination scores on the verbal, quantitative and advanced economics sections, and petition the Economics Department for a waiver.);
4. Graduate students must consult with the graduate advisor for information concerning department procedures and for approval of their course of study before entering the master of arts program in economics.

#### Advancement to Candidacy

Satisfy the general requirements of the University for advancement to candidacy.

## Requirements

1. Thirty units of upper division and graduate courses approved by the Economics Department (courses marked with an asterisk), of which 24 must be in economics with a minimum of 18 units in the 500 and/or 600 series. All students must develop three fields of concentration in economics, including economic theory (micro and macro economics);
2. Satisfactory completion of ECON 503, 510, 511, 581, and 586;
3. A comprehensive examination in economic theory and successful completion of course work in two elective fields of concentration with grades of "B" or better in the appropriate 600-level courses; or completion of a comprehensive examination in economic theory, one elective field of concentration, and a thesis.

## Courses (ECON)

### Lower Division

#### 201. Principles of Microeconomics (3)

Business organization, price theory, allocation of resources, distribution of income, public economy. (CAN ECON 4)

#### 202. Principles of Macroeconomics (3)

Money and banking, price changes, national income analysis, business cycles, economic growth, fiscal and monetary policy, international trade. (CAN ECON 2)

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 300. Fundamentals of Economics (3)

Designed for non-majors. Presents basic training in economics for social studies teachers or citizens who wish to exercise a reasoned judgment about economic issues in public affairs. Content generally same as ECON 201, 202 in condensed form. Not open to students with credit in ECON 201 or 202 except by consent of the Economics Department.

#### 306I. Environmental Issues of the World Economy (3)

Prerequisites: ENGL 100, three units from G.E. Category B.1., and upper division standing. Interdisciplinary analysis of human impact on the atmosphere and biological diversity; consideration of policies to foster sustainable development with emphasis on the economic perspective; international political economy of negotiations to promote global cooperation in defense of our common environment.

#### 308. Consumer Economics (3)

Consumer demand; advertising and other influences affecting demand; consumer sovereignty; patterns of consumer expenditure; the consumer protection movement; consumer taxes, family incomes and related public policy issues.

#### 309I. Consumer Survival in the Legal and Economic Environment: Selected Topics (3)

Prerequisites: ENGL 100 and upper division status. A general consumer survival course with consideration of selected topics including the consumer as buyer of goods and services, the consumer as an investor, and the consumer in personal partnerships. Same course as FIN 309I and FCS 309I.

#### 310. Microeconomic Theory (3)

Prerequisites: ECON 201, 202 and either MATH 115 or 122. Analysis of economic concepts and their applications to business situations. Emphasis on supply and demand analysis, costs of production, variations of competition and monopoly, revenues, prices, profits and losses, and other aspects of the operations of the business enterprise.

#### 311. Macroeconomic Theory (3)

Prerequisites: ECON 201, 202 and either MATH 115 or 122. Determinants of income, employment, and prices; of secular and cyclical changes in economic activity; and of the effects of public policies upon aggregative economic experience.

#### 313. History of Economic Thought (3)

Prerequisites: ECON 201 and 202, or 300. Evolution of economics as a science. Doctrines of the different schools of economic thought. Study of the contributions of outstanding economists.

#### 320. Money and Banking (3)

Prerequisites: ECON 201, 202 and either MATH 115 or 122. Nature and functions of the money and its relation to prices; the monetary system of the United States; the functions of banks, bank credit, foreign exchange and monetary control.

#### 333. Managerial Economics (3)

Prerequisites: ECON 201, 202, and either MATH 115 or 122. Development of the tools of marginalist analysis and their application to managerial decisions and planning. Emphasis upon the calculation of solutions to operational problems of the business firm. Topics include demand analysis, production and cost, pricing, and output decisions under different market structures. Product and factor markets will be analyzed.

#### 355. Law and Economics (3)

Prerequisites: ECON 201 and 202, or 300. Analysis of economic concepts and their application to law and legal institutions. Emphasis on property law, contract law, accident law, crime control and judicial administration.

#### 360I. American Economic History (3)

Prerequisites: ECON 201 and 202, or 300; ENGL 100 and upper division status. Economic analysis of growth and welfare in the American economy from the beginnings of industrialization to the present, with emphasis upon the material and social factors affecting the transformation of our economy since the early nineteenth century.

#### 361I. European Economic History (3)

Prerequisites: ECON 201 and 202, or 300; ENGL 100 and upper division status. Economic analysis of the principal features of the European economy from the Industrial Revolution to the present, with emphasis upon the problems of economic growth, capital formation and technological and demographic change in this era.

#### 365. Economics of Modern China (3)

Prerequisites: ECON 201 and 202, or 300. Economic analysis of the Chinese economy in the modern era. After a brief historical background, the main focus of the course will be on the socialist transformation of the economy (1949-1978). The post-1978 Total Economic Reform will be discussed as a contrast and to suggest some patterns for the future. Economic topics will be supplemented by attention to institutional, geographic, and demographic aspects.

#### 368. Comparative Economic Systems (3)

Handling of economic problems in differing national and ideological contexts. Combines an overall conceptual framework with the study of specific national approaches.

#### 369. East/Central European Economies in Transition (3)

Prerequisites: ECON 201 and 202, or 300. This course focuses on the East/Central European countries of Hungary, East Germany, Poland and the Czech/Slovak Federal Republic. Topics to be covered include the economic experiences of these countries under Communism (central planning), the movement towards the market allocative process (decentralized choice), as well as the development and influence of neighboring countries and institutions, including Romania, Yugoslavia, West Germany, the European Common Market, the former Soviet Union and the United States.

#### 370. Pacific Rim Economy (3)

Prerequisites: ECON 201 and 202, or 300. Examines economic backgrounds and resource bases of the nations comprising the Pacific Rim, patterns of growth in trade among the Pacific Rim countries, flows of capital, activities of multinationals, interdependence of domestic and trade policies among the Pacific Rim countries, and future prospects of trade opportunities and possible constraints on expanded trade relations. Traditional grading only.

**372. International Economics (3)**

Prerequisites: ECON 201 and 202 or 300. International trade and exchange rate theory. Types of trade control: tariffs, quotas, exchange manipulation, monopolies. Basic U.S. and European commercial policies since 1930. Not open to students with credit in ECON 471.

**380. Economic Statistics (4)**

Prerequisites: ECON 201, 202 and either MATH 115 or 122. Use of descriptive and inferential statistical concepts for the analysis of economic data. Topics applied to economics include measures of central tendency and dispersion, probability theory, discrete and continuous probability distributions, hypothesis testing, regression and correlation analysis, economic time series and index numbers.

**403./503. Mathematical Economics (3)**

Prerequisites: ECON 310, 311 and consent of instructor. Applications of calculus, linear algebra and other mathematical tools in formulating and solving economic problems. Designed for exceptional undergraduate students who intend to pursue a graduate degree in economics. Traditional grading only. (Not open to students with credit in 483./583.)

**410H./510. Advanced Microeconomics (3)**

Prerequisites: ECON 310, 311 and consent of the instructor. Applications of microeconomic theory. Detailed examination and analysis of particular markets and contemporary issues in light of economic theory. Specific emphasis on policy analysis for government and business decisions. This course is designed for exceptional undergraduate students who intend to pursue a graduate degree in economics. Traditional grading only.

**411H./511. Advanced Macroeconomics and Forecasting (3)**

Prerequisites: ECON 310, 311 and consent of the instructor. Applications of macroeconomics, monetary and forecasting theory to operational management and planning decisions of government and business. This course is designed for exceptional undergraduate students who intend to pursue a graduate degree in economics. Traditional grading only.

**\*420. Forecasting (3)**

Prerequisite: ECON 311 or 320. Principles and methods of forecasting. Evaluation of the reliability of existing forecasting techniques. Also covers use of the macroeconomic model as a basis for forecasting and the role of forecasts in the formulation of national economic policy.

**422./522. Macroeconomics for Management (3)**

Prerequisites: ECON 311. Managerial applications of macroeconomic concepts. Emphasis on developing tools to analyze and predict aggregate economic activity and on promoting understanding of interrelationships and interdependencies of the macroeconomic environment for managerial decision making. Topics include: macroeconomic goals and efficient management; measurement and sources of economic data; modeling the macroeconomy; structural, or supply-side, changes affecting the macroeconomy; business cycle forecasts and the use of economic indicators; econometric forecasting, input-output analysis.

**\*430. Industrial Organization (3)**

Prerequisites: ECON 310 or 333. Exploration of corporate economics. The structure, behavior and performance of the relatively few large enterprises that originate more than two-thirds of the GDP of the U.S. An economic analysis of the arguments for and against 'big business.' Implications of separation of ownership and control, Corporate social responsibility and the profit motive. The dilemma of size versus competition.

**\*432. Economics of Antitrust (3)**

Prerequisites: ECON 310 or 333. The attempt of government to produce superior economic practices and results by the legal imposition of purportedly more competitive market structures and behavior patterns on business firms. An economic analysis of the leading judicial decisions comprising the modern law of antitrust. A rigorous examination of the underlying presupposition of antitrust that competition is the best model for economic activity. The future of antitrust including a discussion of proposals for legislative overhaul, including repeal of existing antitrust law.

**\*433. Capital Theory and Financial Analysis (3)**

Prerequisites: ECON 310 or 333. Intertemporal choice and decision-making under uncertainty. Topics include multiperiod consumption, multiperiod production, capital budgeting and financial management.

**\*434. Economics of Regulation (3)**

Prerequisites: ECON 310 or 333. The attempt of government to intervene in the existing market sector for the purpose of producing more competitive and socially acceptable practices and results while retaining the efficiency of large-scale economic organization. A comprehensive survey of the past, present and future of the political regulation of economic and business activity. Consideration of the rationale for regulation and deregulation and the creation, design and removal of regulatory practices. The changing concept of the public interest.

**\*441. Labor Economics (3)**

Prerequisite: ECON 310. Manpower resources and their utilization, with particular reference to labor unions, collective bargaining and related public policies. Effects of these institutions on production, employment, prices and patterns of income distribution.

**\*445. Economics of Health (3)**

Prerequisite: ECON 310. Analysis of health as an economic good. Health services as scarce resources. Use of tools of economic theory in study of special problems of health resources, markets, manpower shortages, non-profit enterprises, insurance programs and Medicare. Procedures stress individual studies and reports. Same course as HCA 451.

**\*450. Public Sector Economics (3)**

Prerequisites: ECON 310 and 311. The economic role of government. Analysis of the theory of public goods. Criteria for efficient allocation of resources between the private and the public sector. Possible responses of government externalities, such as environmental degradation. Emphasis on the allocation and distribution effects of government expenditures and taxation.

**\*451. Economics of State and Local Governments (3)**

Prerequisites: ECON 310 and 311. State and local fiscal systems; economic analysis of government functions, revenues and intergovernmental relations; implications for regional development.

**\*462. Environmental Economics (3)**

Prerequisite: ECON 310. Economic analysis of environmental problems and policy. Market failures due to externalities, public goods, and common property resources will be examined. Private (market) and public (governmental) solutions to environmental problems are examined.

**\*463. Energy Economics (3)**

Prerequisite: ECON 310. Application of economic analysis to energy problems and policies. Representative topics include macroeconomic effects of energy price shocks, international financial fragility, OPEC pricing strategies, determinants of demand and supply, industrial organization and finance, investor and publicly owned utilities, domestic and international policies.

**\*464. Natural Resource Economics (3)**

Prerequisite: ECON 310. Microeconomic and capital theory applied to problems of conserving and managing natural resources. Analysis of public policies affecting renewable and nonrenewable resources including price controls, taxation and leasing. Representative topics include: forestry, fishery, energy, water, and mineral economics.

**465./565. Economic Development (3)**

Prerequisites: ECON 310, 311 and consent of instructor. Economic and social factors underlying economic development. Analysis of problems associated with economic growth of less developed countries. Evaluation of development policies.

**472./572. International Trade and Finance (3)**

Prerequisite: ECON 310, 311, and consent of the instructor. Pure theory of trade. Consequences of balance of payments disequilibrium for national income and prices. Tariffs, customs, unions and the theory of commercial policy. Foreign exchange market and international financial institutions.

**481./581. Intermediate Economic Statistics (3)**

Prerequisites: ECON 310, 311, 380, and consent of instructor. A rigorous treatment of statistics emphasizing aspects relevant to economics. Statistical inference, probability distributions, application of simple and multiple regression analysis to economic problems, analysis of variance and structural analysis of time series. (Lecture 3 hours, laboratory 2 hours.)

**486. Introduction to Econometrics (4)**

Prerequisites: ECON 310, 311, 380, and consent of instructor. Elementary mathematical expression of economic theory. Combined use of mathematics and statistics to solve economic problems. Use of econometric models for formulation of economic policy. (Lecture 3 hours, laboratory 2 hours.)

**\*490. Special Topics in Economics (3)**

Prerequisite: Consent of instructor. Topics of current interest in economics selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

**491H. Senior Honors Seminar in Economics (3)**

Prerequisites: Senior status, ECON 481 or 486, and consent of instructor. Provides opportunity for students to integrate their knowledge of economics, statistics-econometrics and computer studies. Designed as a seminar in research where students will be expected to write a paper and present their research results orally. Research topics must be approved by instructor.

**495. Field Studies Practicum (3)**

Prerequisites: ECON 310 or 333 and consent of instructor. Observation and practical experience, at a managerial level, in an appropriate business or government enterprise. Applications for permission to enroll must be filed with the Economics Department at least six weeks prior to beginning of the semester involved. Course may be repeated for a maximum of six units.

**499. Directed Study (1-3)**

Prerequisite: Consent of instructor. Independent study under the supervision of a faculty member. May be repeated for a maximum of 6 units of credit.

**Graduate Division**

**500. Business Economics (3)**

Workings of the price system in the allocation of resources, and the determination of the level and fluctuations of aggregate economic activity, with special emphasis on the role of business enterprise in the economy. Analysis of the economic implications of various forms of industrial organization and the application of public policy to business activity, including antitrust policy and regulation. Not open to students majoring in economics.

**503./403. Mathematical Economics (3)**

Prerequisites: ECON 310 and 311. Applications of calculus, linear algebra and other mathematical tools in formulating and solving economic problems. (Not open to students with credit in 483./583.)

**510./410H. Advanced Microeconomics (3)**

Prerequisites: ECON 310, 311 and 503. Applications of microeconomic theory. Detailed examination and analysis of particular markets and contemporary issues in light of economic theory. Specific emphasis on policy analysis for government and business decisions.

**511./411H. Advanced Macroeconomics and Forecasting (3)**

Prerequisites: ECON 310, 311 and 503. Applications of macroeconomics, monetary and forecasting theory to operational management and planning decisions of government and business.

**522./422. Macroeconomics for Management (3)**

Prerequisites: ECON 311. Managerial applications of macroeconomic concepts. Emphasis on developing tools to analyze and predict aggregate economic activity and on promoting understanding of interrelationships and interdependencies of the macroeconomic environment for managerial decision making. Topics include: macroeconomic goals and efficient management; measurement and sources of economic data; modeling the macroeconomy; structural, or supply-side, changes affecting the

macroeconomy; business cycle forecasts and the use of economic indicators; econometric forecasting, input-output analysis. Traditional grading only.

**565./465. Economic Development (3)**

Prerequisites: ECON 310 and 311. Economic and social factors underlying economic development. Analysis of problems associated with economic growth of less developed countries. Evaluation of development policies.

**572./472. International Trade and Finance (3)**

Prerequisites: ECON 310 and 311. Pure theory of trade. Consequences of balance of payments disequilibrium for national income and prices. Tariffs, customs, unions and theory of commercial policy. Foreign exchange market and international financial institutions.

**581./481. Intermediate Economic Statistics (3)**

Prerequisites: ECON 310, 311 and 380. A rigorous treatment of statistics emphasizing aspects relevant to economics. Statistical inference, probability distributions, application of simple and multiple regression analysis to economic problems, analysis of variance and structural analysis of time series. (Lecture 3 hours, laboratory 2 hours.)

**586. Introduction to Econometrics (3)**

Prerequisites: ECON 310, 311, and 380. Elementary mathematical expression of economic theory. Combined use of mathematics and statistics to solve economic problems. Use of econometric models for formulating economic policy. (Lecture 3 hours, laboratory 2 hours.)

**597. Directed Studies (1-3)**

Prerequisite: Consent of instructor. Intensive reading and/or practical research in economics.

**650. Seminar in Public Sector Economics (3)**

Prerequisites: ECON 510, 511, and one of the following: ECON 450 or 451. Selected topics in the theory of public finance: theories of budgetary policy, tax justice, shifting and incidence, other effects of taxation, fiscal policy. Traditional grading only.

**660. Seminar in Natural Resources and the Environment (3)**

Prerequisites: ECON 510, 511, and one of the following: ECON 462, 463 or 464. Research methods applied to selected topics from energy, natural resources, and the environment. Traditional grading only. (Seminar, 3 hours.)

**670. Seminar in International Trade and Development (3)**

Prerequisites: ECON 510, 511, and one of the following: ECON 565 or 572. Selected topics dealing with current problems and solutions in international trade, finance, and development. Traditional grading only.

**686. Seminar in Econometrics (3)**

Prerequisites: ECON 586, 510 and 511. Development of methods for the estimation and testing of the relationships among economic variables and use of econometric models for prediction and economic policy purposes. Traditional grading only.

**690. Seminar in Economics (3)**

Prerequisite: Consent of instructor. Seminar on topics of current interest in economics. May be repeated for a maximum of six units with different topics.

**697. Directed Research (1-3)**

Prerequisite: Consent of instructor. Independent research under the guidance of a faculty member.

**698. Thesis (2-6)**

Prerequisite: Consent of graduate advisor. Planning, preparation and completion of a thesis related to a field in economics.

# EDUCATIONAL PSYCHOLOGY, ADMINISTRATION, AND COUNSELING

*College of Education*

Department Chair

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Kathleen Cohn

George Demos (Emeritus, 1983)

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Elaine J. Haglund

Alice M. Harris

A. Jean Houck

Cynthia Johnson (Emeritus, 1996)

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Associate Professors

Michael Bernard

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Maria Quezada

Katherine Van Giffen

Assistant Professor

Jennifer Coots

Office Manager

Cherie Dougan

Secretary

Yvette Moss

The Department of Educational Psychology, Administration and Counseling offers graduate level course work in the following program areas: Educational Administration; Educational Psychology; Social and Philosophical Foundations Education; Career Counseling; MFC Counseling; School Counseling; Student Development in Higher Education; Vocational Rehabilitation Counseling; and Special Education; as well as undergraduate service courses in life skills and other areas.

Students desiring information should contact the department office for referral to one of the faculty advisors.

All CED graduate level courses (500/600) are assumed to be traditional grading only unless stated otherwise.

## Graduate Degrees

Master of Arts degrees in Education with the following options are offered:

- Educational Administration
- Educational Psychology
- Social and Multicultural Foundations of Education

Two Master of Science degrees are available:

- Special Education
- Counseling

MS in Counseling offers five options:

- Career Counseling
- Marriage, Family, and Child Counseling
- School Counseling
- Student Development in Higher Education
- Vocational Rehabilitation Counseling

## Credentials

The department offers credentials in Administrative Services (Preliminary and Professional), Pupil Personnel Services (School Counseling, School Counseling Internship, School Psychology, School Psychology Internship), Special Education (Learning Handicapped, Learning Handicapped Internship [Bilingual focus], Severely Handicapped, Resource Specialist Certificate) and Library Media Teacher Services. In addition, a Graduate Certificate as a Career Guidance Specialist is offered. Required credential courses must be completed with a grade of "C" or better.

## Interdisciplinary Minor in Crosscultural Language and Academic Development Studies (code 0-9683)

The minor comprises courses that integrate studies of culture, language, learning and the academic environment, and human development. It is an interdisciplinary program designed to support career objectives related to public education in Crosscultural Language and Academic Development. The minor consists of a minimum of 18 units selected with an advisor. Courses in the department of the student's major may not be used.

1. One course from each of the following areas (12 units):
  - Culture: ANTH 421/LING 425 or EDP 432/EDEL 430
  - Language: EDP 454 or LING/CD 329
  - Schooling: EDP/LING 485
  - Development: EDP 301, EDP 302, HDEV 307I, or PSY 361
2. Six additional units, selected with an advisor, from the following:
  - Culture: AIS 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319, ANTH 329, ANTH 412I, ANTH/LING 413, ANTH 419, ANTH 421/LING 425, ANTH/WST 475, CHLS/ASAM 335I, EDP 432/EDEL 430
  - Language: ANTH 170, CHLS 402, EDP 454, LING/CD 329, LING/ENGL 327, LING 363I, LING 435, LING 472, LING 486.
  - Schooling: AIS 361, ASAM 310, B/ST 420, CHLS 340, EDP 305, EDP 350.
  - Development: EDP 301, EDP 302, HDEV 307I, PSY 361.

## Master of Arts in Education

### Admission and Advancement to Candidacy

Please refer to the College of Education section for information concerning admissions criteria and advancement to candidacy.

### Option in Educational Administration (code 5-3103)

Educational leaders serve in many capacities. No matter what position an individual holds within an educational organization, all energies should be directed at maximizing the academic achievement of all students being served. The courses in the Educational Administration Option are designed to prepare leaders for this important work. Emphasis is placed on the role of schooling in a democratic society, instructional leadership, building collaboratives, managing and guiding change, and working with diverse populations. Because of our location, issues associated with urban schools are a primary focus of the program.

### Prerequisites

15 upper-division units in education including ED P 400, or equivalent experience.

### Clear Admission

1. Meet University admission requirements;
2. A minimum 2.85 overall GPA in the last 60 semester units of course work, and provide official copies of transcripts to the Department and University;
3. Pass the Writing Proficiency Examination (WPE);
4. Submit two non-confidential letters of recommendation from individuals familiar with your professional competence and potential as an educational leader, one of which must be from your principal or immediate supervisor;
5. Submit a double-spaced typed personal statement (2-3 pages) describing your educational and experiential background, and your philosophy of leadership;
6. Attend the Educational Administration advisement meeting.

### Requirements

A minimum of 30 units with a 15 unit concentration in Educational Administration is required. 21 units must be in the 500/600 level series taken at this University.

1. One of the following (3 units): ED P 574 or EDAD 649;
2. One of the following (3 units): ED P 575, 576, or 672;
3. One of the following (3 units): ED P 500, 595, or 696;
4. One of the following chosen in consultation with the faculty advisor (3-6 units): EDAD 695 masters project (3 units) or EDAD 698 thesis (6 units);
5. All of the following (18 units): EDAD 541, 544, 647, 648, 650, ED P 677.

### Option in Educational Psychology (code 5-3158)

A research-oriented option in the Master of Arts in Education. Designed for students seeking the school psychology credential, for educators who seek to develop their understanding of learning, testing and assessment, and research in education, and for students planning to pursue a doctorate in education.

### Prerequisites

Fifteen units of approved upper-division units in education, including all of the following: ED P 301 or 302, 305, 350, 419, and 420.

### Clear Admission

1. A 2.85 minimum GPA on the last 60 semester units of course work attempted.
2. All applicants must take the GRE General Test. Files of students whose scores fall below the 25th percentile on the Verbal or Quantitative section will be reviewed to determine the appropriate remedial measures to be taken before clear admission. Evidence of satisfactory completion of any work required in connection with low test scores must be on file in the Graduate Office prior to clear admission. (See the College of Education section for additional information on clear admission.)
3. Resolution of all incomplete grades.
4. Satisfactory completion of Writing Proficiency Exam.

### Requirements

A total of 34 units, with twenty one units in the 500/600 level series taken at this University.

### Core Requirements

1. All of the following (6 units): ED P 519, 520;
2. The following (3 units): ED P 555;
3. The following (6 units): ED P 698.

### Option Requirements

1. All of the following (6 units): ED P 604, 605;
2. Two diagnosis courses (7 units): ED P 524, and 525 or 564;
3. Two remediation courses (6 units): ED P 405, 554, 560, 579A.

NOTE: Students pursuing a School Psychologist credential should not choose ED P 564 or ED P 554 from the above.



## Option in Social and Multicultural Foundations of Education (code 5-3160)

Students pursuing the option in Educational Foundations receive both traditional and contemporary preparation through specialized, interdisciplinary study. The option is designed for individuals seeking careers in multicultural/multilingual education programs, international and global education, and/or contemporary urban educational environments, or for students interested in further academic study.

### Prerequisites

Twenty-four (24) units of advisor approved upper division or graduate level courses in education, ethnic studies, humanities, social and behavioral sciences, liberal studies or other appropriate areas. Among these: A minimum of nine (9) from the following courses (or the equivalent): three (3) units from an ethnic studies or women's studies course (e.g., AIS/ASAM/B/ST/CHLS/W/ST 319); ANTH/W/ST 475); three (3) units from ED P 400 (or an equivalent upper division quantitative methods course); three (3) units from ED P 432/EDEL 430 or ANTH 421/LING 425; four semesters of a foreign/second language (or the equivalent); basic computer and internet literacy and e-mail access.

### Clear Admission

Meet University and College admission requirements including graduation from an accredited college; personal interview with coordinator and/or program faculty; written statement describing previous/professional experience and goals; a minimum grade point average of 2.85 in the last 60 units of course work.

### Requirements

A minimum of 30 units of upper division and graduate courses of which a minimum of twenty-one (21) must be at the 500/600-level and a minimum of fifteen (15) units within a specialization.

### Core Requirements

A minimum of twelve (12) units; ED P 574 , 575, 576, EDP/LING 595, or EDP 519

### Advancement to Candidacy

Writing Proficiency Examination; apply for Advancement prior to completing 9 units of the master's program.

Choice of one from the following specializations:

#### 1. International/Global Education

A minimum of fifteen (15) units; nine (9) of which must be from: ED P 582, ED P 583, EDEL/EDSE 530, ED P 672, and six (6) units from advisor approved elective courses related to global/international education, or courses focused on specific global regions, cultures, religions, and/or languages.

#### 2. Language, Literacy and Culture

A minimum of fifteen (15) units; three (3) of which are from: ED P 578/LING 475/575, EDP 589, and nine (9) of which must be from: ANTH 413\*, ANTH 530, EDEL/EDSE 540, ED P 573, ED P 577/LING 500, ENG 410/510, LING 460, and three (3) units from advisor approved elective courses related to language, literacy and diversity.

#### 3. Language Minority Education

A minimum of fifteen (15) units from; six (6) of which must be from: ED P 573, ED P 672, and six (6) units of which are from: ED P 454, ED P 485/LING 485, ED P 578/LING 475/575, LING 486, LING 650, and three (3) units from advisor approved elective courses related to language minority education.

#### 4. Special Concentration

A minimum of fifteen (15) units in an advisor approved specialized area of study. (Suggested areas of specialization include—but are not limited to—education for ethnic/racially/gender specific groups, or populations with special needs; bicultural/bilingual education; or urban education).

### Program Exit Requirements

Comprehensive examination; project, or thesis: Three (3) to six (6) units by successfully completing one of the following: Comprehensive Examination and Research Paper: ED P 697 three (3) units (Prerequisite: Advancement to candidacy, consent of instructor, department chair and associate dean); or Thesis (ED P 698) for six (6) units (Prerequisite: Advancement to candidacy, approval by director, department chair and associate dean); or Project (ED P 699) for a maximum of six (3-6) units (Prerequisite: Advancement to candidacy, approval by director, department chair and associate dean).

## Master of Science in Counseling

Counselors serve valuable functions in fields of education, health and human services, and business. Their domains of practice include public and private educational institutions, medical facilities and allied health agencies, social service agencies and organizations, state and federal human service agencies and programs, correctional facilities, business and industry, and private practice. The program's philosophy is to introduce students to a variety of approaches to counseling, and to encourage the development of competencies within these approaches.

The program combines theory and practice utilizing on and off campus course work and field work assignments. Required courses are offered predominantly in the evening, but most field assignments require daytime participation during normal business hours defined by the off campus sites.

Students coming from diverse experiential backgrounds are trained at the graduate level to be able to perform entry level duties expected by the counseling profession and its specialty areas. Students are prepared to assume future leadership positions in their area(s) of expertise after additional work experiences have been acquired in the field following graduation.

The Master of Science in Counseling Program consists of five options:

1. Career Counseling
2. Marriage, Family, and Child Counseling
3. School Counseling
4. Student Development in Higher Education
5. Vocational Rehabilitation Counseling

The total number of course units needed to satisfy requirements for graduation depends upon the option selected by the student.

## Admission Requirements

1. University Admission: File an "Application for Graduate Admission" along with one complete set of official transcripts with the University Office of Admissions no later than March 1 [VRC applicants only: April 15];
2. Program Admission: File a "Master of Science in Counseling" application to only one program option area with the College of Education Graduate Office along with one complete set of official transcripts and one copy of the University Application no later than March 15;
3. Transcripts must verify a GPA of 2.85 or higher on the last 60 semester (or 90 quarter) units of course work taken. Evidence of completing at least a baccalaureate degree majoring in the behavioral sciences, education, or related program prior to beginning the Master of Science in Counseling program (those with other majors should seek advisement from the program faculty);
4. Send three (3) letters of recommendation along with the Program Application;
5. Send a type-written personal statement along with the Program Application;
6. Screening interview(s) (upon notification by the option area);
7. Items 1-5 above must be on file in the College no later than March 15 for the following fall semester [students are admitted to begin course work in the fall semester only] except as noted below.

Career Counseling applicants only: Items 1-5, along with results of the Miller Analogies Test (MAT) and current edition of the Strong Interest Inventory, must be on file in the College no later than March 15.

MFCC applicants only: Items 1-5 must be on file in the College no later than March 1 for fall or October 15 for spring. Item 6 is required. [MFCC students are permitted to begin course work in either summer, fall, or spring semester upon admission to this option area];

VRC applicants only: Items 1-5, along with results of the Miller Analogies Test (MAT) and current edition of the Strong Interest Inventory, must be on file in the College no later than May 1.

8. Applicants are not allowed more than one-third the total number of semester units credit applied to curriculum requirements of the option selected completed prior to admission into the first semester of the program.

## Option in Career Counseling (code 6-3171)

Students in this option prepare to provide career counseling and guidance services to adults and adolescents in community and public agencies, college and university settings, business and industry settings, and private practice. They also prepare for national certification (NCCC) and California Registry (CRPCC).

### Requirements

All of the following (55-61 units): ED P 419, 420, 430, 510, 513, 515, 516, 520, 529, 530, 531, 555, 580, 637, 638, 643C, 644C, and one from ED P 517 or 566; and ED P 698 or comprehensive examination;

Advancement to Candidacy: ED P 419, 430, 510; pass the WPE.

## Option in Marriage, Family and Child Counseling (MFCC) (code 6-3175)

Students in this option will prepare for licensed independent MFCC practice to work in private practice, community-agency settings, government-court settings, hospitals, clinics, Employee Assistance Programs, and city-county-state agencies to provide counseling services for adults, children, families and couples.

### Requirements

All of the following (62-68 units): EDP 419, 420, 430, 510, 511, 512, 513, 515, 520, 522, 531, 543, 555, 556, 604, 608, 609, 634, 638, 643D, 644D, and EDP 698 or comprehensive examination;

EDP 609 requires completion of 150 experience hours;

EDP 643D requires completion of 300 experience hours;

EDP 644D requires completion of 300 experience hours.

Advancement to Candidacy: EDP 430, 510, 513; pass the WPE.

## Option in School Counseling (code 6-3172)

The school counseling program is designed to prepare counselors to work in elementary, middle, and high schools. The program supports a comprehensive, developmental, and collaborative school counseling model. Students are expected to become proactive leaders who will advocate for their students and themselves, as counseling professionals working toward equity, achievement, and opportunity for all students.

### Requirements

All of the following (48-54 units): ED P 419, 420, 430, 515, 517, 520, 536, 555, 604, 615, 638, 639, 643A, 644A, 695C, and one from ED P 530 or 531; and ED P 698 or comprehensive examination;

Advancement to Candidacy: ED P 419, 430, 515; pass the WPE.

## Option in Student Development in Higher Education (SDHE) (code 6-3173)

Students completing this option are employed in residency halls, financial aid, student activities, adult re-entry, admissions, career centers, academic advising, disabled student services, counseling centers, orientation, educational opportunity programs, and community outreach in two- and four-year institutions.

### Requirements

All of the following (48-54 units): EDP 419, 420, 430, 515, 516, 538, 547, 548, 549, 555, 576, 593, 638, 643B, 644B, 693, and one from EDP 520 or 595; and EDP 698 or comprehensive examination. Elective: EDP 531.

Advancement to Candidacy: EDP 419, 430, 515, 593; and pass the WPE.

## Option in Vocational Rehabilitation Counseling (VRC) (code 6-3170)

Students in this option prepare to provide vocational rehabilitation services to people with disabling conditions in state rehabilitation service offices, community-based sheltered workshops, hospitals, clinics, geriatric centers and hospices, Employee Assistance Programs, Social Security Disability Administration offices, private counseling firms, private practice,

and School-to-Work Transition Programs. They also prepare for national certification (CRC) and California Registry (CRPRC).

#### Requirements

All of the following (59-65 units): ED P 419, 420, 430, 501, 502, 503, 505, 510, 513, 515, 520, 524, 529, 531, 555, 580, 637, 645; and ED P 698 or comprehensive examination;

Advancement to Candidacy: ED P 419, 430, 510; pass the WPE.

### Master of Science in Special Education (code 6-3155)

Students in this masters degree program are working toward leadership positions in public and private facilities in the community which provide services for individuals with exceptional needs.

#### Clear Admission

1. Copies of transcripts verifying a GPA of 2.85 or higher on the last 60 semester units (or 90 quarter units) of course work taken;
2. Baccalaureate degree from an accredited institution;
3. A typed essay of not less than three pages, double spaced, outlining the candidate's reasons for entering the program, experiences and training related to the program, and anticipated outcomes upon completing the program;
4. A screening interview.

#### Prerequisites

A bachelor's degree with 24 upper division units to include the following areas of study (suggested courses in education noted in parentheses):

1. Developmental: 3 units (ED P 301 or 302);
2. Statistics and Measurement: 3 units (ED P 400);
3. Individual Differences: 3 units (ED P 350).

#### Requirements

Students must complete a minimum of 30 units of upper division and graduate courses with a minimum of 21 units at the 500/600-level taken at this University.

1. Degree Core:
  - A. The following (3 units): ED P 550;
  - B. One of the following (3 units): ED P 500, 520, or 696;
  - C. One of the following chosen in consultation with a faculty advisor (3-6 units): ED P 695S (3) and written comprehensive examination or ED P 698 (6).
2. Degree Requirements:
  - A. All of the following (9 units): ED P 535, 546A or B, and 566 or OCST 508;
  - B. Electives to meet the required minimum of 30 units select-ed in consultation with a special education faculty advisor.

## CREDENTIAL PROGRAMS

### Pupil Personnel Services

The College of Education at CSULB offers two of the four pupil personnel services credential programs issued by the California Commission on Teacher Credentialing (CCTC): school counseling and school psychology.

#### School Counseling Credential (code 802)

The school counseling credential is required of persons serving counseling and guidance functions beyond the advisory duties customarily performed by classroom teachers. A teaching credential or experience is not required. The credential holder is authorized to work in California public schools from kindergarten through grade 12. The counseling credential requirements include (1) undergraduate course work in the behavioral sciences and (2) specific graduate courses including practicum and field experience.

#### Admission

1. Copies of transcripts verifying a GPA of 2.85 or higher on the last 60 semester units (or 90 quarter units) of course work taken;
2. Evidence of completing at least a baccalaureate degree majoring in the behavioral sciences, education, or related program prior to beginning the school counseling credential program (those with other majors should seek advisement from the credential program coordinator);
3. Evidence of prior experience in the kindergarten through grade 12 setting;
4. Three letters of recommendation;
5. A typewritten personal statement;
6. Screening interview(s);
7. An application and items 1-5 above must be on file in the Department of Educational Psychology, Administration and Counseling at the time of applying to the University. Applicants who do not meet all program requirements may qualify for admission by completion of approved course work or admission conditions planned by the student and coordinator.

#### Prerequisites

1. Application for Certificate of Clearance is required for public school field work. Apply at least one year prior to the expected first field work semester. Persons possessing a valid California credential are exempt from this requirement.
2. Applicants are required to take the California Basic Educational Skills Test (CBEST) no later than the second available administration date following enrollment in the program.

#### Requirements

1. A bachelor's degree and completion of the following upper division course work or equivalents approved by the program coordinator: ED P 400 (or 419 and 420), 430.
2. Completion of the following or equivalent graduate courses (33 units): ED P 515, 517, 530, 536, 555, 604, 615, 638, 639, 643A, 644A;
3. Field Work Prerequisites:

A. First Semester Counseling Field Work, ED P 643A (300 hours per semester, 20 hours per week);

(1) ED P 515, 517, and 638 (or concurrent enrollment in 638);

(2) Certificate of Clearance - see Prerequisites above.

B. Second Semester Advanced Counseling Field Work, ED P 644A (300 hours per semester, 20 hours per week):

(1) ED P 530, 536, 638, and 643A;

(2) Passing the CBEST prior to entrance in ED P 644A.

4. Certification of program completion by the faculty is required. The faculty may require students to complete additional course work, field work, or demonstrate specific competencies before recommendation to the state CCTC for the school counseling credential.

### School Counseling Internship Credential

See Department for details.

### School Psychology Credential (code 804)

School Psychologists consult with teachers, parents, and others regarding student learning and behavior difficulties. They monitor the progress of students with special needs, assist students to develop more productive school careers, and assist teachers in the areas of behavior management and teaching methods. A teaching credential is not required.

#### Admission

1. Copies of transcripts verifying a GPA of 3.0 or higher on the last 60 semester units (or 90 quarter units) of course work taken;
2. Possession of a baccalaureate degree from an accredited university;
3. Three letters of reference by persons who have had professional work association with applicant;
4. Evidence of a passing grade on the WPE;
5. A written personal statement – the application form contains a list of the items to be included;
6. Evidence of having taken the CBEST is required prior to clear admission to the program;
7. Screening interview - after the admission committee reviews the papers sent in by each applicant, those selected for the interview will be notified as to time and place.

#### Requirements

1. Completion of an acceptable master's degree in one of the behavioral sciences. Master's degrees which typically meet this requirement in the Department of Educational Psychology, Administration and Counseling are: Master of Science in Counseling; Master of Arts in Education with an option in Educational Psychology or approved equivalent master's degree;
2. Completion of a minimum of 60 units in graduate course work or their equivalents with the approval of the PPS-School Psychology faculty in the following areas of study: Human Development and Learning: ED P 301 or 302, 305, 604, 605. Counseling, Consultation, and Pupil Personnel Services: ED P 350, 430, 515, 517, 528, 536, 555. Psychological Assessment, Remediation: ED P 405, 524, 525, 527, 560, 579A. Measurement and Research: ED P 419, 420,

520. Practicum and Field Work: ED P 641 (required for students who do not have public school experience), 642A,B (2 semesters at 3 units each). Electives to complete a minimum of 60 units. Students accepted to the school psychology program must complete a minimum of 1200 hours of field work (internship).

3. Certification of program completion by the PPS credential School Psychology faculty is required. The student may be required to complete additional course work, field work, or demonstrate specific competencies before approval;
4. A Certificate of Clearance and successful performance on CBEST is required prior to field work/ internship;
5. Field Work in School Psychology prerequisites: Approval of field work-school psychology internship application by the faculty. All program courses except EDP 527, 536, 560, and 642. Application deadlines are stated in the course description.

### School Psychology Internship

See Department for details.

An internship is paid field work, performed under the supervision and with the permission of the PPS credential School Psychology faculty and the school district which hires the intern. In order to be recommended to a district as a possible intern, the student must have completed the prerequisites listed above in "1" and "5.", and be approved by the School Psychology credential coordinator.

### Special Education

All courses required for the special education credential are scheduled in the evening for the benefit of regular teachers pursuing this advanced credential.

### Special Education Specialist Credential

As a result of regulation changes by the California Commission on Teacher Credentialing (CCTC) in the Spring of 1996, the Department of Educational Psychology, Administration, and Counseling now offers two Special Education Credential programs. The first special education credential program consists of credentials in Learning Handicapped and Severely Handicapped, and the Resource Specialist certificate. It will continue to be offered for those students who have a Multiple or Single Subject credential. The final date for candidates to complete this program is July, 1999. The second credential program prepares and certifies candidates in the new CCTC Education Specialist Credential categories of Mild/Moderate and Moderate/Severe. This program does not require a Multiple or Single Subject credential as a prerequisite. Application deadlines for both programs are October 1 (Spring and Summer Admission) and March 1 (Fall Admission). Additional information and guidelines are found in the student handbook available in the department office.

### Special Education Specialist Credentials: Learning Handicapped and Severely Handicapped (Sunsets July, 1999)

This credential program is for teachers who hold a basic teaching credential. It provides candidates with advanced training in preparing students with disabilities to be contributing and productive members of their schools and communities.

## Admission

1. Admission to the University;
2. An overall GPA of 2.75 in all college and university course work;
3. Hold a valid California teaching credential or be enrolled in student teaching for multiple or single subjects credential; and
4. Oral interview with faculty.

## Prerequisite

Multiple or Single Subject Credential

## Requirements

Generic Core: EDP 350, 405, 564, 579A or 579B, and 454.

### Learning Handicapped (code 463)

EDP 554, 465, 586B.

### Severely Handicapped (code 464)

EDP 561, 563, 586C.

Learning handicapped credential candidates jointly pursuing a bilingual emphasis or certificate of competence may substitute ED P 454 for C D 361.

## Preliminary Level I Education Specialist Credential and Professional Level II Education Specialist Credential: Mild/Moderate (code 468) and Moderate/Severe (469)

This specialist credential program prepares candidates in Mild/Moderate and Moderate/Severe. The program is designed so that students may be certified in both areas of authorization, if they complete two separate field experiences, i.e., one with students with mild and moderate disabilities and one with students with moderate and severe disabilities. At admission to program, candidates must identify an area of authorization and indicate whether they will be certified in one or both areas. The program has two tiers: the Preliminary Level I Education Specialist Credential and the Professional Level II Education Specialist Credential. Following receipt of the Preliminary Level I Credential, candidates must be employed in an appropriate educational setting which allows for completion of Level II requirements. In this setting, candidates need to complete the Professional Level II preparation in special education within five years of the date of issuance of the preliminary credential. The Level I program has been approved by the Commission on Teacher Credentialing. The Level II program is currently in development and CTC approval is anticipated in Spring, 1988.

## Application and Admission: Preliminary Level I Education Specialist Credential

Application for admission to the Education Specialist Credential should be made the semester before taking the required courses in Level I. To be considered for admission students must provide verification of the following:

1. Be admitted to the university;
2. Possess an overall GPA of 2.75 in all college and university course work;
3. Possess a Baccalaureate degree (Liberal Studies Major, Track 1) or demonstrate Subject Matter verification by successful completion of the Multiple Subject Assessment for Teachers (MSAT);

4. Verification CBEST attempt; and

5. Current TB test verification.

## Prerequisites to Admission

Most of the program prerequisites are part of the Bachelors degree in Liberal Studies, Track 1: Core, Human/Child Development Concentration. The following prerequisites must be taken prior to admission to the new Education Specialist program:

EDP 301 (or HDEV 307I or PSY 361) or EDP 302, EDP 350, EDEL 380 or equivalent, EDP 454, EDP/LING 485, EDP 443 or 523 or meet clear credential competencies through testing.

To complete the admissions process, students should:

1. Complete and submit application form for Education Specialist Credential program;
2. Specify area of authorization (Mild/Moderate; Moderate/Severe or both);
3. Verify that prerequisites have been met;
4. Obtain an e-mail account; and
5. Participate in oral interview with program faculty.

Each applicant will be informed in writing of the decision of the program faculty regarding acceptance into the program shortly after the interview. Students will complete a program advisement sheet with a primary advisor and may begin taking course work in Level I only after acceptance into the program.

## Requirements: Level I

1. EDP 480, EDP 405, EDEL 452 (CLAD), EDEL 462, EDP 564 EDP 567, EDP 569, EDP 536, EDP 587A,B\* or EDP 588A,B\*
2. Apply for certificate of clearance prior to field study
3. Pass CBEST prior to field study
4. US Constitution Requirement (meet competencies through testing or POSC 100 or 391)

\*Candidates pursuing authorization in both Mild/Moderate and Moderate/Severe must successfully complete 3 semesters of field study: 2 in the first authorization and 1 in the second.

## Professional Level II Education Specialist Credential

The program has been developed to meet new California Commission Teacher Credentialing Standards. Approval is pending. See Department for further information.

## Special Education Internship (Bilingual Focus)

In cooperation with area school districts the College of Education offers an internship program leading to the special education specialist, learning handicapped credential. This program has limited enrollment, and preference is given to applicants with demonstrated bilingual skills and experience in multicultural settings.

## Admission

1. Hold a valid California basic teaching credential;
2. Be employed by the cooperating school district, or have an offer of employment on an Internship Credential Program from the cooperating district;

3. Demonstrated teaching experience in a multicultural setting;
4. An overall GPA of 2.75 in all college and university course work, or permission from the Special Education Internship Council;
5. Submit a written application and letter of reference from current or most recent principal to the Special Education Internship Council. This joint district-university council will review applications, interview applicants, and select candidates.

#### Prerequisite

ED P 350.

#### Requirements

Submit the State application for a Special Education Internship Credential with supporting documents and fees to the California Commission on Teacher Credentialing through the CSULB Credential Processing Center. Students must hold the Internship Credential prior to placement in a special education setting.

Accept placement in a learning handicapped special education instructional setting. For some candidates this may require changing schools, according to district guidelines.

Successfully complete 34 units to include the following:

ED P 405, 454, 554, 565, 568, 572A (8), and 572B (8).

#### Resource Specialist (code 467)

The Resource Specialist Certificate Credential Program is a post-baccalaureate program for professionals who hold a regular teaching credential and a Special Education Specialist or the Clinical Rehabilitative Services Credential in Language, Speech and Hearing with the Special Class Authorization. The candidate for this certificate must have had three or more years of teaching experience, including assignments with both regular and handicapped students. Student teaching experience can be counted toward the three-year requirement.

#### Requirements

ED P 535, 546B, 570, electives up to 3 units, based on determination of competencies in ED P 546B. (The evaluation process in ED P 546B is a certification of competencies and determination by the Special Education Faculty of the candidate's skills.)

#### Administrative Services

Certification of school administrators is established in a two-level Administrative Services Credential.

The Preliminary Administrative Services Certificate (first tier) has no expiration and authorizes the holder to seek an administrative position. The Certificate informs the employing school district/agency of eligibility to serve. The Certificate must be registered with the CCTC at the time the candidate accepts employment as an administrator. The CCTC will then issue the Preliminary Administrative Services Credential authorizing the candidate to serve as an administrator. Once issued, the Preliminary Credential is valid for five (5) years and it is not renewable.

The Professional Administrative Services Credential (second tier) cannot be pursued until the candidate is employed in a position requiring an administrative credential. Once issued

it is valid for five years and is renewable subject to fulfillment of professional development requirements.

#### Administrative Services Credential: Preliminary (code 501)

Certification under this credential authorizes the candidate to serve in any position requiring the Administrative Services Credential. The program is oriented toward the following positions: elementary and secondary principals, assistant principals, supervisors of instruction, curriculum directors, and other building level positions. The program has been revised to meet the new Commission on Teacher Credentialing program standards. Approval pending. See Department for further information.

#### Clear Admission

1. Complete the "clear admission" requirements (#'s 1-6) as listed for the MA in Education, Option Educational Administration;
2. Possession of a valid teaching credential, or pupil personnel, or library media teacher, or health services credential, or vocational education instructor's credential, or clinical rehabilitative services credential.

#### Requirements

1. EDAD 541, 544, 580, 647, 648, 650, 680, ED P 677, and EDAD 649 or ED P 574. One of the two required field experiences (EDAD 580 or 680) must be during the school day, either during the regular year with time off, or during the summer at a year around school;
2. Passing the CBEST prior to entrance in advanced field experience (EDAD 680). Take CBEST no later than the second available test administrative date following enrollment.

#### Exit Requirements

1. Verification of three years of successful experience in a position requiring one of the credentials listed in "Clear Admission", Item 2;
2. Satisfy the state requirement for mainstreaming;
3. Present to program faculty a professional portfolio of course and field experience projects and papers completed during the program which demonstrate candidate competency.

#### Administrative Services Credential: Professional (code 502)

Certification under the Professional Administrative Services Credential (Tier II) authorizes the candidate to serve in any position requiring the Administrative Services Credential. The professional Credential cannot be pursued until the candidate is employed in a position requiring an administrative credential. The program requirements must be completed within the five year authorization of the Preliminary Administrative Services Credential. Once issued, the Professional Credential is valid for five years and is renewable subject to fulfillment of professional development requirements.

#### Prerequisites

1. Possession of a valid Preliminary Administrative Services Credential;
2. Verification of employment by an educational agency in an administrative position.

## Admission

1. Program application and evidence that prerequisites have been met;
2. Copy of transcript verifying a 3.0 minimum overall GPA in most recent thirty (30) semester units of graduate work;
3. Two (2) non-confidential letters of recommendation, one of which must be from the applicant's immediate supervisor;
4. A personal statement (double spaced 2-3 page) regarding your experience and educational background, and your philosophy of educational leadership;
5. Personal interview with the Coordinator of the Educational Administration Program;
6. Employer verification of support for the induction and mentoring program.

## Requirements

The Professional Administrative Services Credential Program has a unique design intended to better meet the needs of the new administrator. The unit requirement ranges from 16-24 semester units, with an option for non-university professional development activities of up to 120 clock hours to substitute for any or all of the 8 elective units. The program has been designed to provide the candidate with professional support through a two (2) unit mentoring and professional development plan. The plan is developed collaboratively by the candidate, the school district mentor, and the University supervisor. The academic core consists of 12 units which must be completed with a grade of B or better. In the final semester there is a two (2) unit candidate assessment conducted through the Portfolio Exhibition. The balance of the program is completed through approved electives and/or professional development plan activities.

1. Individual candidate professional development plan prepared in EDAD 640.
2. The Program includes four (4) components:  
Mentoring and Professional Development Planning - 2 units: EDAD 640;  
Core Courses - 12 units: EDAD 641, 657, 658, and 659;  
Electives/Professional Development Plan Activities - up to 8 units: selected from approved courses throughout the University; EDAD 691 for 1-8 units; and/or up to 120 clock hours of professional development activities to substitute for the 8 elective units. (non-university);  
Candidate Assessment - 2 units: EDAD 692.
3. Satisfactory completion of the professional development plan as demonstrated through the Portfolio Exhibition in EDAD 692.
4. Minimum of two years of successful, full-time school administrative experience in the public school, or private school of equivalent status.

## Exit Requirements

1. Provide verification of two years of successful full time experience in a position requiring the Administrative Services Credential;
2. Present to program faculty, school district mentor, and a panel of other candidates a professional portfolio of course and professional development projects, activities, and papers completed during the program which demonstrate candidate competency.

## Library Media Teacher Services Credential (code 700)

The 31 unit program in Library Media prepares students for service as a library media teacher, grades K-12, in the state of California.

## Admission

1. Admission to the University (a maximum of three units may be completed through Open University/Extension when application is received too late for regular admission for that semester);
2. Completion of a bachelors degree;
3. Overall 3.0 GPA in the last 60 semester units of course work or completion of first 15 units of credential course work with a 3.0 GPA;
4. Three letters of recommendation;
5. A written personal statement;
6. Screening interview.

## Requirements

1. Core Courses (6 units): ED P 677 or EDEL/EDSE 625, and ED P 583 or EDEL/EDSE 530;
2. Specialization Courses (21 units): LI 510, 520, 530A, 530B, 540, 550, 570;
3. Passage of CBEST prior to enrolling in Field Experience (LI 580);
4. Possession of a valid California teaching credential and completion of course work prior to enrolling in Field Experience (LI 580);
5. Field Experience (4 units): LI 580.

## Graduate Certificate for Career Guidance Specialist (code 3000)

This post-baccalaureate certificate program is planned for counselors and educators with interests in career education and career counseling.

## Admission

1. File an "Application for Graduate Admission," along with two complete sets of official transcripts, with the University Office of Admissions no later than March 1 for fall semester or October 1 for spring semester;
2. Transcripts must verify a GPA of 2.85 or higher on the last 60 semester (or 90 quarter) units of course work taken;
3. Evidence of completing at least a baccalaureate degree prior to beginning the Graduate Certificate program;
4. Two letters of recommendation (send only after notification by the program);
5. A type-written personal statement (send only after notification by the program);
6. Screening interview(s) (upon notification by the program);
7. Items 1-5 above must be on file in the department no later than November 1 for the following spring semester, or April 1 for the following fall semester;
8. Applicants are allowed only nine semester units credit applied to curriculum requirements completed prior to admission into the first semester of the program.

## Requirements

1. 19 core course units: ED P 434B, 529, 530, 531, 637, and 643C;
2. Passage of the Writing Proficiency Examination (WPE);
3. Approved electives in the Departments of Educational Psychology, Administration and Counseling; Human Resources Management; Occupational Studies; Psychology or Sociology as needed to fulfill 19 units upon waiver of any core course units granted upon admission to certificate program.

## Departmental Courses

The courses offered by the department align with several academic disciplines and traditions as listed below:

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### Counseling

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EDP 311 Mental Hygiene  
EDP 357 Self-Management  
EDP 430 Principles of Counseling and Guidance  
EDP 434B,C Interpersonal Skills in Human Resource Development  
EDP 501 Foundations of Vocational Rehabilitation  
EDP 502 Vocational Aspects of Disability  
EDP 503 Case Management in Rehabilitation  
EDP 505 Job Placement and Independent Living  
EDP 510 Laws and Ethics for Counselors  
EDP 511 Counseling the Alcohol/Chemically Dependent Person  
EDP 512 Child and Spousal/Partner Abuse  
EDP 513 Introduction to Clinical Interviewing  
EDP 515 Counseling Theory  
EDP 516 Counseling the Adult  
EDP 517 Seminar in School Counseling  
EDP 521 Crisis Intervention and Counseling  
EDP 522 Counseling Methods and Techniques  
EDP 529 Assessment in Career Counseling  
EDP 530 Career Development and Decision Theory  
EDP 531 Career Information Resources  
EDP 535 Counseling and Guidance of Exceptional Individuals  
EDP 538 Student Development in Higher Education  
EDP 543 Human Sexuality Counseling  
EDP 547 Student Development Theory  
EDP 548 Students in U.S. Higher Education  
EDP 549 Management of Student Development in Higher Education  
EDP 555 Cross-Cultural Counseling  
EDP 556 Counseling Children and Adults  
EDP 580 Vocational Work Evaluation Systems  
EDP 595 Seminar in Professional Development and Counseling  
EDP 608 Seminar and Practicum in Marriage, Family, Child Counseling  
EDP 609 MFCC Practicum  
EDP 615 Seminar in Home-School – Community Relations  
EDP 634 Family Systems Therapy: Theory and Practice  
EDP 637 Career Counseling Practicum  
EDP 638 Group Counseling  
EDP 639 Seminar in Organization of Pupil Personnel Services  
EDP 640 Computer Applications in Counseling & Human Services  
EDP 643A-D Counseling Field Work  
EDP 644A-D Advanced Counseling Field Work

EDP 645 Internship in Rehabilitation Counseling  
EDP 692 Special Topics in Counseling  
EDP 693 Advanced Seminar in Professional Development and Counseling  
EDP 695C Seminar in Professional Development in Counseling and Human Services

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### Educational Administration

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EDAD 541 Leadership, Decision Making, and Collaboration  
EDAD 544 Legal Aspects of Education: Equity and Access  
EDAD 580 Introduction to Field Experience in Administration  
EDAD 590 Special Problems in Educational Administration  
EDAD 640 Mentoring and Professional Development Planning for the New Administrator  
EDAD 647 Human and Financial Resources  
EDAD 648 Schools as Organizations: Development, Management, and Assessment  
EDAD 649 Urban Schools and the Community: Social, Political, Policy Issues  
EDAD 650 Instructional Leadership and Assessment  
EDAD 657 Practical Applications of Human and Fiscal Resources  
EDAD 658 Organizational Development, Culture, and Change  
EDAD 659 Educational Governance, Politics and Policy  
EDAD 680 Advanced Field Experience in Administration  
EDAD 691 Educational Administration Professional Development  
EDAD 692 Administrator Portfolio Development and Exhibition  
EDAD 695 Masters Project in Educational Administration  
EDP 677 Curriculum/Program Development and Evaluation

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### Educational Psychology

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EDP 301 Child Development and Learning  
EDP 302 Early and Late Adolescent Development: A Cross-Cultural Perspective  
EDP 305 Educational Psychology  
EDP 350 Education of Exceptional Individuals  
EDP 400 Fundamentals of Educational Statistics, Measurement and Evaluation  
EDP 405 Positive Strategies for Classroom Management  
EDP 419 Educational Statistics  
EDP 420 Tests, Measurement and Evaluations  
EDP 430 Principles of Counseling and Guidance  
EDP 490 Special Topics in Educational Psychology  
EDP 500 Educational Research  
EDP 519 Advanced Educational Statistics  
EDP 520 Program Evaluation and Research  
EDP 524 Individual Intelligence Testing  
EDP 525 Psychoeducational Diagnosis in Multicultural Settings  
EDP 527 Clinical Practice in School Psychology  
EDP 528 Orientation to School Psychology  
EDP 536 Collaborative Consultation in the Schools  
EDP 554 Principles of Educational Remediation  
EDP 590 Special Problems in Educational Psychology  
EDP 595 Qualitative Research Methods  
EDP 604 Seminar in Human Development  
EDP 605 Seminar in Consultation on School Learning  
EDP 641 Apprenticeship in School Psychology  
EDP 642A,B Field Work - School Psychology  
EDP 677 Curriculum/Program Development and Evaluation



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## Foundations of Education

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EDP 432 Social and Cultural Diversity in Educational Settings  
EDP 485 Theoretical Foundations of Language Minority Education  
EDP 573 Intercultural Communication in Education  
EDP 574 Sociological Foundations of Education  
EDP 575 Intellectual Foundations of Educational Reform, 19th Century to Present  
EDP 576 Education and Diversity: Historical and Contemporary Perspectives  
EDP 577 Educational Linguistics  
EDP 578 Literacy and Linguistics  
EDP 582 Comparative International Education  
EDP 583 Global Education  
EDP 589 Adult Literacy and Language Diversity  
EDP 672 Language and Educational Policies  
EDP 695F Seminar in Foundations of Education

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## Library Media

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LI 510 Selection of Materials and Information Sources  
LI 520 Basic Reference  
LI 530A Library Media Materials for Elementary Grades  
LI 530B Library Media Materials for Secondary Grades  
LI 540 Organization and Cataloging of Materials  
LI 550 School Library Media Center Management  
LI 570 Library Media Technologies  
LI 580 Field Experience in the School Library Media Center  
LI 590 Special Topics in Library Media

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## Research

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EDP 400 Fundamentals of Educational Statistics, Measurement and Evaluation  
EDP 419 Educational Statistics  
EDP 420 Tests, Measurements and Evaluations  
EDP 500 Educational Research  
EDP 519 Advanced Educational Statistics  
EDP 520 Program Evaluation and Research  
EDP 595 Qualitative Research Methods  
EDP 696 Thesis Study: Methodology, Organizational and Research Aspects  
EDP 697 Directed Research  
EDP 698 Thesis  
EDP 699 Project

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## Special Education

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EDP 350 Education of Exceptional Individuals  
EDP 405 Positive Strategies for Classroom Management  
EDP 453 Adults with Learning Disabilities: Counseling Model  
EDP 454 Development of Communication Skills in Bilingual Classrooms  
EDP 480 Foundations of Inclusive Education in a Diverse Society  
EDP 535 Counseling and Guidance of Exceptional Individuals  
EDP 546A-E Practicum in Special Education  
EDP 550 Cultural Perspectives of Special Education  
EDP 554 Principles of Educational Remediation  
EDP 560 Management of Emotionally Handicapped Child  
EDP 561 Individuals with Severe Handicaps  
EDP 563 Methods of Teaching Individuals with Severe Handicaps

EDP 562 Multicultural Special Education  
EDP 564 Assessment and Evaluation of Students with Disabilities  
EDP 565 Methods of Teaching Learning Handicapped Individuals  
EDP 566 Career Planning and Transition for Youth and Adults with Disabilities  
EDP 567 Curriculum Models and Practices for Learners with Disabilities  
EDP 568 Evaluation of Bilingual/Multicultural Exceptional Children  
EDP 569 Effective Instructional Strategies for Learners with Disabilities  
EDP 570 Role of the Resource Specialist  
EDP 572A,B Internship with Learning Handicapped Individuals  
EDP 579A Instructional Strategies for Individuals with Learning Handicaps  
EDP 579B Instructional Strategies for Individuals with Severe Handicaps  
EDP 586B,C Field Study with Students with Disabilities  
EDP 695S Seminar in Special Education

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## Technology and Education

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EDP 443 Educational Technology  
EDP 449 Technology Applications for Educators  
EDP 523 Technology-Based Learning  
EDP 551 Education and the Internet  
EDP 553 Instructional Design  
EDP 623 Developing Technology-Based Learning  
EDP 640 Computer Applications in Counseling & Human Services  
LI 570 Library Media Technologies

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## General

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EDP 190 Current Topics in Education  
EDP 191 Career and Personal Explorations  
EDP 192 Learning Strategies and Study Skills  
EDP 357 Self-Management  
EDP 373I Nonverbal Communication: Interaction of Mind and Body  
EDP 492 Field Studies in Human Services/Mental Health

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## Courses in Educational Administration (EDAD)

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### Graduate Division

541. Leadership, Decision-Making, and Collaboration (3)  
Prerequisite: A valid regular teaching credential or 15 upper division or graduate units in education. Leadership theory, styles, skills and their relationship to effective schools. Importance of developing a vision and skills for leading an organization to accomplish goals supportive of academic achievement for all pupils. Decision-making, communication, group dynamics, conflict resolution, and collaboration. Participate in a personal assessment, develop a philosophy and vision statement, a professional and academic plan, and begin a professional portfolio to demonstrate educational leadership competence.

544. Legal Aspects of Education: Equity and Access (3)  
Prerequisite: EDAD 541. Study of school law with particular emphasis on California law, as set forth in the State and Federal Constitutions, statutes, judicial decisions, and in the rules and regulations of the U.S. Department of Education, California Department of Education and local units of administration.

580. Introduction to Field Experience in Administration (3)  
Prerequisite: Approval by the Program Coordinator, Department of Educational Psychology, Administration and Counseling. Written application should be made by October 1 for the spring semester and March 1 for the fall semester. The first of two on-the-job experi-

ences involving the student in the solution of problems in administration and supervision at the elementary and secondary levels. Credit/No Credit grading only.

**590. Special Problems in Educational Administration (1-3)**  
Prerequisite: Enrollment limited to graduate students who hold a standard teaching credential and consent of instructor. Advanced study in educational administration within an area of specialization done on experimental, research and/or seminar basis. Area will be designated by department at the time course is scheduled. A student may enroll for one-three units to a maximum of 6 units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

**597A,B,C. Directed Study (1,2,3)**

Prerequisite: Approval of program coordinator and Graduate Studies Office. Application for enrollment must be made to the Office of Graduate Studies by March 1 for the summer or fall semester or by October 1 for the spring semester. Individual creative activity; projects, surveys, intensive reading; practical and action research in an area significant to the field of educational administration. Could also involve small group activity focused on an educational problem or issue. May be repeated for a maximum of six units, with no more than three units in one semester or for degree purposes.

**640. Mentoring and Professional Development Planning for the New Administrator (2)**

Prerequisite: Admission to EDAD Professional Administrative Services Program. The candidate, the University supervisor, and the school district mentor work together to develop an individualized induction plan for the support and professional development of the beginning administrator. The plan is based on a pre-assessment of the candidate's skills and competence. The plan includes a mentoring component, portfolio, academic course work, and optional non-university based professional development activities. Emphasis is placed on preparation to provide leadership in socio-culturally diverse schools. Credit/No Credit grading only.

**641. Advanced Instructional Leadership (3)**

Prerequisite: EDAD 640. A major intent of the course is to guide instructional leaders in broadening their theoretical knowledge of transformational pedagogy (transformative theories based on constructivism, critical, and affective pedagogies, and in applying these transformative constructs to structure schools for student success. The course is designed to present a holistic approach to educational leadership and curricular decision-making through the integration of the major themes: 1) organizational and cultural environment, 2) ethical and reflective leadership, and 3) management and information systems.

**647. Human and Financial Resources (3)**

Prerequisite: EDAD 541. Examine civil service systems, study the role and structure of personnel administration used in public schools. Review bureaucracy, rules and regulations, limitations in hiring and firing, PERB decisions, case law. Labor contracts and limitations imposed by those contracts. Examine the costs associated with human resources and other fiscal infrastructure costs associated with the provision of free public education in California.

**648. Schools as Organizations: Development, Management, and Assessment (3)**

Prerequisite: EDAD 541. Concepts and skills of managing educational organizations. Decision making, conflict management, motivation, leadership, team building, communication, planning, and organizational change, culture and renewal. Perspectives and analysis of complex organizations and the theoretical and conceptual advances in the field.

**649. Urban Schools and the Community: Social, Political, Policy Issues (3)**

Examination of characteristics of urban schools and the diversity of student populations and attitudes towards them. Study of the social, political, cultural forces impacting schools. Study of school programs and community collaboratives for delivering instruction and services which lead to safe, effective urban schools.

**650. Instructional Leadership and Assessment (3)**

Prerequisite: Admission to MA and/or Preliminary Administrative Services Credential program. Examine instructional leadership practices which have been proven successful in maximizing achievement for all students in urban schools. Examples of such practices included: working with teachers to develop a learning community which values diversity and provides powerful learning experiences based on knowledge of constructivist pedagogy, cognitive and language development; planning and utilizing valid and reliable assessments of student progress; utilizing instructional supervision models which provide for formative evaluation of teachers; planning and implementing staff development.

**657. Practical Application of Human and Fiscal Resources (3)**

Prerequisite: EDAD 640. Examination and application of principles, practices, procedures and guidelines affecting the management of fiscal and human resources, and information systems in public education. Course will include labor relations, collective bargaining, contract management, staffing, and budgeting issues.

**658. Organizational Development, Culture, and Change (3)**

Prerequisite: EDAD640. An examination of the current and historical contexts of schooling; macro and micro factors and conditions that influence schools as organizations; moral and ethical leadership principles; and the application and management of change to improve the cultural and organizational environments of schools

**659. Educational Governance, Politics and Policy (3)**

Prerequisite: EDAD640. A critical examination of the moral and ethical dimensions of schooling, policies related to equity and access issues, political, economic, and legal perspectives and how they influence educational organizations, and the effects of collaborative leadership models on evolving school governance systems.

**680. Advanced Field Experience in Administration (3)**

Prerequisites: EDAD 541, approval by the Coordinator of Educational Administration, successful completion of EDAD 580. Application should be made by March 1 for the fall semester and October 1 for the spring semester. This is the second of two on-the-job experiences involving the student in the solution of problems in administration and supervision at the elementary and secondary levels. Credit/No Credit grading only.

**691. Educational Administration Professional Development (1-8)**

Prerequisite: EDAD640. Participation in field-based professional development activities as specified in the candidate's individual Professional Development Plan created and approved in EDAD 690. One unit credit may be granted for 15 contact hours of professional development activity. Course may be repeated to a maximum of 8 units. Credit/No Credit grading only.

**692. Administrator Portfolio Development and Exhibition (2)**

Prerequisite: Completion of the Professional Development Plan, including the core courses, electives and/or professional development activities. Presentation of the candidate's Professional Portfolio consisting of academic course accomplishments such as papers, projects action research; a personal mission statement; a reflective journal and/or artifacts which portray accomplishments in the administrative work setting, mentor involvement, and optional professional development activities completed during the credential program. The presentation will be made to the instructor, the school district mentor, and a panel of other candidates. Credit/No Credit grading only.

**695. Masters Project in Educational Administration (3)**

Prerequisites: Advancement to candidacy in Educational Administration Option, approval of graduate advisor, and written application to the Graduate Office. Application for enrollment must be made to the Graduate Office by March 1 for the summer or fall semester or October 1 for the spring semester. Study and analysis in the field of educational administration including use of archival data and public records at university, district, and school sites; development of a culminating masters project which can take any of the following forms: 1) utilize action based research to examine a school/district-based problem and recommend resolution to the problem; or 2) develop a position paper, issue paper, or policy recommendation. (Not open to students pursuing the thesis option.) Course may be repeated to a maximum of 6 units.

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## Courses in Educational Administration (EDAD)

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### 697. Directed Research (1-3)

Prerequisites: Consent of instructor, department chair and associate dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by March 1 for the fall semester or by October 1 for spring.

### 698. Thesis (3,3)

Prerequisites: Advancement to candidacy, ED P 595 or 696, approval by director, department chair and associate dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for six units. Application for enrollment must be made to the Graduate Studies Office by March 1 for the fall semester or summer session or October 1 for the spring semester.

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## Courses in Educational Psychology (ED P)

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### Lower Division

#### 190. Current Topics in Education (1-3)

Orientation to and exploration of topics relevant to the college student as a learner-scholar and decision-maker within the changing campus, community and societal milieu. Lectures, discussion, field study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

#### 191. Career and Personal Explorations (3)

A course designed for, but not limited to, entering and undeclared students. An exploration of the issues, topics, and tasks related to personal, educational and career choices. Includes educational and career planning, exploration of personal characteristics and individual differences, life and work values and interests, decision making, goal setting, and job/career search preparation.

#### 192. Learning Strategies and Study Skills (3)

Determination of individual cognitive (learning) style preferences and development of strategies to use the preferred style in the educational and work environment. Identify and implement study and life skills and habits which facilitate the effective use of the preferred cognitive style.

### Upper Division

#### 301. Child Development and Learning: A Cross-Cultural Perspective (1-3)

Explores the physical, cognitive, communicative/linguistic, and socio-emotional development of the child from the prenatal to adolescent period across diverse cultures with an emphasis on the learning process.

#### 302. Early and Late Adolescent Development: A Cross-Cultural Perspective (3)

Explores the social, emotional, cognitive, and physical development of early and late adolescents across diverse cultures.

#### 305. Educational Psychology (3)

Modifiability and educability of the human organism at different levels of maturity; psychology of learning applied to teaching.

#### 311. Mental Hygiene (3)

Psychological factors important for the development of mental health; implications for teaching, group work and interpersonal relationships in home and school; behavior disorders and educational practice.

#### 350. Education of Exceptional Individuals (3)

Survey of the education of individuals who have communication disabilities, visual disabilities, hearing disabilities, physical disabilities, learning disabilities, severe disabilities, and those labeled as gifted and talented. Field work.

#### 360. Life and Career Decisions (3)

Prerequisite: Upper division standing. The course content will cover self-awareness (locus-of-control, personal characteristics, life values, etc.) personal styles and preferences (study and work skills and preferences), analysis of educational progress, decision making, selecting a major, and selecting a career. A series of assessments and assignments will be used to explore each of these areas. This course is designed to assist juniors and seniors who are undeclared majors or who have declared a major but are unsure that their choice of major is the right one for them. Traditional grading only.

#### 357. Self-Management (3)

(Not open to students with credit in PSY 357.) Prerequisite: PSY 100. Introduction to theory, research and application of self-management procedures. Methods for integrating and managing the cognitive, emotional, behavioral, and physiological aspects of an individual will be discussed. Topics will include systematic self-observation, career decision-making, interpersonal relations, time management, stress and emotion management, and habit change and maintenance.

#### 373I. Nonverbal Communication: Interaction of Mind and Body (3)

Prerequisites: ENGL 100 and upper division status. History and theories of the development of mind/body integration. Enhancement of personal and interpersonal relations through lecture, discussion, films and movement experiences. Analysis and synthesis of the interdependence of the psychological and physical processes in nonverbal communication. Same course as DANC 373I.

#### 390. Current Topics in Education (1-3)

Orientation to and exploration of topics relevant to the college student as a learner-scholar and decision-maker within the changing campus, community and societal milieu. Lectures, discussion, field study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

#### \*400. Fundamentals of Educational Statistics, Measurement and Evaluation (3)

(May not be used as a substitute for ED P 419 and/or ED P 420.) Fundamentals of measurement, evaluation and statistical concepts in education: a research consumer and educational practitioner's approach.

\*405. Positive Strategies for Classroom Management (3)  
Applications of existing models and strategies of classroom management to promote student prosocial behaviors and academic growth and development. Includes information regarding functional analysis, hypothesis testing, instruction of alternative behaviors, crisis management and program modification in school settings.

#### \*419. Educational Statistics (3)

Prerequisite: Completion of a mathematics course suitable for general education math credit. Introduction to descriptive and inferential statistical methods with application to educational research problems. Emphasis upon understanding statistical concepts, computation skills, and the use of computer programs in data analysis. (Lecture 2 hours, laboratory 2 hours.)

#### \*420. Tests, Measurements and Evaluations (3)

Prerequisite: ED P 419. Determination, meaning and use of fundamental statistical concepts applied to problems of measurement and evaluation; construction, interpretation and use of standardized and teacher-made tests.

#### \*430. Principles of Counseling and Guidance (3)

Introduction to the fields of school counseling, school psychology, marriage, family, child counseling, and other community human services. An overview of the functions and duties of school counseling, community mental health services, and an orientation to professional issues, counseling theories and practices.

#### \*432. Social and Cultural Diversity in Educational Settings (3)

Experiential opportunity to examine personal attitudes toward distinct groups of persons, to develop multicultural competencies, and examine racism. Study of cultural, historical, social, and psychological factors that promote equal human worth. Same course as EDEL 430.

**\*434B.C. Interpersonal Skills in Human Resource Development (3,4)**

Designed to develop interpersonal skills identified as necessary to have effective helping relationships and human resources development. Includes a presentation of theory and research applicable to processes in interpersonal functioning and human relations. Didactic and experiential learning approaches. Same course as HDEV 434B.C.

**\*443. Educational Technology (3)**

An introduction to the variety of technological applications used in education today. The course provides a survey of today's educational technology tools and describes how these tools are used by educators. Students complete a series of hands-on learning experiences to become familiar with today's educational technologies, including computer applications, multimedia resources, programming and authoring tools, computer-assisted instruction, Internet-based educational resources, and technology-based human research tools (seminar 2 hours, laboratory 2 hours)

**\*449. Technology Applications for Educators (1-3)**

Prerequisites: Consent of Instructor. Contemporary applications of technology for teaching, learning, and the management of instruction. Demonstration and hands-on experience with computer and media applications in education. Demonstration and hands-on experience with computer and media applications in educational settings. Topics are announced in the Schedule of Classes. Course may be repeated to a maximum of 12 units with different topics.

**A. Internet Resources for Educators**

This course introduces students to the growing number of Internet-based educational resources for educators. The course provides discussion, demonstrations, and hands-on experience in the use of computer communication tools, including e-mail, file transfer protocol (FTP), newsgroups, listservs, and the world wide web. May be taken for Graduate Credit.

**B. Evaluation and Selection of Instructional Technology Resources**

This course introduces students to a variety of evaluation instruments and techniques for evaluating and selecting instructional technology resources to support the California curriculum frameworks. They will become familiar with exemplary programs and learn to evaluate new programs in terms of these exemplars.

**\*453. Adults with Learning Disabilities: Counseling Model (3)**

An introductory course designed to help students gain knowledge in identification, diagnosis, remediation and counseling of adults with learning disabilities.

**\*454. Development of Communication Skills in Bilingual Contexts (3)**

Prerequisite: Consent of instructor. Normal and atypical development of language skills in school-aged children from non-English language backgrounds. Focus on the skills needed in the classroom, including communicative competence, pragmatics and literacy. Distinguishing between normal language development and linguistic problems.

**480. Foundations of Inclusive Education in a Diverse Society: Philosophical and Historical Perspectives and Legal Mandates (3)**

Prerequisites: Admission to Education Specialist credential program. Introduction to the philosophical and historical foundations of special education in a diverse society. Examination and discussion of educational theories, philosophies, models, legal mandates, and traditions of inclusive education. Discussion of impact of contemporary school practices on students with disabilities and their families. Traditional grading only.

**\*485. Theoretical Foundations of Language Minority Education (3)**

Introduction to theoretical foundations of language minority instruction. Background on the historical and political context of the development of educational language policies. Same course as LING 485. Traditional grading only.

**\*490. Special Topics in Educational Psychology (1-6)**

Prerequisite: Consent of instructor. Topics of current interest in educational psychology selected for intensive study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

**492. Internships in the Human Services (3)**

Prerequisite: Consent of instructor. Students in any major are placed in agencies and organizations to engage in volunteer or paid work in human services/mental health. The required fifteen hour seminar will focus on personal values, interpersonal communications skills, critical thinking, and problem solving as they relate to the students' field placement. Development of knowledge and skills transferable to future careers will be stressed. A minimum of 120 hours field experience is required for the semester.

**\*497. Independent Study (1-3)**

Prerequisites: Consent of instructor and department chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units, with no more than three units applicable to credential or major requirement.

**Graduate Division**

**500. Educational Research (3)**

Prerequisite: ED P 400. Types and applications of educational research, research design, problems of internal and external validity, uses of research resources, and critiques of research studies. Recommended to be taken early in a master's degree program.

**501. Foundations of Vocational Rehabilitation (3)**

History, philosophy, and legislation of rehabilitation affecting people with disabilities served by public and private rehabilitation delivery systems.

**502. Vocational Aspects of Disability (3)**

Prerequisite: ED P 501. Medical, psychological, and sociocultural aspects of disabling conditions related to vocational activities. Emphasizes identification of functional limitations, attitudinal barriers to employment, and methods of remediating handicapping conditions.

**503. Case Management in Rehabilitation (3)**

Prerequisite: ED P 502. Techniques and methods of information processing, service arrangement, program monitoring, and overall management of client services and client caseload. Designed to meet certification requirements for rehabilitation counselors.

**504. A Family Systems Approach to School Discipline Problems (3) SS**

Designed to help teachers and parents develop appropriate student behavior. A communications based family systems approach to discipline.

**505. Job Placement and Independent Living (3)**

Prerequisites: ED P 502. Job seeking skills, job development and placement methods, supported employment, and employer concerns. Employability and placeability issues are examined in relation to independent living and job placement services.

**510. Laws and Ethics for Counselors (3)**

Prerequisites: ED P 430 and/or consent of instructor. Examines laws governing the professional aspects of counseling. Included are the legal and ethical considerations of the practice of family/child and clinical community counseling services. The emphasis will focus on clinical practice.

**511. Counseling the Alcohol/ Chemically Dependent Person (2)**

Survey of the theories, etiologies, and major treatment approaches for counseling and preventing alcohol and chemical dependency, and the role of family and community resources, referrals, and prevention programs.

**512. Child and Spousal/Partner Abuse (1)**

Child and spousal/partner abuse assessment indicators, laws, community resources, mandatory reporting requirements for child abuse and spousal/partner violence, assessment, detection, and interventions for the child, family, spouse/partner, and the offender. Designed for licensure requirements for mental health practitioners and graduate students.

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## Courses in Educational Psychology (ED P)

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513. Introduction to Clinical Interviewing (3)  
Theoretical bases and applications in the conduct of problem identification and diagnostic interviewing in career, clinical, college, school, and vocational rehabilitation counseling settings.
515. Counseling Theory (3)  
Prerequisite: ED P 430 or 434B,C (Note: SDHE students should take 434B,C). Major counseling theories examined and the competencies of each developed for use in helping relationships. (Not open to students with credit in ED P 533).
516. Counseling the Adult (3)  
Prerequisite: ED P 515. Theory and practice of counseling and guidance of the adult. (Not open to students with credit in ED P 539.)
517. Seminar in School Counseling (3)  
Prerequisite: ED P 515. Theory, research and techniques of counseling; use and analysis of case studies. Clinical work is required. (Not open to students with credit in ED P 631.)
519. Advanced Educational Statistics (3)  
Prerequisite: EDP 419 or equivalent; and, familiarity with computer-based statistical programs. Principles of statistical analysis with emphasis on sampling procedures, hypothesis testing, experimental design, and correlational, and multivariate techniques. Use of computer programs such as SPSS in data analysis.
520. Program Evaluation and Research (3)  
Prerequisites: ED P 419, 420. Research designs; problems of internal and external validity. Conducting program evaluations, including needs assessments, goal-setting by various constituents, summative and formative evaluation of objectives, and presentation of results.
521. Crisis Intervention and Counseling (1)  
Prerequisite: ED P 515. A study of the theoretical and practical bases for accurately assessing and effectively responding to community, school, personal, law enforcement, medical, and mental health crisis situations.
522. Counseling Methods and Techniques (3)  
Prerequisites/Corequisites: EDP 513, 515. An applied course which provides practice in the methods and techniques of the major theoretical approaches employed in counseling.
523. Technology-Based Learning (3)  
An introduction to modern technology-based tools of learning and instructional design that are of value to educators including educational psychologists, curriculum developers, school developers, school administrators, and school counselors. Students complete a series of hands-on learning experiences to become familiar with educational technologies including computer applications, computer-based counseling resources, software authoring tools, computer-assisted instruction, telecommunications, and computer-based human research tools. (Seminar 2 hours, laboratory 2 hours.)
524. Individual Intelligence Testing (4)  
Prerequisite: ED P 420. Practice in administration and interpretation of individual intelligence tests. Students will administer practice tests to adults and children, be observed for proficiency, and test clinic cases. (Not open to students with credit in PSY 574.) (Lecture 3 hrs, lab 3 hrs.)
525. Psychoeducational Diagnosis in Multicultural Settings (3)  
Prerequisite: ED P 524. Theory and practice of assessment of individuals, with an emphasis on the linguistically and culturally diverse. Application of assessment results to regular and special education programs.
527. Clinical Practice in School Psychology (3)  
Prerequisites: ED P 525, and concurrent enrollment in ED P 642A. Diagnostic and remedial techniques with individuals, including those learning disabilities and those with low-incidence exceptionalities. Discussion of problems and solutions in school psychology practice.

528. Orientation to Professional School Psychology (3)  
Prerequisites: Admittance to the School Psychologist Program; ED P 515. Introduction to the field of school psychology. History of the field, orientation to public education, roles and functions, laws and ethics, research base, organization and supervision, social and cultural influences, service delivery models, and current literature will be discussed. (Not open to students with ED P639.)
529. Assessment in Career Counseling (3)  
Prerequisite: ED P 420 or equivalent or consent of instructor. The selection, administration, scoring, and interpretation of assessment instruments in career counseling. Assessment areas include interests, values, personal characteristics, and aptitudes and abilities. Techniques for developing and using special assessment instruments will also be covered.
530. Career Development and Decision Theory (3)  
Emphasis on life planning concepts as related to the world of work, theories of career development and the career decision process.
531. Career Information Resources (3)  
Knowledge, use and management of information resources in the career development field.
535. Counseling and Guidance of Exceptional Individuals (3)  
Prerequisites: ED P 305, 350, 430 and consent of instructor. Educational and vocational needs of exceptional individuals; methods of counseling; rehabilitation and guidance programs.
536. Collaborative Consultation in the Schools (3)  
Prerequisites/Corequisites: EDP 642A, 642B, 643A, 644A, or Field Placement in Special Education. Theory and practice of collaborative consultation in the schools. Models, roles and skills will be discussed, rehearsed during in-class simulations, and practiced in field settings. Field experiences are required.
538. Student Development in Higher Education (3)  
Survey of student development in public and private colleges and universities, focusing on historical, philosophical and theoretical foundations; roles and functions; legal, ethical, and organizational issues.
543. Human Sexuality Counseling (3)  
Prerequisite: ED P 515. Training in human sexuality education, counseling, and therapy. An examination of personal attitudes and values. The study of the physiological, psychological, and sociocultural variables associated with sexual behavior, sexual identity, and sexual disorders. For MFCC certification only.
- 546A,B,C,D,E. Practicum in Special Education (3,3,3,3,3)  
Prerequisites:  
A. M.S. in Special Education. ED P 350 and consent of instructor.  
B. Resource Specialist Certificate, EDP 350 and consent of instructor.  
C. Education Specialist Credential Program, Level II; Completion of Education Specialist Credential Program Level I; or consent of instructor.  
D. Cooperative Alternative Specialist Credential Program, ED P 350 and consent of instructor.  
E. Cooperative Alternative Specialist Credential Program (semester two) ED P 546D.  
Supervised experience with individuals with exceptionalities in schools, clinics, post-secondary education, workplaces, and residential settings. Application should be made by March 1 for fall semester and October 1 for spring semester. Traditional grading only.
547. Student Development Theory in Higher Education: Theory to Practice (3)  
Prerequisite: EDP 538. This course will explore student development theory and the application of theory to practice for programs and services in student affairs/higher education. Students will examine cognitive, psychosocial, topology, and person/environment theories and their application to traditional and non-traditional student populations. Critiques of these models for viability and usefulness with diverse student populations will be considered. Program models that allow for the translation of theory to practice will guide students in designing an effective program for college student populations as a requirement for this class. Traditional grading only.

548. Students in U. S. Higher Education (3)

Prerequisite: ED P 538. Focus on the concepts of community and culture in the United States college with an emphasis on understanding the diversity of the student population to include age, gender, ethnic culture, sexual orientation, and people with disabilities.

549. Management of Student Development in Higher Education (3)

An analysis of the management and organizational theory and practice as it pertains to student development in higher education. Includes study of human and physical resources management.

550. Cultural Perspectives of Special Education (3)

Prerequisite: ED P 350. Social, philosophical and historical foundations of special and compensatory education.

551. Education and the Internet. (3)

Prerequisites: EDP 523, Technology-Based Learning. The course provides discussion, demonstrations, and hands-on experience related to educational applications of computer communications systems such as e-mail, file transfer protocol (ftp), computer bulletin boards, listservs, and the world wide web. Students complete a series of hands-on instructional assignments using technology-based tools to design and manage educational programs delivered via the Internet. (Seminar 2 hours, Laboratory 2 hours).

553. Instructional Design (3)

Prerequisite: ED P523. An introduction to the principles of instructional design with emphasis on the role of modern technology-based tools of learning. Introduces concepts of instructional design that are of value to educators including educational psychologists, curriculum developers, special education teachers, school administrators, and school counselors. Students are introduced to the basics of instructional development as a systematic planning of learning activities in which information is transferred to a learner. Students will complete a series of instructional design assignments using both traditional teaching tools and modern technology-based tools.

554. Principles of Educational Remediation (3)

Prerequisite: Admission to the special education credential program, learning handicapped. Analysis of theories and assumptions underlying definitions and etiologies of learning handicaps and models of remedial intervention. Implications of current research for the selection and implementation of materials and classroom management and instructional methods.

555. Cross-Cultural Counseling (3)

Prerequisite: EDP 515 or consent of instructor. Examination of discriminatory attitudes and practices including historical antecedents. Problems of minorities in cross cultural counseling. Psychological, sociological, cultural, and educational concerns regarding counseling of multicultural populations.

556. Counseling Children and Adolescents (3)

Prerequisites: EDP 515 and 522, or consent of instructor. Theories and application of the methods and techniques of the major theoretical approaches employed in counseling children and adolescents.

560. Management of Emotionally Handicapped Child (3)

Prerequisite: EDP 301. Etiology and characteristics of disturbed emotional behavior in the pre-school and school-age child, management of such children in school and home.

561. Individuals with Severe Handicaps (3)

Prerequisite: Admission to Special Education Specialist credential, Severely Handicapped. Assessment of developmental and learning disabilities relating to etiology and diagnosis in individuals with severe handicaps. Identification of theoretical frameworks, current issues and practices. Utilization of research findings in curriculum development and program implementation.

562. Multicultural Special Education: Issues and Practices (3)

Prerequisites: EDP 485, 454 and completion of Education Specialist Credential Level I. Identification of current issues in the education of culturally and linguistically diverse students in special education. Utilization of research findings in assessment, curriculum development and program implementation, including best practices. Traditional grading only.

563. Methods of Teaching Individuals with Severe Handicaps (3)

Prerequisite: Admission to Special Education Specialist credential, Severely Handicapped. Methods of teaching individuals with severe handicaps including the use of best practice instructional technology, and non-aversive behavior management strategies. Infusion and use of basic skills such as communication, physical management and positioning, and functional academics within natural routines and activities. Strategies for working with families of individuals with severe handicaps who may be culturally and linguistically diverse will be presented.

564. Assessment and Evaluation of Students with Disabilities (3)

Prerequisites: Admission to the Education Specialist Credential program, EDP 350, 405, 480, or consent of instructor. Knowledge of appropriate use of formal, informal and authentic assessment procedures for planning, monitoring and evaluating instructional programs for students with disabilities. Emphasis on issues in assessing and evaluating culturally and linguistically diverse students.

565. Methods of Teaching Learning Handicapped Individuals (3)

Prerequisites: Admission to the Special Education Specialist Credential, Learning Handicapped, ED P 554. Methods, materials and strategies to teach students with learning disabilities at all levels. Emphasis on practical ideas and activities in academic curriculum areas. Includes techniques to enhance career preparation in the special instructional program.

566. Career Planning and Transition for Youth and Adults with Disabilities (3)

Prerequisites: Completion of Education Specialist Credential program, Level I, Development of Induction Special (Level II), or consent of instructor. Examination of rationale, legislation, models, agencies, programming, and planning components of career education and transition from school to adult life for youth and adults with disabilities. Emphasis will be upon collaborative transition planning between families of persons with disabilities and public and private community agencies and organizations which provide services to persons with disabilities.

567. Curriculum Models and Practices for Learners with Disabilities (3)

Prerequisites: Admission to Education Specialist credential program and completion of regular education methods coursework or equivalent. Curricular issues, models and practices for students with disabilities. Emphasis will be placed on core curriculum in the public schools and appropriate modifications and delivery of content to students with disabilities. Traditional grading only.

568. Evaluation of Bilingual/Multicultural Exceptional Children (3)

Prerequisite: Admission to the Learning Handicapped Internship Program. Working with bilingual/multicultural children who are classified as exceptional in the school system. Includes review of fundamentals of measurement, non-biased assessment procedures, and instruments and techniques developed to assess bilingual/multicultural exceptional children.

569. Effective Instructional Strategies for Learners with Disabilities (3)

Prerequisites: Admission to Education Specialist credential program, completion of regular education methods coursework or equivalent and completion of EDP 567. Effective instructional practices and methods for use with learners with disabilities. Emphasis placed upon individualized instructional planning procedures, validated instructional strategies, and collaborative teaching for students with disabilities. Traditional grading only.

570. Role of the Resource Specialist (3)

Prerequisite: ED P 350. The concepts of the resource program as related to the aspects of consultation, program coordination, legal consideration, staff development and parent education programs. Instruction in developmental processes and skills for planning individual programs for students with special needs.

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## Courses in Educational Psychology (ED P)

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### 572A-B. Internship With Learning Handicapped Individuals (8,8)

Prerequisites: Admission to the Learning Handicapped Internship Program, possession of a basic teaching credential, and demonstration of specified competencies. The student will be involved in a paid employment situation five days a week for the equivalent of four semesters. School district and university faculty will supervise the student. The student will demonstrate competencies for the specialist credential in prior or concurrent credential courses. In addition, the student will demonstrate advanced professional development. (Supervision) Credit/No Credit grading only.

### 573. Intercultural Communication in Education (3)

Analysis of patterns and functions of communication in the classroom and school from the perspective of intercultural communication; structures of participation; communication and social structure; communicative events and interaction; attitudes toward languages and language skills in school contexts; comparison of school and community styles and expectations regarding communication. Course fulfills a requirement for the Supplementary Authorization in Teaching English as a Second Language.

### 574. Sociological Foundations of Education (3)

Relationships between society and the schools: local/national ideologies and political/economic influences; education as a social function; current trends and issues as they affect education. (Not open to students with credit in ED P 480.)

### 575. Intellectual Foundations of Educational Reforms, 19th Century to Present (3)

Historical survey of the intellectual and ideological foundations of educational reform movements in the United States, with emphasis from the late 19th century to present. Focus on individual educational philosophers and on major curriculum orientations; comparison of the major educational ideologies; canons for basic mass literacy education versus elite education are compared, with consideration of their impact on diverse groups.

### 576. Education and Diversity: Historical and Contemporary Perspectives (3)

Major themes in the history of education from the perspectives of ethnic, racial, linguistic diversity, and gender in the United States and in California with an emphasis on the 19th and 20th centuries; survey of educational approaches for diversity; focus on the experiences of various groups; examination of the implications of major educational ideologies, policies and curriculum movements for various groups.

### 577. Educational Linguistics (3)

Prerequisites: Six units in linguistics or permission of instructor. A graduate introduction to the role of language and linguistics in contemporary education; analysis of the context of language acquisition; attitudes toward multilingualism; language policies which set guidelines and expectations for instruction; cultural factors which influence language acquisition. Same course as LING 500.

### 578. Literacy and Linguistics (3)

Prerequisites: Six units in linguistics or permission of instructor. This course provides a general introduction to the field of literacy studies from a linguistic and sociocultural perspective. Among the major topics presented are the relationship between oral and written language; the relationship between literacy and socioeconomic/sociocultural factors; and the impact of societal expectations regarding literacy. Pedagogical implications of these issues are explored. Same course as LING 575.

### 579A. Instructional Strategies for Individuals with Learning Handicaps (3)

Prerequisites: Admission to the Special Education Specialist Credential, Learning Handicapped, or School Psychologist Credential, and ED P 525 or 564. Development and implementation of effective instruction for individuals with learning handicaps. Demonstration and application of clinical strategies with students with learning handicaps in the Educational Psychology Clinic. (Lecture 2 hours, laboratory 2 hours.)

### 579B. Instructional Strategies for Individuals with Severe Handicaps (3)

Prerequisites: Admission to the Special Education Specialist Credential, Severely Handicapped, or School Psychologist Credential, and ED P 525 or 564. Development and implementation of effective instruction for individuals with severe handicaps. Demonstration and application of clinical strategies with students with severe handicaps. Twenty (20) hours of field work required. (Course held off campus.)

### 580. Vocational Work Evaluation Systems (3)

Prerequisites: ED P 430, 529. Concepts and processes of vocational work evaluation systems as they pertain to the assessment of occupationally disabled clientele. The role and functions of work evaluators in industry, private and public vocational rehabilitation agencies, schools, and personnel/training activities will be examined in regard to their theoretical and situational applications.

### 582. Comparative International Education (3)

An overview of education in selected foreign countries; a study of institutional organization, as well as issues which develop in particular social, economic, and political contexts; an examination of types of educational problems and solutions which are commonly shared.

### 583. Global Education (3)

Background on critical world issues and cultural influences, as well as methods and resources for application in the classroom. Format includes resource speakers and practitioners, map activities, and cultural simulation exercises.

### 586B,C. Field Study with Students with Disabilities (7,7)

Prerequisites: Admission to the Learning or Severely Handicapped Special Education Specialist Credential and demonstration of specified competencies.

B: Learning Handicapped

C: Severely Handicapped

Application for admission should be made by March 1 for the summer session and fall semester and October 1 for the spring semester. Advanced field study including student teaching in a public or private school or facility serving individuals with disabilities. Students will be assigned to field sites five days a week or demonstrate competencies in their own classroom under an emergency credential, for the equivalent of one semester, under the supervision of a field-site specialist. Opportunities will be provided for the student to demonstrate competencies in (1) the analysis and evaluation of all program elements; (2) the application of appropriate intervention to extend interaction among individuals with disabilities and their peers; (3) planning and conducting parent meetings; (4) utilization of ethical practices in communication to others about individuals with disabilities; and (5) the initiation and pursuit of a program of self-assessment and professional improvement. Credit/No Credit grading only. Both "B" and "C" courses may be repeated for a maximum of 14 units.

### 587A. Advanced Field Study and Seminar: Education Specialist Credential in Mild/Moderate Disabilities (6)

Prerequisite: Admission to the Level I Education Specialist Credential in Mild/Moderate Disabilities. Must complete all Level I courses or be concurrently enrolled in EDP 569. Application for admission should be made by March 1 for the summer session and fall semester and October 1 for the spring semester. Advanced field study in a public or private school or community-based site serving individuals with mild/moderate disabilities. Candidates will be assigned to field sites five days a week with a master teacher or demonstrate competencies in their own classroom with an emergency credential, under the supervision of a university supervisor. Credit/No Credit grading only.

### 587B. Advanced Field Study and Seminar: Education Specialist Credential in Mild/Moderate Disabilities (6)

Prerequisite: EDP 587A. Application for admission should be made by March 1 for the summer session and fall semester and October 1 for the spring semester. Advanced field study in a public or private school or community-based site serving individuals with mild/moderate disabilities. Candidates will be assigned to field sites five days a week with a master teacher or demonstrate competencies in their own classroom with an emergency credential, under the supervision of a university supervisor. Credit/No Credit grading only.

**588A. Advanced Field Study and Seminar: Education Specialist Credential in Moderate/Severe Disabilities (6)**  
Prerequisite: Admission to the Level I Education Specialist Credential in Moderate/Severe Disabilities. Must complete all Level I courses or be concurrently enrolled in EDP 569. Application for admission should be made by March 1 for the summer session and fall semester and October 1 for the spring semester. Advanced field study in a public or private school or community-based site serving moderate/severe disabilities. Candidates will be assigned to field sites five days a week with a master teacher or demonstrate competencies in their own classroom with an emergency credential, under the supervision of a university supervisor. Credit/No Credit grading only.

**588B. Advanced Field Study and Seminar: Education Specialist Credential in Moderate/Severe Disabilities (6)**  
Prerequisite: EDP 588A. Application for admission should be made by March 1 for the summer session and fall semester and October 1 for the spring semester. Advanced field study in a public or private school or community-based site serving moderate/severe disabilities. Candidates will be assigned to field sites five days a week with a master teacher or demonstrate competencies in their own classroom with an emergency credential, under the supervision of a university supervisor. Credit/No Credit grading only.

**589. Adult Literacy and Language Diversity (3)**  
Prerequisite: Three (3) units from ED P 578/LING 575, ENGL 510; ENGL 535, or from an instructor approved course in literacy studies or adult second language acquisition. A general survey of issues in adult and family literacy/biliteracy and native language literacy with special focus on the educational needs of language minority adults and their families; consideration of the relationship between theory, policy and practice with attention to the social, economic and cultural characteristics of populations in need of literacy services. Traditional grading only.

**590. Special Problems in Educational Psychology (1-6)**  
Prerequisite: Consent of instructor. Advanced study of special topics and problems in educational psychology. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

**595. Qualitative Research Methods (3)**  
Introduction to the theory and application of ethnographic and qualitative methods in educational settings with special emphasis on applications for educational linguistics, educational anthropology, and research related to language arts instruction. Surveys the basic rationale for qualitative/ethnographic inquiry and basic concepts and methods for applications in teacher-as-researcher approaches and for action research. Same course as LING 595.

**593. Seminar in Professional Development in Counseling and Human Services (1)**  
Prerequisite: EDP 538 and 548 (must have completed or concurrently enrolled) This course is an experiential orientation to the profession of counseling and student development/student affairs in higher education with an emphasis on opportunities to observe the interactions between organizational cultures, student cultures, and the functions and role of student affairs professionals in the work environment. Students will meet in a seminar format to discuss and analyze their observations and intentional learning activities from shadowing a professional and completing a fifty-hour practicum. Traditional grading only.

**604. Seminar in Human Development (3)**  
Prerequisites: EDP 301 or 302, and EDP 400 or 419. Theories and issues in developmental psychology, Cognitive, linguistic, perceptual, biological, psychomotor, social and emotional development; nature-nurture and individual differences.

**605. Seminar in Consultation on School Learning (3)**  
Prerequisites: ED P 305, and ED P 400 or ED P 419. Analysis of current theory and research in the area of student motivation, achievement and learning problems in the classroom; role of consultation among pupil service personnel, teachers, special educators and parents in maximizing the school learning of all students.

**608. Seminar and Practicum in Marriage, Family, Child Counseling (4)**  
Prerequisites: ED P 510, 511, 512, 513, 515, 522, 556, 634. Theories, research, and techniques of marriage, family, child (MFC) counseling and the major psychotherapeutic approaches relating to family relationships, family systems, and communications theory as applied to relationship units regarding the assessment, diagnosis, treatment of premarital, marital, family, child, and relationship dysfunctions.

**609. MFCC Practicum (2,2)**  
Prerequisites: EDP 510, 511, 512, 513, 515, 522, 556, 608. Practicum application submitted no later than March 1 for the following fall semester, and October 1 for the spring semester. May be taken concurrently with EDP 608. The BBS requires the completion of 150 hours of practicum - refer to the practicum information in the department office. MFCC counseling in an appropriate practicum setting with closely supervised experiences prior to MFCC field-work. Students will be required to assess, diagnosis, describe appropriate interventions and conduct counseling services for individuals and/or families. The course may be repeated for a maximum total of 4 units to complete the 150 hour requirement. Credit/No Credit grading only.

**615. Seminar in Home-School – Community Relations (3)**  
Prerequisite: ED P 430. Theory and research into the social influence of home, school and community on child behavior; techniques to foster close home-school relations and use of community agencies.

**623. Developing Technology – Based Learning (3)**  
Prerequisites: ED P 523, 553. Analysis and hands-on experience related to the use of modern techniques for developing technology-based learning. The course provides discussions, demonstration, and hands-on experience in the computer lab toward the development of technology-based interactive learning programs. The course introduces advanced concepts of technology-based instructional design that are of value to educators including educational psychologists, curriculum developers, school administrators, special education teachers, and school counselors. Students will complete a series of hands-on instructional design assignments using state of the art technology-based tools for the delivery of learning programs. Each Student will apply these methods by designing a technology-based instructional program. Seminar 2 hours, laboratory 2 hours.

**634. Family Systems Therapy: Theory and Practice (3)**  
Major family systems therapy theories, research issues, and techniques for counseling families.

**637. Career Counseling Practicum (4-6)**  
Prerequisites: ED P 510, 515, 529, 530 or 531, and 524 or 580. Career counseling at the secondary and post-secondary levels with closely supervised clinical experiences. The number of units credit a student chooses would correspond to the amount of time the student will be required to be available to serve clients of the Educational Psychology Clinic on a weekly basis (i.e., 4 units = 2 hours, 5 units = 4 hours, 6 units = 6 hours) in addition to class time. (Not open to students with credit in ED P 537).

**638. Group Counseling (3)**  
Prerequisite: ED P 516 or 517 or 608 or 637. Theory and application of small group processes in guidance and counseling, laboratory practice in selection of participants, leadership, interaction methods, problem solving and evaluation. (Not open to students with credit in ED P 532.)

**639. Seminar in Organization of Pupil Personnel Services (3)**  
Prerequisite: ED P 430. Practices and problems in organizing, administering, supervising and evaluating pupil personnel programs at various educational levels.

**640. Computer Applications in Counseling and Human Services (3)**  
Prerequisite: Computer literate. Application of computer technology to the delivery of mental health, school counseling, school psychology and other human services. Emphasis on developing competencies in the use of computer-assisted guidance and counseling materials that relate to specific professional career goals. (Lecture 2 hours, laboratory 2 hours.)



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## Courses in Educational Psychology (ED P)

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### 641. Apprenticeship in School Psychology (2)

Prerequisites: Admission to school psychology credential program, ED P 517, 524. Field placement with an experienced school psychologist for one day a week for the semester (18 days). Observation of and entry level participation in routine school psychological services. Not required for those with approved school experiences.

### 642A. Field Work I - School Psychology (3)

Prerequisites: ED P 525, completion of acceptable masters degree, concurrent enrollment in ED P 527, and approval of program committee. Application for field work should be made by October 1 for the spring semester, or by March 1 for summer (if offered) or fall semester. Credit/No Credit grading only.

### 642B. Field Work II - School Psychology (3)

Prerequisites: ED P 527, 642A, and approval of program committee. Continuation of school psychology field work experiences. Application for field work should be made by October 1 for the spring semester, or by March 1 for summer (if offered) or fall semester. Credit/No Credit grading only.

### 643A-D. Counseling Field Work (3)

#### A. School Counseling

Prerequisites: ED P 517, Certificate of Clearance.

#### B. Student Development in Higher Education

Prerequisites: ED P 516, 538.

#### C. Career Counseling

Prerequisites: ED P 637.

#### D. Marriage, Family, Child Counselor

Prerequisites: ED P 608.

Practical experiences in counseling and guidance activities under supervision in approved settings. Applications for field work must be made no later than March 1 for the following summer or fall semester, and October 1 for the spring semester. (Not open to students with credit in ED P 541.) Credit/No Credit grading only.

### 644A-D. Advanced Counseling Field Work (3)

#### A. School Counseling

Prerequisites: ED P 531, 638, 643A, passage of CBEST.

#### B. Student Development in Higher Education

Prerequisites: ED P 549, 638, 643B.

#### C. Career Counseling

Prerequisites: ED P 638, 643C.

#### D. Marriage, Family, Child Counselor

Prerequisites: ED P 638, 643D.

Continued field work under licensed/credentialed supervisors (if required by specialty area or work setting). Applications for field work must be made no later than March 1 for the following summer or fall semester, and October 1 for the spring semester. (Not open to students with credit in ED P 545.) Credit/No Credit grading only.

### 645. Internship in Rehabilitation Counseling (6)

Prerequisites: ED P 637 and Advancement to Candidacy. Application must be made no later than March 1 for the following summer/fall semester or October 1 for the spring semester. Full-time paid employment situation resulting in a minimum of 600 clock hours in an approved rehabilitation site under supervision of a nationally Certified Rehabilitation Counselor. The student will demonstrate competencies for national certification and advanced professional development. (Supervision.)

### 672. Language and Educational Policies (3)

Examination and analysis of contemporary and historical language policies, educational language policies, and legal decisions in the United States which provide the context for current language practices in the schools; comparison of U.S. experiences with those of other nations; discussion of the relationship between language attitudes and educational policy formation.

677. Curriculum/Program Development and Evaluation (3)  
Broad-based approach to classroom curriculum planning and curriculum design, and the technical process of curriculum and program planning. The role of the administrator as the leader of the learning community. Examine issues of: school democracy, developing a thinking curriculum, restructuring of public school curricula in urban and culturally diverse communities, and an integrated bi-literacy approach to learning. Examine ways to apply current instructional design models, and evaluate and assess their effective implementation. The California Curriculum Frameworks will be used to supplement and guide the development of a restructured curricula.

### 692. Special Topics in Counseling (1-6)

Advanced study of special topics in the field of counseling. Continuing education and non-degree students may enroll for units subject to suitable changes in course content. Course may be repeated with different topics. Topics regarding continuing education for mental health providers are announced in the UCES Schedule of Classes or the University Fall, Spring, or Summer semester Schedule of Classes. Course may be repeated under different topics to a maximum of 12 units.

#### A. Special Topics in Counseling: Introduction to Psychodrama

An applied course which provides instruction and practice in the major theoretical approaches to psychodrama, a specialized group psychotherapy approach, with special attention to individual, child, adolescent, and family issues. Does not qualify for psychodrama certification.

#### B. Special Topics in Counseling: Advanced Psychodrama

Prerequisites: EDP 692A or consent of instructor. An applied course which provides instruction and practice in directing psychodrama as a counseling method.

#### C. Mediation Methods and Techniques

History and theories of mediation, utilization in diverse settings, California requirements regarding Alternative Dispute Resolution, basic mediation skills training.

### 693. Advanced Seminar in Professional Development in Counseling and Human Services (1-2)

Prerequisites: ED P 515, 538, 548, 593, and concurrently enrolled in 549. Students will explore the professional associations available for counselors and student affairs professionals, and will attend one on-campus professional development institute and one off-campus professional conference that is either regional or national in scope. Additionally, students will explore and demonstrate an integration of roles, philosophy, and theory for counseling and student development work. Finally students will develop a life long professional development plan. Traditional grading only. Course is repeatable to 2 units.

### 695C. Seminar in Professional Development in Counseling and Human Services (3)

Prerequisites: Advancement to candidacy and permission to enroll from College of Education Graduate Office. A seminar stressing integration of counselor roles and specializations. The student will demonstrate knowledge of the field along with select-ed skills in critical thinking and counseling methods.

### 695F. Seminar in Foundations of Education (3)

Prerequisites: Advancement to candidacy in the Educational Foundations option, approval of graduate advisor, and written application to Graduate Office. Applications for enrollment must be made by March 1 for the summer session or fall semester, or by October 1 for the spring semester. Analysis of major issues in educational foundations (sociological, historical, and philosophical) and their relationships to international education, language, literacy and culture and urban education. This course is taken in preparation for comprehensive examination in Educational Foundations. (Not open to students pursuing the thesis option.)

### 695S. Seminar in Special Education (3)

Prerequisites: Advancement to candidacy, and written application to Graduate Office. Application for enrollment must be made by March 1 for the summer session or fall semester, or by October 1 for the spring semester. Studies of problems and issues in

special education. Relating research to practice in the several areas of exceptional individuals. For qualified candidates preparing for the comprehensive examination. (Not open to students with credit in ED P 650.)

**696. Thesis Study: Methodology, Organizational and Research Aspects (3)**

Prerequisite: ED P 400, or ED P 419 and 420 [MS in Counseling and MA in Education, Educational Psychology Option require ED P 419 and 420]. Analysis and definition of problems in education in the context of thesis research. Reference techniques and survey of literature, research design and procedure, data analysis and inference, interpretation and generalization of research findings. Designed for students planning to do a thesis. A thesis committee must be formed and the thesis problem approved by the thesis committee by the midterm of the course. (The CR/NC grading option is available only to those students for whom ED P 696 is not a required course.)

**697. Directed Research (1-3)**

Prerequisites: Consent of instructor, department chair and associate dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made to the Office of Graduate Studies and Research by March 1 for the fall semester or by October 1 for the spring semester.

**698. Thesis (3,3)**

Prerequisites: Advancement to candidacy, ED P 519 or 520 or 595 or 696, approval by director, department chair and associate dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for six units. Application for enrollment must be made to the Graduate Studies Office by March 1 for the fall semester or October 1 for the spring semester.

**699. Project (3)**

Prerequisites: Advancement to candidacy, approval of graduate advisor, and written application to the College of Education Graduate Office. Project application to be made to the College of Education Graduate Office by March 1 for the Summer or Fall semester or October 1 for the Spring semester. Information and discussion related to the development of master's degree projects in Educational Psychology, School Administration, Counseling and related fields. Traditional grading only. Can be repeated with consent of program advisor. Course may be repeated to a maximum of 6 units.

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## Courses in Library Media (LI)

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### Upper Division

**\*497. Independent Study (1-3)**

Prerequisites: Consent of instructor and department chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units, with no more than three units applicable to credential or major requirement.

### Graduate Division

**510. Selection of Materials and Information Sources (3)**

Criteria, tools, procedures and policies for evaluating and selecting instructional resources appropriate to use in school library media centers.

**520. Basic Reference (3)**

Philosophy of reference service; criteria for evaluation, selection, study, and use of selected basic reference sources, both print and electronic; selection of reference tools to reflect cultural and linguistic diversity of our students; instruction in the use of reference sources.

**530A. Library Media Materials for Elementary Grades (3)**

Selection and use of fiction and non-fiction books, audiovisual and electronic media, and related materials of interest to children that reflect the cultural diversity of our state and will support current curriculum frameworks; criteria and tools for selection and use; current issues.

**530B. Library Media Materials for Secondary Grades (3)**

Selection and use of fiction and non-fiction books, audiovisual and electronic media, and related materials of interest to young adults that reflect the cultural diversity of our state and will support current curriculum frameworks; criteria and tools for selection and use; current issues.

**540. Organization and Cataloging of Materials (3)**

Rationale and use of card and online catalogs; principles and practice in classification and cataloging applied to school library media centers; processing/organization of information.

**550. School Library Media Center Management (3)**

Philosophy, principles and problems of planning, organizing, supervising and managing a school library media center program.

**570. Library Media Technologies (3)**

Prerequisites: Beginning skill with word processing and database management programs required. Evaluation, selection, and curriculum applications of computer, video, videodisc, CD-ROM, audiovisual, and other technologies appropriate for use in school library media centers; analysis of available hardware and software.

**580. Field Experience in the School Library Media Center (4)**

Prerequisites: Pass CBEST; possession of valid California teaching credential; and completion of the courses required for the credential or consent of program coordinator. Students will model effective practices in administering a library media program under the supervision of a credentialed library media teacher. Applications for spring and summer semester must be in the office of the program coordinator by October 1 and for fall semester by March 1.

**590. Special Topics in Library Media (1-6)**

Study of special problems and topics in the field of library media. A student may enroll for one to six units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content. Topics will be announced in the Schedule of Classes.

# COLLEGE OF EDUCATION

Dean

Jean Houck

Telephone

(562) 985-4513

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(562) 985-4951

Associate Dean

Kathleen C. Cohn

Assistant to the Associate Dean

Jeanne Kaplan

Administrative Services Manager

Nita Nuessle

Administrative Assistant

Toshie Sweeney

Director of Development

Barbara Holden

Director, Educational Psychology Clinic

Michael E. Bernard

Director, Educational Career Services

Judi Walker

Director, Credential Processing Center

Carol Riley

Secretary to the Dean

Belen Estrada

Departments:

Educational Psychology, Administration and Counseling  
(ED P, EDAD and LI)

Robert Berdan, Chair

Liberal Studies Program

Kristi Jones, Director

Single Subject Teacher Education (EDSS)

Jean Conroy, Interim Coordinator

Teacher Education (EDEL and EDSE)

John Attinasi, Acting Chair

**T**he College of Education (CED) prepares students for professional careers in the field of public and private education.

The College of Education's main purpose is to create and nurture a learning and teaching community committed to excellence in education across the life span. We fulfill our purpose by: preparing professionals to be socially responsible leaders; engaging in research and scholarly activity which informs and improves practice; valuing diversity as we work to achieve common goals; serving and collaborating with schools, agencies, the community and each other; engaging in an inclusive process for planning, communicating, working, and assessing our progress towards our goals.

The College of Education provides undergraduate and graduate studies in education. It offers specific curricula focusing on the preparation of personnel for teaching and educational service in the pre-school, elementary, middle and high schools, community colleges, adult programs, and other educational agencies. In addition to two certificate programs and a variety of teaching and service credentials, the College offers a Bachelor of Arts in Liberal Studies, a Master of Arts in Education degree with various options, and two Master of Science degrees (special education and counseling). All graduate level courses (500/600) in the departments in the College of Education are assumed to be "traditional grading only" unless stated otherwise. Descriptions that include prerequisites and requirements for each credential, certificate, and degree program are listed in this Catalog in the College of Education department that houses the particular program.

## Degree Programs

Bachelor of Arts in Liberal Studies

Master of Arts in Education with Options in:

Educational Administration

Educational Psychology

Social and Multicultural Foundations of Education

Specialization in International/Global Education

Specialization in Language, Literacy, and Culture

Specialization in Language Minority Education

Special Concentration

Elementary Education

Specialization in Curriculum and Instruction

Specialization in Early Childhood Education

Specialization in Reading (Program is undergoing revision. See department for information.)

Secondary Education

Specialization in Curriculum and Instruction

Specialization in Reading (Program is undergoing revision. See department for information.)

## Master of Science in Special Education

### Master of Science in Counseling:

- Marriage, Family, Child Counseling (MFCC) Option
- Vocational Rehabilitation Counseling Option
- School Counseling Option
- Student Development in Higher Education Option
- Career Counseling Option

## California Teaching and Service Credentials

### Basic Teaching Credentials

#### Elementary:

- Multiple Subject Credential, Cross-cultural Language, and Academic Development (CLAD) Emphasis
- Multiple Subject Credential, Bilingual Cross-cultural Language and Academic Development (BCLAD) Emphasis
- Multiple Subject Internship Teaching Credential, with Cross-Cultural, Language and Academic Development (CLAD) Emphasis

#### Secondary:

- Single Subject Internship Credential
- Single Subject Credential
  - Art; English (American Studies, Comparative Literature, Creative Writing, Dance, Journalism, Language & Composition, Literature, Radio/TV, Speech, Theatre); Foreign Language (French, German, Japanese, Spanish); Health Science; Home Economics; Life Science; Mathematics; Music; Physical Education (Adapted P.E., Dance, Elementary School, Secondary School); Physical Science (Chemistry, Earth Science, Physics); Social Science (covering Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology)

### Specialist Teaching Credentials

- Adapted Physical Education
- Early Childhood Education
- Reading
- Learning Handicapped
- Severely Handicapped
- Special Education Internship (Bilingual focus)
- Resource Specialist Certificate of Competence
- Education Specialist Mild/Moderate Disabilities
- Education Specialist Moderate/Severe Disabilities

### Services Credentials

- Preliminary Administrative
- Professional Administrative
- Library Media Teacher
- Clinical Rehabilitative (Communicative Disorders)
- Health (Nursing)
- School Counseling
- School Counseling Internship
- School Psychology
- School Psychology Internship
- School Social Work and Child Welfare and Attendance

## Other Credentials and Authorizations

Designated Subjects (Adult and Vocational Education, ROTC, Supervision and Coordination)

### Certificates

- Career Guidance Specialist (Graduate)
- Teaching of Reading and Language Arts (Graduate)

### Scholarships

Several scholarships are available to students enrolled in the College of Education.

The Clyde Sanfred Johnson Memorial Scholarship fund, established in 1970 as a tribute to Dr. Clyde Johnson, a long time member of the faculty of the College of Education, provides monies for scholarships for students enrolled in the student personnel services program.

The William H. McCreary Scholarship is awarded annually to a graduate student by the California Association for Counseling and Development to honor the former Chief of the Bureau of Pupil Personnel Services. Applications for the McCreary and Johnson Scholarships are available in the Graduate Studies Office.

The William C. Maslow Memorial Scholarship was established as a tribute to the husband of a now retired College of Education faculty member, Dr. Phyllis Maslow.

For prospective elementary school teachers, the Sam Pollach Memorial Scholarship has been established as a tribute to Dr. Pollach, a long time member of the department.

The Steven Warren Endowment Scholarship fund, established in 1984 as a tribute to former student Steven Warren, provides money for scholarships for student teaching.

The Norman Cahn Scholarship Fund provides an award for multiple subject credential candidates.

The Pat Colucci Single Subject Student Teacher Scholarship is awarded semesterly to a student teacher who is demonstrating the level of commitment and excellence personified by Pat Colucci, secretary for the single subject office for many years.

Other scholarships for prospective teachers are awarded through donations from the California Retired Teachers Association, CSULB Association of Emeriti, education honorary societies, anonymous donors, and state and federal agencies. These scholarship applications are available the first week in November in the Office of Graduate Studies and Research, and should be completed and submitted by the first Friday in March.

### Educational Psychology Clinic

The Educational Psychology Clinic is housed in the College of Education (ED2, Room 155, (562) 985-4991) and serves University and public school students. The primary purpose of the Clinic is to give practicum experience for CSULB students in the areas of school psychology, special education (learning disabilities), elementary and secondary reading and mathematics. The secondary purpose of the Clinic is to serve the wider community in Los Angeles and Orange Counties by providing services in the above areas at a reduced rate. No client is refused who can meet the criteria for acceptance but lacks the finances. Parents, as well as

children and adolescents, participate in the clinic program through parent education groups in order to become better informed about their children's problems.

Included in the instructional program of the clinic is extensive monitoring, audio taping and video taping of student progress in working with individual clients, client groups and family groups. Introduction to the use of the microcomputer with the learning disabled is also included.

### Educational Career Services (ECS)

Located in the College of Education, Educational Career Services assists students and alumni in their search for professional positions in the field of education. ECS serves students currently enrolled as student teachers and also provides services to those seeking positions as administrators, counselors, college instructors, librarians, and school psychologists. Student teachers in elementary, secondary, and special education should establish a placement file and attend an orientation meeting. Other candidates should register with the office just prior to graduation or completion of an advanced credential.

Services offered by ECS include: duplicating and mailing professional placement files, posting written job vacancy notices, conducting job search workshops, providing individual advisement, mailing job vacancy bulletins, and providing information about professional educational opportunities. Appointments may be scheduled with an Educational Career counselor to obtain information about the current job market within the field of education. The office is located in ED1, Room 67, phone (562) 985-5772. The 24-hour job tape hot line number is (562) 985-5320.

### Credential Processing Center

The Credential Processing Center's objective is to assist CSU, Long Beach students in pursuit of their credential and educational goals. The Credential Processing Center (CPC) serves as a campus liaison to the State of California Commission on Teacher Credentialing (CTC), and coordinates the dissemination of credential information to CSULB staff, faculty, students and the general public.

The Credential Processing Center is responsible for the evaluation, verification, and recommendation of all initial elementary teaching, secondary teaching and service credentials. Candidates completing requirements by the end of the summer or fall term of any year should register with the CPC prior to March 1. Spring term candidates should file prior to October 1. Multiple Subject and Single Subject candidates complete this registration process as part of the student teaching application.

The Credential Processing Center provides a University resource of credential requirements and regulations, which includes advisement and program admission for the Professional Clear Single Subject and Multiple Subject Credential Programs (Fifth-Year Programs), advisement for out-of-state and out-of-country credential applicants, and assistance to credentialed teachers seeking renewal information.

The CPC is located in ED 1, Room 42, and is open for service Monday through Friday, from 10:00 to 12:00 Noon, and 1:00 to 5:00 PM, unless otherwise posted. The telephone number is (562) 985-4109.

### Master's Degree Programs

Master's degree programs are offered in each of the two departments within the College. General procedures, policies and requirements, for the Master of Arts in Education degree are available in each department and are listed following each option and specialization.

The Department of Educational Psychology, Administration and Counseling offers two Master of Science degrees: MS in Counseling, with Options in: Marriage, Family, and Child Counseling; Vocational Rehabilitation Counseling; School Counseling; Student Development in Higher Education; Career Counseling; and MS in Special Education. One Master of Arts in Education degree is offered with Options in: Educational Administration, Educational Psychology, and Social and Philosophical Foundations of Education.

The Department of Teacher Education offers two Options in the Master of Arts in Education: Elementary Education and Secondary Education. The Elementary Education Option offers three specializations: Curriculum and Instruction, and Early Childhood Education. The Secondary Education Option has one specialization: Curriculum and Instruction.

To be considered for admission to a master's degree program, students must submit an application, official transcripts (including CSULB), and required test scores to the College of Education, Office of Graduate Studies and Research. Application for admission in a master's degree program should be made by December 1 for the spring semester or by May 1 for the fall semester.

Information regarding degree programs is available in the Office of Graduate Studies and Research (ED-1, Room 7). Students should consult with faculty in the various departments concerning particular programs and refer to the appropriate department's section of the Catalog.

All master's degree candidates in education are required either to complete a thesis or project or to take a comprehensive examination according to the requirements of the degree, degree option, or degree option specialization. Application for enrollment for thesis, project, or comprehensive examination must be made by October 1 for the spring semester or by March 1 for the fall semester or summer session. A separate application must be filed for each semester of enrollment in Education 698-Thesis.

### Admission to Master's Programs

Master of Arts in Education

Master of Science in Counseling

Master of Science in Special Education:

To be eligible for admission to the respective College of Education master's degree programs, applicants must meet the following grade-point average (GPA) requirements:

**Clear Admission** — To be eligible for clear admission to a master's program in the College of Education, applicants must have a GPA of 2.85 or higher in the last 60 semester units of course work taken. Lower division and/or extension courses taken after obtaining the bachelor's degree are excluded from this calculation.

**Conditional Admission** — Applicants who meet all requirements for clear admission except one program requirement may qualify for clear admission by earning a minimum of

3.00 on 12 units of approved course work planned by the student and advisor. Applicants who fail to meet more than one program admission requirement must be recommended by faculty as a promising candidate in order to be conditionally admitted.

NOTE: Individual programs retain the right to determine who is admitted to their programs, and meeting the requirements for clear or conditional admittance does not guarantee acceptance to the program.

Clear admission to the CED is required for enrollment in 500- and 600-level courses.

#### Advancement to Candidacy

To be advanced to candidacy for a graduate degree, each student must:

1. Pass the Writing Proficiency Examination (WPE) by University regulation, all applicants must pass the WPE prior to advancement to candidacy. Verification of passing of WPE must be on file in the College of Education, Office of Graduate Studies and Research one semester prior to advancement to candidacy;
2. Students must satisfy all general University requirements for advancement to candidacy, as well as the specific requirements for the degree option and specialization;
3. All prerequisites and testing must have been completed, an approved program of studies must have been filed with the College of Education, Office of Graduate Studies and Research, and the student must be currently enrolled;
4. Resolution of all incomplete grades (to either "complete" or "default" grade).

NOTE: Some master's programs require the Graduate Record Exam (GRE) for admission to the program or for advancement to candidacy, i.e., Educational Psychology, Elementary, and Secondary. See the respective program section for details.

# ELECTRICAL ENGINEERING

## *College of Engineering*

Department Chair

Fumio Hamano

Department Office

ECS Building, Room 512

Telephone

(562) 985-5102/5103

Faculty

Professors

James Ary

Michael Singh Chelian

Radhe Das

Christopher Druzgalski

Fumio Hamano

Michael Hassul

Kenneth James

Thimias Jordanides

Rajendra Kumar

Slawomir Lobodzinski

Hassan Mohamed-Nour

Nick Panagiotacopoulos

Harnatha Reddy

Alfonso Rueda

Bahram Shahian

Raymond Stefani

Robert Teng

Chit-Sang Tsang

Henry Yeh

Mahmoud Wagdy

Undergraduate Advisor

Hassan Mohamed-Nour

Graduate Advisor

Michael Singh Chelian

General Education Advisor

Hassan Mohamed-Nour

Biomedical Engineering Advisors

James Ary, Christopher Druzgalski

Department Secretary

Barbara V. L. Marshall

Students desiring detailed information should contact the department office for referral to one of the faculty advisors.

### *Advisory and Development Council*

The Department of Electrical Engineering is supported by an Advisory and Development Council consisting of outstanding engineers and executives from industry and government in southern California. Its function is to form a liaison between the University and industry and to keep the administration and faculty informed of modern engineering practices. This ensures that the curricula are kept up-to-date. It also advises on placement opportunities before and after graduation.

### *ABET Accreditation*

The Bachelor of Science in Electrical Engineering is accredited by the Accreditation Board for Engineering and Technology (ABET) (Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710). Students enrolling in this program are strongly advised to get in touch with the undergraduate advisor as early as possible to know the details of the ABET requirements in math/sciences, humanities and social sciences areas.

### **Bachelor of Science in Electrical Engineering (code 3-4330) (137 units)**

The degree in electrical engineering is designed to prepare graduates for responsible engineering positions in design, development, research, applications and operation in the fields of communication, control systems, digital signal processing systems, electromagnetics, digital and analog electronic circuits, physical electronics, computer-aided design and power systems. The curriculum is built around a strong basic core of mathematics, physics and engineering science. This is followed by intermediate courses in electrical engineering topics and finally a senior elective sequence including a senior design seminar and terminating in a capstone design course.

By choice of senior elective sequence comprehensive coverage is provided in any one of the above fields.

Laboratory facilities are available in the engineering buildings allowing for basic as well as more advanced laboratory instruction in electronics, digital signal processing, control systems, micro-electronics, communication, power, and digital systems.

### **Requirements**

Core: CHEM 111A; CECS 242; EE 200, 201, 211, 211L, 310, 320, 330; MATH 122, 123, 224, 370A; PHYS 151, 152, 154 (or 153). Each of the foregoing courses must be completed with a grade of "C" or better as well as all courses that are prerequisite or corequisite to courses required for the major including English 100 or equivalent. The interdisciplinary courses as well as the Speech courses required for general education must be taken for a letter grade. Other required courses are CECS 342, EE 330L, 346, 347, 350, 370, 370L,

382, 400, 430, 430L, 460; MATH 370B; ME 330 or CE 370; plus an elective sequence with capstone senior design course as follows:

Analog Elective Sequence: EE 410, 420, 420L, 432; plus approved analog electives\* to at least 137 units approved by the department.

Communications Sequence: either EE 380 or 401, EE 482, 386, 488; plus approved communication electives\* to at least 137 units approved by the department.

Controls Elective Sequence: EE 411, 470, 471; plus approved controls electives\* to at least 137 units approved by the department.

Digital and Computer Elective Sequence: EE 301, 301L, 332, 446, 447; plus approved digital electives\* to at least 137 units approved by the department.

Digital Signal Processing Elective Sequence: either EE 380 or 401, EE 482, 386, 386L, 486, 489; plus approved digital signal processing electives\* to at least 137 units approved by the department.

Power Elective Sequence: EE 350L, 452, 453, 458; plus approved power electives\* to at least 137 units approved by the department.

\* See undergraduate advisor for list of approved electives.

### Bachelor of Science in Engineering Option in Biomedical and Clinical Engineering (code 3-4336) (137 units)

The Department of Electrical Engineering administers an option in Biomedical and Clinical Engineering that allows the student to acquire substantive competence in biomedical engineering and biology. The program builds upon a strong base of biology, mathematics, physics, chemistry, and engineering science to develop a clinically orientated biomedical engineer to serve community medicine. It includes a core of standard electrical engineering courses as well as courses and laboratories in biomedical engineering, anatomy, physiology and biology. Elective units are available in the senior year to explore individual areas of interest.

Laboratory facilities in the field of biomedical engineering are available in the engineering buildings, and laboratory facilities for anatomy and physiology are available in biology. Computer systems are available to simulate biological systems and to collect, process and display physiological data.

#### Requirements

CHEM 111A; CECS 242; EE 200, 201, 211, 211L, 310, 330; MATH 122, 123, 224, 370A; PHYS 151, 152, 154 (or 153). All of the foregoing courses must be completed with a grade of "C" or better. A/P 207; CECS 342; EE 330L, 346, 347, 350, 370, 370L, 382, 406, 406L, 407, 430, 460; MATH 370B; ME 330 or CE 370; plus approved biomedical electives to at least 137 units approved by the department.

### Certificate Program in Energy Conversion and Power Systems Engineering (code 1-4000)

The 27-unit Certificate Program in Energy Conversion and Power Systems Engineering is an undergraduate program designed to prepare electrical and mechanical engineering students to become proficient in the analysis and design of power generating systems (such as direct conversion, coal burning,

hydraulic, nuclear, solar, wind and various other types of power plants), the elements of electrical power plants and systems, and industrial electric power systems design.

For certificate requirements see the Mechanical Engineering Department section of this Catalog.

### Master of Science in Electrical Engineering (code 6-4330)

This program affords an opportunity for engineers and others to advance their competency in analysis and design to better meet the high technology needs of local industry. Each student selects three graduate courses in one area of emphasis, and the remaining courses must augment and support that area of emphasis. Some current examples of areas of emphasis are biomedical, communications, control systems and robotics, digital signal processing, digital systems, electromagnetics and optics, electronics, engineering mathematics, networks and filters, and power. Students may create other areas of emphasis with the approval of the graduate advisor. Some laboratory and teaching assistantships are available to qualified graduate students.

#### Prerequisites

1. A bachelor's degree from an accredited curriculum in electrical engineering or a bachelor's degree from an accredited engineering, natural science or other appropriate curriculum with the requirement that essential undergraduate deficiencies in electrical engineering are removed prior to Advancement to Candidacy.
2. Graduate students must consult with the graduate advisor and obtain the MSEE Handbook which covers procedures and requirements. A tentative program must be approved by the graduate advisor. That program must exhibit an area of emphasis comprised of at least three related graduate courses (500 or 600 level).
3. The prospective graduate student must have attained a GPA of at least 2.7 for the last 60 semester units (90 quarter units) attempted prior to entry in the MSEE program. The student should apply directly to the University Admissions Office. There is no need to apply to the Department initially.

#### Advancement to Candidacy

1. Fully classified standing (if initially admitted as conditionally classified) by completing all deficiency requirements.
2. Currently enrolled in a regular session.
3. For classified students, removal of all undergraduate deficiencies as determined by the graduate advisor. The GPA must be at least 3.0 for all such courses attempted.
4. Demonstration of competence in technical writing by passing an appropriate writing course with a grade of "C" or better or by providing acceptable proof of technical writing ability. This requirement can be waived for thesis students upon recommendation of the graduate advisor and the thesis advisor.
5. Passing the Writing Proficiency Exam.
6. Completion of at least 9 units as a graduate student in residence while maintaining an overall GPA of at least 3.0 and a major GPA of at least 3.0. Students are advised strongly to be advanced before completing about 15 units of the program.



## Requirements

EE core courses consist of the following: EE 501, 505, 508 and 509. Students must select at least 2 out of the above 4 courses appropriate to their area of emphasis and subject to the approval of the Graduate Advisor. Completion of a minimum of 30 units in 400-, 500- or 600-level courses as approved in advance by the graduate advisor. Students must choose either the thesis or nonthesis alternatives. Successful completion of a thesis provides a unifying culmination to the program and an enhanced resume for future industrial or academic endeavor.

Thesis Alternative: EE 500/600 including the above core requirement (15 units); EE 697 (3 units); EE 698 (6 units); EE 400/500/600 (6 units); Comprehensive Oral Exam on Thesis.

Non-Thesis Alternative: EE 500/600 including the above core requirement (24 units); EE 400/500/600 (6 units); Comprehensive Oral Exam on MSEE Program.

## Courses (E E)

The following courses were formerly in the Electrical Engineering Department (with prefix EE) but have been transferred into the Computer Engineering and Computer Science (with prefix CECS): CECS 242, 340, 342, 442, 444, 494. In making the transfer of courses only the prefixes were changed (e.g., CECS 242 was formerly EE 242).

### Lower Division

**200. Trends in Electrical Engineering (1)**  
Electrical Engineering as a profession. Nature of professional and design activities. Advances in Electrical Engineering. Current designs, future trends and challenges in various fields of Electrical Engineering. (Lecture 1 hour.) Traditional grading only.

**201. Digital Logic Design (4)**  
Prerequisite: MATH 117 (or equivalent). Practical design of digital circuits. Basic topics in combinational and sequential switching circuits with applications to the design of digital devices. A materials fee may be charged. (Lecture-problems 4 hours.)

**211. Electric Circuits I (3)**  
Prerequisites: PHYS 152, MATH 224. Linear circuit analysis techniques including Kirchhoff's laws, network theorems, mesh and nodal analysis, Thevenin and Norton equivalents. Simple RL, RC and RLC circuits, Ideal op-amps, Ideal transformers. Phasors, balanced 3-phase systems and power. (Lecture-problems 3 hours.) Traditional grading only. (CAN ENGR 12; E E 211+211L, CAN ENGR 6)

**211L. Electric Circuits Laboratory (1)**  
Prerequisites: PHYS 152, MATH 224. Linear circuit analysis techniques including Kirchhoff's laws, network theorems, mesh and nodal analysis, Thevenin and Norton equivalents. Simple RL, RC and RLC circuits, Ideal op-amps, Ideal transformers. Phasors, balanced 3-phase systems and power. Use of computers in circuit analysis. (Laboratory 3 hours.) Traditional grading only.

### Upper Division

All 300- through 700-level courses are Traditional Grading Only unless otherwise stated.

**301. Sequential Circuit Design (3)**  
Prerequisite: EE 201. Synthesis of sequential circuits. Asynchronous sequential circuits, algorithmic state machines, hardware design languages, sequential circuit design using programmable logic devices. (Lecture-problems 3 hours) Traditional grading only.

**301L. Sequential Circuit Design Laboratory (1)**  
Prerequisites: Corequisite: EE 301. Design implementation and verification of digital systems using medium scale integrated and large scale integrated circuits. A materials fee may be charged. (Laboratory 3 hours) Traditional grading only.

**310. Electric Circuits II (3)**  
Prerequisites: EE 211 and 211L, MATH 370A. Continuation of circuit analysis including Fourier series, Fourier and Laplace transform techniques, two port networks. (Lecture-problems 3 hours.) Traditional grading only.

**320. Solid State Electronic Devices (3)**  
Prerequisites: CHEM 111A, MATH 370A, PHYS 153 or 154. Crystals, carrier modeling and action, fabrication, junction statics, dynamics, derivation of BJT characteristics, nonidealities, models, JFET and MOS device statics. (Lecture-problems 3 hrs.) Traditional grading only.

**330. Analog Electronic Circuits I (3)**  
Prerequisites: EE 211 and 211L. Analysis and design of diode, transistor, and operational amplifier circuits. (Lecture - problems 3 hours) Traditional grading only.

**330L. Engineering Electronics I Laboratory (1)**  
Prerequisite: EE 330. Transistor and operational amplifier circuit design laboratory. (Lab 3 hrs) Traditional grading only.

**331. Design of Digital Circuits (3)**  
Prerequisites: CECS 201, EE 211, 211L. (Not open to EE majors.) Analysis and design of digital electronic circuits. Operation of bipolar and MOS transistors. NMOS, CMOS and bipolar transistor inverters, NAND gates and NOR gates. Interfacing digital circuits with external devices. D/A and A/D converters. Semi-conductor memories. (Lecture-problems 3 hours.) Traditional grading only.

**332. Digital Electronic Circuits (3)**  
Prerequisites: EE 201, 211 and 211L. Analysis and design of digital electronic circuits. Structure and operation of MOS transistors, including SPICE models. NMOS and CMOS inverters. Bipolar transistor inverters. Bipolar digital gate circuits (TTL & ECL). Regenerative logic circuits (flip-flop, Schmitt trigger, multivibrator). Semi-conductor memories. Basic IC design-Gate Array, Standard Cell, PLA. (Lecture-problems 3 hrs) Traditional grading only.

**346. Microprocessor Principles and Applications (3)**  
Prerequisite: EE 201. Study of microprocessor and microcomputer elements for applications of these devices to practical problems. Assembly language programming. Design of microprocessor based systems using 80X86 architecture. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**347. Microprocessor Based System Design (3)**  
Prerequisite: EE 346. Design and construction of a microprocessor based system. Interfacing and control of external devices. A material fee may be charged. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only

**350. Energy Conversion Principles (3)**  
Prerequisites: EE 211 and 211L. Energy conversion processes and systems. Energy storage. Energy issues. Components of electrical energy systems in generation, conversion, control, transmission, distribution and utilization. Power electronics in energy conversion and control. (Lec-problems 3 hours) Traditional grading only.

**350L. Energy Conversion Laboratory (1)**  
Prerequisite: EE 350. Testing and performance validation of electric, electronic, electrochemical and electromechanical components and apparatus. (Laboratory 3 hours.) Traditional grading only.

**370. Control Systems (3)**  
Prerequisites: EE 310, MATH 370B. Control systems analysis; block diagrams, signal flow graphs, stability criteria, root locus, frequency domain analysis. Examples of classical control system design. (Lecture-problems 3 hours.) Traditional grading only.

**370L. Control Systems Laboratory (1)**  
Prerequisite: EE 370. Study of analog and digital simulation and servomotor control systems. (Laboratory 3 hours.) Traditional grading only.

**380. Engineering Probability and Statistics (3)**

Prerequisites: EE 310. Introduction to probability, statistics, random variables and their application. A materials fee may be charged. Not open to students with credit in EE 480. (Lecture-problems, computer projects 3 hrs.) Traditional grading only.

**382. Communication Systems I (3)**

Prerequisite: EE 310. Review of Fourier series and transforms. Introduction to passive, active and digital filters. Basic elements of probability theory, statistics, concept of white noise, AM, DSB, SSB and vestigial modulation, narrowband and wideband FM. Not open to students with credit in EE 482. (Lecture-problems 3 hours.) Traditional grading only.

**386. Digital Signal Processing I (3)**

Prerequisite: EE 310. (Not open to students with credit in EE 485.) Study of continuous-time signals and systems, and the corresponding discrete-time signals and systems. Z-transform analysis. Sampling theorem, analog-digital and digital-analog conversion approximation. Analysis and design of digital filters. (Lecture-problems 3 hours.) Traditional grading only.

**386L. Computer Aided Digital Signal Processing Systems (1)**

Prerequisite: EE 386. (Not open to students with credit in EE 485L.) The use of computer packages to design digital filters and process digital signals. Digital filter design including Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) filters. Design of digital signal processing systems. (Laboratory 3 hours.) Traditional grading only.

**400. Senior Design Seminar (1)**

Prerequisite: Senior standing. Design terminologies, processes and issues. Simple design examples. Constraints imposed by factors such as performance, economics, reliability, safety, aesthetics, packaging, codes, standards and practices. Ethics and social impact. Case studies. Open-ended solutions. Specification and schedule of design projects. (Lecture-problems 1 hour.) Traditional grading only.

**\*401. Mathematical Methods for Electrical Engineers (3)**

Prerequisite: MATH 370 A. Corequisite: EE 310. Analytic techniques relevant to electrical engineering. (Lecture-problems 3 hours.) Traditional grading only.

**404. Physiological Control Systems (3)**

Prerequisite: EE 370L. Mathematical modeling and computer simulation of physiological control systems, including neural, skeletomuscular, oculomotor, cerebellar, vestibular, auditory, and cardiovascular. Continuous, discrete, linear, and non-linear models. (Lecture-problems 3 hours.) Traditional grading only.

**\*405. Special Topics in Electrical Engineering (3)**

Prerequisites: Senior standing in electrical engineering or consent of instructor. Selected topics from recent advances in electrical engineering. Course content will vary from year to year and may be repeated once for credit with the consent of the department undergraduate advisor. (Lecture-problems 3 hours) Traditional grading only.

**\*406. Biomedical Engineering (3)**

Prerequisites: EE 330 or consent of instructor. Application and design of medical electronic instruments and automated systems. (Lecture -problems 3 hours) Traditional grading only.

**\*406L. Biomedical Engineering Laboratory (1)**

Prerequisite or corequisite: EE 406. Laboratory study of medical-instrumentation, transducers and computer data processing. A materials fee may be charged. (Laboratory 3 hours.) Traditional grading only.

**\*407. Applications of Computers in Medicine (3)**

Prerequisites: EE 346 or consent of instructor. Principles of analysis and design for computers and data collection equipment for real-time on-line medical systems. A materials fee may be charged. (Lecture-problems, computer projects 3 hours) Traditional grading only.

**408. Health Care Delivery Systems Engineering (3)**

Prerequisites: EE 406 or 407. Applications of engineering in health care delivery systems. Classroom and hospital studies of clinical engineering. Professional aspects of biomedical engineering including engineering support of medical care, employment practices and ethics. (Lecture-problems 3 hours.) Traditional grading only.

**409. Bioelectric Phenomena (3)**

Prerequisites: EE 406 or 407. Generation, recording, analysis, and interpretation of bio-electric signals including evoked potentials, electroencephalogram (EEG), electroretinogram (ERG), electrocardiogram (ECG), electro-oculogram (EOG), and electromyogram (EMG). (Lecture-problems 3 hours.) Traditional grading only.

**\*410. Analog Filter Design (3)**

Prerequisites: EE 310. Theory and design of active filters using operational amplifiers. Emphasis is placed on low-pass filters. (Lecture-problems 3 hours) Traditional grading only.

**\*411. Linear Systems Analysis (3)**

Prerequisite: EE 370. Introduction to continuous and discrete systems. Difference equations and z-transforms. Matrix theory and linear algebra. State-space analysis and linearization. Stability, controllability, and observability. (Lecture-problems 3 hours.) Traditional grading only.

**412. Advanced Circuit Theory and Filter Design (3)**

Prerequisite: EE 310. A parallel treatment of continuous and discrete time signals, circuit theory and filter design. Tellegen's theorem, nonlinear circuits and filters, broadband matching. (Lecture-problems 3 hours.) Traditional grading only.

**\*420. Microelectronics (3)**

Prerequisites: EE 301, EE 330. Microelectronic fabrication processes and characterization of devices. Full custom design examples with small scale integration of bipolar, NMOS and CMOS devices, both analog and digital formats. (Lecture-problems 3 hours) Traditional grading only.

**\*420L. Microelectronics Laboratory (1)**

Corequisite: EE 420. Laboratory evaluation of IC process steps. Wafer probe, packaging, and final test. Empirical device model formulation from test data. (Laboratory 3 hours.) Traditional grading only.

**\*430. Analog Electronic Circuits II (3)**

Prerequisites: EE 330, 370; Co-requisite EE 330L. Differential pairs, current sources, output stages, and integrated operational amplifiers. Op-amp applications and practical issues. Frequency response. Computer-aided circuit analysis and design. Feedback amplifiers and stability. Oscillators. (Lecture-problems 3 hours.) Traditional grading only.

**\*430L. Engineering Electronics II Laboratory (1)**

Corequisite: EE 430. Advanced transistor, operational amplifier, and linear-integrated circuits and systems design laboratory. A materials fee may be charged. Not open to students with credit in EE 433L. (Laboratory 3 hours) Traditional grading only.

**\*432. Design of Analog Circuits and Systems (3)**

Prerequisites: EE 400, 430. Corequisite: EE 410. Extensive laboratory projects. Building blocks such as practical amplifiers, transducers, signal sources, nonlinear circuits, phase-locked loops, D/A and A/D converters, ASICs. Noise. Computer-aided system design. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**\*440. Digital System and Computer Architecture (3)**

Prerequisite: EE 301 or 346. Basic digital system and computer organization and architecture including studies of the arithmetic logic unit, the control unit, input/output processes and memory organization. (Lecture-problems 3 hours.) Traditional grading only.

**\*446. Advanced Microprocessors and Embedded Controllers (3)**

Prerequisites: EE 346 and 347L. Advanced microprocessors (16 bit and 32 bit) such as 80386. Hardware features and new instructions. Math coprocessors. Embedded controllers, their on-chip resources and applications. Support for virtual memory, paging, protection and multitasking and internal cache in advanced processors. (Lecture-problems 3 hours.) Traditional grading only.

**\*447. Design of Digital Systems (3)**

Prerequisites: EE 301, 346, 400. Design of medium and large scale digital systems. Hardware design languages, programmable logic design, custom LSI circuits. Hardware compilers. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**450. Electronic Control of Motors (3)**

Prerequisite: Senior standing or consent of instructor. Characteristics of semiconductor power switches. Commutation techniques. Unidirectional, bidirectional and 4-quadrant converter topologies. Selection of drives to control various AC and DC motors. Uninterruptible power supplies and adjustable speed drives. (Lecture-problems 3 hours.) Traditional grading only.

**\*452. Electric Power Systems Analysis (3)**

Prerequisites: EE 310, EE 350 or consent of instructor. Analysis of power systems using specialized computer programs. Transmission line parameters and performance. Load flow. Symmetrical components, symmetrical and unsymmetrical faults. Power system control, stability and protection. Economic dispatch. HVDC transmission. (Lecture-problems 3 hours.) Traditional grading only.

**\*453. Industrial Power Systems (3)**

Prerequisites: EE 310, EE 350. Electrical design, specification, selection, protection and control of electrical apparatus. Power distribution wiring diagrams. Design calculations and examples, codes and standards. (Lecture-problems 3 hours) Traditional grading only.

**\*455. Space Electric Power Systems (3)**

Prerequisites: EE 330, EE 350. A comprehensive treatment of characteristics of and requirements imposed by missions on spacecraft power systems, power sources, power conversion and control. Energy storage, electrical equipment, power converters and loads, power management. Effects of environment, future space missions and technological needs. (Lecture-problems 3 hrs) Traditional grading only.

**\*458. Design of Power System Components (3)**

Prerequisites: EE 330, 400, and either 450, 452, or 453. Design of electrical, electronic and electromechanical components required for power conversion, control, transmission, distribution, protection and measurements in terrestrial and space electric power systems. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**\*460. Electromagnetic Fields (3)**

Prerequisites: EE 310, MATH 370B. Electric and magnetic field theory including propagation of planewaves in lossless and dissipative media. Maxwell's equations. Transmission lines. Not open to students with credit in EE 462. (Lecture-problems 3 hours.) Traditional grading only.

**463./563. Microwave Engineering (3)**

Prerequisite: EE 460. (Masters students register in EE 563.) Propagation of guided waves in lossless and dissipative media. Radiation and antenna design. Waveguides, microstrip, microwave circuits. Additional projects required for EE 563. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**465./565. Photonics (3)**

Prerequisite: EE 460. (Master's students register in EE 565.) Maxwell's equations applied to electro-optic devices and systems. Electromagnetic formulation of geometrical and Fourier optics. Topics include optics in semiconductors, fiber optics and integrated optics, lasers and holography. Additional projects required for EE 565. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**\*470. Digital Control (3)**

Prerequisites: EE 370L, 411 or consent of instructor. Analysis and synthesis of digital control systems. General application of both the Z-transform and the state-space approach for discrete system design. A material fee may be charged. (Lecture- problems 2 hours, laboratory 3 hours) Traditional grading only.

**\*471. Design of Control Systems (3)**

Prerequisite: EE 400, 411. Corequisite: EE 470. Design of compensators using root-locus and Bode-plot methods. Design of state-space control systems and observers. Computer-aided design. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**474./574. Robot Dynamics and Control (3)**

Prerequisite: EE 411, EE 501 or consent of instructor. Basic methodology for analysis and design of robotic manipulators. Classification of robots. Homogeneous transformations, kinematics, dynamics, trajectory planning and control of robots. Application of robots in flexible manufacturing. Additional projects required for EE 574. (Lecture-problems 3 hours.) Traditional grading only.

**\*482. Communication Systems II (3)**

Prerequisites: EE 382. Information sources and communication systems. Orthogonal series representation of signals, pulse and digital modulation techniques, band-pass digital communication systems, special topics in communications. (Lecture-problems 3 hours) Traditional grading only.

**\*483. Digital Image Processing (3)**

Prerequisites: MATH 370A. Image formation. Image detectors and their characteristics. Perception, image models. Sampling and quantization. Pixel relationships. Statistical characterization of discrete images - probability density models. Image fidelity criteria and image intelligibility. Image transforms. Image enhancement techniques. (Lec-prob 3 hrs) Traditional grading only.

**\*484. Satellite Communication (3)**

Prerequisites: EE 380, 382. Overview of satellite systems, satellite orbits and launching methods, geostationary orbit. Space segment: attitude control, spin stabilization, transponders. Earth segment: baseband signals and modulation. Space link: Link power budget, system noise, intermodulation noise, satellite multiple accessing - FDMA, TDMA. (Lecture 3 hours.) Traditional grading only.

**\*486. Digital Signal Processing II (3)**

Prerequisite: EE 386. Digital signal processing computation and analysis techniques. Discrete and fast Fourier transforms, discrete Hilbert transform, periodogram, spectrum and cepstrum, analyses, and homomorphic deconvolution. (Lecture-problems 3 hours.) Traditional grading only.

**\*487. Data Compression Techniques and Applications (3)**

Prerequisite: EE 401, or consent of the instructor. Introduction to data compression. Classes of data compression (reversible, irreversible). Reversible: noiseless coding, redundancy reduction. Irreversible: fidelity-reducing coding, entropy reduction. Redundancy reduction: optimum source coding (Huffman coding), binary source coding, non-redundant source coding etc. Entropy reduction: quantization (block, sequential, zero memory). Applications to picture television, telemetry and speech data. (Lecture-problems 3 hours.) Traditional grading only.

**\*488. Communication Systems Design (3) F**

Prerequisites: EE 400, 430, 430L, 482. Application of communication theory to the design of communication systems/sub-systems and their implementation with digital and analog integrated circuits. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**\*489. Digital Signal Processing Design (3)**

Prerequisites: EE 347, 386, 400. Design of digital filters, including Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) filters. Design of digital signal processing systems and the implementation of digital filters with digital signal processors in real time. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**\*490. Special Problems (1-3)**

Prerequisite: Consent of instructor. Assigned topics in technical literature or laboratory projects and reports on same. May be repeated for a total of six units. Traditional grading only.

## Graduate Division

### 501. Linear Multivariable Systems (3)

Prerequisite: EE 411. Linear spaces and operators. Linear system and realizations. Stability analysis. Controllability and observability. Composite systems. (Lecture - problems 3 hours.) Traditional grading only.

### 505./605. Advanced Engineering Mathematics for Electrical Engineers (3)

Prerequisites: EE 401 or 411 or equivalent or consent of the instructor. (Master's students register in EE 505; Ph.D. students register in EE 605.) Boundary-value problems and generalized Fourier (or eigenfunction) expansions. Review of Fourier series. Fourier transforms (FT, FFT and STFT), wavelet transform and its computer implementation. The Z-transform. The Hilbert transform. Solutions of partial differential equations using the methods of separation of variables, Laplace, Fourier and wavelet transforms, conformal mapping, numerical (finite difference, finite element), and experimental techniques. Additional projects required for EE 605. (Lecture-problems 3 hours.) Traditional grading only.

### 506./606. Theory and Practice of Biomedical Instrumentation (3)

Prerequisites: Graduate standing in engineering or natural sciences and either EE 406 or consent of the instructor. (Master's students register in EE 506; Ph.D. students register in EE 606.) Advanced design concepts and practical utilization of biomedical instrumentation. Transduction of physiological parameters. Theory and practice. Additional projects required for EE 606. (Lecture-problems 3 hours.) Traditional grading only.

### 507./607. Advanced Biomedical Systems (3)

Prerequisites: Graduate standing in engineering or natural sciences and either EE 406 or consent of the instructor. (Master's students register in EE 507; Ph.D. students register in EE 607.) Novel trends in biotechnology, design and organization of modern hospital systems and utilization of advanced technologies. Modeling and simulation of physiological and medical systems. Additional projects required for EE 607. (Lecture-problems 3 hours.) Traditional grading only.

### 508. Probability Theory and Random Processes (3)

Prerequisites: EE 380, 411. Probability spaces, random vectors and processes, convergence concepts, stationarity and ergodic properties, second-order moments and linear systems, correlation and spectral representations. Some applications of random processes. (Lecture-problems 3 hours) Traditional grading only.

### 509. Network Theory (3)

Prerequisites: EE 386, 410 or 430. Network classifications and study of non-linear circuits. Analysis of linear networks using topological and state-space techniques. Characterization of networks using scattering and other parameters. Tellegen's theorem and its application. (Lecture-problems 3 hours.) Traditional grading only.

### 510. Circuit Synthesis (3)

Corequisite: EE 509. Synthesis of passive lumped networks, cascade synthesis (link with filter synthesis), realization of commensurate distributed networks, discrete passive networks. (Lecture-problems 3 hours.) Traditional grading only.

### 513. Digital Filter Design and Audio Compression (3)

Prerequisites: EE 386, 410 or consent of instructor. Frequency and time-domain analysis using FFT, FIR and IIR filter design and implementation techniques. Principles of digital audio compression. Applications of audio coding standards, such as MPEG Audio and G.729. (Lecture-problems 3 hours.) Traditional grading only.

### 514. Advanced Circuit Synthesis and Design (3)

Prerequisite: EE 510. (Master's students register in EE 514; Ph.D. students register in EE 614.) Scattering synthesis in (s-z) domains, wave digital filters. Lossless bounded-real two-port and orthogonal digital filters with an emphasis on structures suitable for VLSI implementation. Additional projects required for EE 614. (Lecture-problems 3 hours.) Traditional grading only.

### 520. VLSI Design (3)

Prerequisite: EE 430. Techniques for designing Very Large Scale Integrated (VLSI) circuits using n-channel metal oxide semiconductors (n-MOS). (Lecture-problems 3 hours.) Traditional grading only.

### 528. Speech Signal Processing (3)

Prerequisite: EE 486 or consent of instructor. Principles of engineering applications of speech signal processing. Speech synthesis, recognition, encoding, and compression. Applications of neural networks. (Lecture-problems 3 hours.) Traditional grading only.

### 531. CMOS Electronics (3)

Prerequisite: EE 430. Electronic design automation CAD tools, silicon compilers, CMOS design, BiCMOS design (technologies, modeling, device characterization and simulation), CMOS and BiCMOS subcircuits, amplifiers, op-amps and systems. (Lecture-problems 3 hours.) Traditional grading only.

### 532./632. Analog Signal Processing (3)

Prerequisite: EE 430 or consent of the instructor. (Master's students register in EE 532; Ph.D. students register in EE 632.) Basic CMOS circuit techniques. Low-voltage and current-mode signal processing. Switched-capacitor (SC) and switched-current (SI) circuits such as amplifiers, integrators, S/H circuits, filters, oscillators, comparators, D/A and A/D converters. Advanced techniques for corrections of nonideal behavior. Analysis and simulation projects. Additional projects required for EE 632. (Lecture-problems 3 hours.) Traditional grading only.

### 533./633. Quantum and Optical Electronics (3)

Prerequisites: EE 430 and 460 or equivalent. (Master's students register in EE 533; Ph.D. students register in EE 633.) Modern quantum and optical concepts of relevance in lasers, fiber optics, optical technology and semiconductor solid state electronics. Basic theory and applications to state-of-the-art electronics engineering. Additional projects required for Ph.D. students. (Lec-prob 3 hrs) Traditional grading only.

### 540. Advanced Digital System and Computer Architecture (3)

Prerequisite: EE 440,446 or consent of instructor. High level computer architectures including studies of supercomputers, array processors, parallel processing, direct execution computers. (Lecture-problems 3 hr.) Traditional grading only.

### 545. Computer Networks (3)

Prerequisites: EE 482 or consent of instructor. Design and analysis of computer communication networks including their topologies, architectures, protocols and standards. Local area, baseband and broadband networks are covered as well as the use of fiber optics. A materials fee may be charged. (Lecture-problems computer projects 3 hours.) Traditional grading only.

### 550. Power Electronics and Applications (3)

Prerequisites: EE 350 and 430. Power converters: rectifiers, inverters, choppers and cycloconverters. PWM and PFM techniques. Harmonics and filters. Magnetics. Applications in motor controls in industrial systems, energy conversion, HVDC transmission, aircraft and spacecraft power systems. (Lecture-problems 3 hours.) Traditional grading only.

### 551./651. Theory and Applications of DC/DC Converters (3)

Prerequisite: EE 550 or consent of instructor. (Master's students register in EE 551; Ph.D. students register in EE 651.) Modeling, analysis, design and application of DC/DC switch-mode converters. Additional projects for EE 651. (Lec-prob 3 hrs.) Traditional grading only.

### 552. Electric Machines and Robotic Applications (3)

Prerequisites: EE 370, 452 or consent of instructor. Applications and design of small electric machines including stepper and brushless DC motors with emphasis on robotic control. Performance characteristics of electric machines interfacing with robotic systems. (Lecture-problems 3 hours.) Traditional grading only.

### 553. High Voltage Power Systems (3)

Prerequisite: EE 452. Design of insulation systems for high voltage power components. Electric field distribution and insulation breakdown phenomena. High voltage test procedures, instrumentation techniques and protective schemes for major power components. (Lecture-problems 3 hours.) Traditional grading only.

- 560./660. Applied Electro-magnetics (3)  
Prerequisite: EE 460 or consent of instructor. (Master's students register in EE 560; Ph.D. students register in EE 660.) Electromagnetic theory applied to communication, radar, and computer components and systems. Topics include transmission lines, wave guides, fiber optics, phased array antennas, radar cross-section, Fourier optics, near and far field aperture radiation, Doppler radar, quasistatics and DC linear motors. Additional projects required for EE 660. (Lecture-problems 3 hours.) Traditional grading only.
561. Electromagnetic Compatibility (3)  
Prerequisite: EE 460 or consent of instructor. Fundamentals of Maxwell's equations applied to radiating elements in electronic systems. Coupling of radiating interference between electronic elements and various transmission formats. Noise at the systems level. Shielding and grounding analysis and techniques. (Lecture-problems 3 hrs.) Traditional grading only.
- 563./463. Microwave Engineering (3)  
Prerequisite: EE 460. (Master's students register in EE 563.) Propagation of guided waves in lossless and dissipative media. Radiation and antenna design. Waveguides, microstrip, microwave circuits. Additional projects required for EE 563. (Lecture-problems 2 hours, lab 3 hours.) Traditional grading only.
564. Electromagnetics in Wireless Communications (3)  
Prerequisite: EE 460 or consent of instructor. Maxwell's equations applied to modern wireless communication systems. High frequency transmission lines such as microstrip, stripline and requisite antennas. Applications in cellular phone, direct broadcast TV and wireless local area networks (LANs). (Lecture-problems 3 hours.) Traditional grading only.
- 565./465. Photonics (3)  
Prerequisite: EE 460. (Master's students register in EE 565.) Maxwell's equations applied to electro-optic devices and systems. Electromagnetic formulation of geometrical and Fourier optics. Topics include optics in semiconductors, fiber optics and integrated optics, lasers and holography. Additional projects required for EE 565. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.
- 568./668. Wavelet Theory and Applications (3)  
Prerequisites: Strong interest in modern engineering mathematics, EE 505 or consent of the instructor. (Master's students register in EE 568; Ph.D. students register in EE 668.) From Fourier analysis to wavelet analysis. The wavelet transform and time-frequency analysis. Construction and classification of wavelets. Multiresolution analysis, splines, and wavelets. Wavelet decomposition and reconstructions. Orthogonal wavelets and wavelet packets. Linear systems and modeling using wavelets. Applications to signal and image processing. Additional projects required for EE 668. (Lecture-problems 3 hours.) Traditional grading only.
- 569./669. Remote Sensing (3)  
Prerequisites: EE 401, 460 and 483. (Master's students register in EE 569; Ph.D. students register in EE 669.) Interaction of electromagnetic waves with surfaces and atmospheres. Scattering of microwaves by surfaces. Microwaves and thermal emission from atmospheres and surfaces. Spectral reflection from surfaces and atmospheres in the near infrared and visible regions. Review of modern spaceborn sensors and associated imaging technology and data analysis. Additional projects required for EE 669. (Lecture-problems 3 hours.) Traditional grading only.
570. Optimal Controls (3)  
Prerequisite: EE 471. Corequisite: EE 501. The applications of continuous and discrete optimization techniques to control problems. Calculus of variations. Pontryagin's minimum principle. Optimal trajectory, open-loop control and closed-loop control. Numerical solutions. (Lecture-problems 3 hours.) Traditional grading only.
- 572./672. Linear Quadratic Control (3)  
Prerequisites: EE 471, 501. (Master's students register in EE 572; Ph.D. students register in EE 672.) In depth study of the Linear Quadratic Regulator (LQR) problem. Stochastic control and the Linear Quadratic Gaussian (LQG) problem. Robustness properties and Loop Transfer Recovery. Additional problems required for EE 672. (Lecture-problems 3 hours.) Traditional grading only.
- 573./673. Robust Multivariable Control (3)  
Prerequisite: EE 572. (Master's students register in EE 573; Ph.D. students register in EE 673.) Multivariable control. Matrix fraction description and the factorization approach to control system design. Robust control of uncertain systems. Introduction to H infinity control. Additional projects required for EE 673. (Lecture-problems 3 hours.) Traditional grading only.
- 574./474. Robot Dynamics and Control (3)  
Prerequisite: EE 411, EE 501 or consent of instructor. Basic methodology for analysis and design of robotic manipulators. Classification of robots. Homogeneous transformations, kinematics, dynamics, trajectory planning and control of robots. Application of robots in flexible manufacturing. Additional projects required for EE 574. (Lecture-problems 3 hours.) Traditional grading only.
580. Statistical Communication Theory (3)  
Prerequisites: EE 482, 505 and 508 or consent of instructor. Power spectral density of analog and digital communication signals. Matched filters. Signal-to-noise-ratio performance analysis for analog and pulse modulation systems. Vector space representation of digital signals. Error rate analysis for various signaling formats. Optimum digital receivers. Fading channels. (Lecture-problems 3 hours.) Traditional grading only.
581. Satellite Communication Systems (3)  
Prerequisite: EE 580 or consent of instructor. Basic orbital mechanics, link analysis, multiple access architectures and protocols. FDMA, TDMA and CDMA systems. Synchronization techniques, modulation and coding techniques. Security and spread spectrum requirements. System design. (Lecture-problems 3 hours.) Traditional grading only.
582. Spread Spectrum Communication Systems (3)  
Prerequisite: EE 580 or consent of instructor. Spread spectrum (SS) techniques. Direct sequence systems, frequency hopped systems. Generation and correlation properties of pseudo random sequences. Electronic jamming and interference. Processing gain against interference, carrier synchronization, code acquisition and tracking, information modulation and coding. Total SS system design considerations. Applications include ranging, combating multipath effects, code division multiple accessing in mobile satellite and cellular communication systems. (Lecture-problems 3 hours.) Traditional grading only.
- 583./683. Digital Image Processing (3)  
Prerequisite: EE 505 or consent of the instructor. (Masters students register in EE 583; Ph.D. students register in EE 683.) Acquiring Images. Correcting Imaging defects. Image enhancement. Segmentation and thresholding. Processing Binary images. Tomography. Three dimensional Imaging. Some image data compression techniques. Additional projects required for EE 683. Traditional grading only. (Lecture-problems 3 hours.)
- 584./684. Information Theory and Coding (3)  
Prerequisites: EE 482 and 508. (Master's students register in EE 584; Ph.D. students register in EE 684.) Information measures, source coding, Shannon's first theorem, mutual information and channel capacity, Shannon's second theorem, coding techniques for reliable information transmission over noisy channels. Additional projects required for EE 684. (Lecture-problems 3 hours.) Traditional grading only.
586. Real-Time Digital Signal Processing (3)  
Prerequisite: EE 486, EE or CECS 440, or consent of instructor. Digital signal processors architecture and language. Real-time DSP considerations and limitations. Digital filter and signal processing system implementations. (Lecture-problems 3 hours.) Traditional grading only.
587. Radar Systems (3)  
Prerequisite: EE 482. Principles of radar theory and systems. Radar equation, detection, ground effects, ambiguity function. Applications include moving target indicator radar and tracking radar. (Lecture-problems 3 hours.) Traditional grading only.
- 589./689. Neural Networks and Fuzzy Logic (3)  
Prerequisite: EE 486 or consent of instructor. (Master's students register in EE 589; Ph.D. students register in EE 689.) Principles and applications of artificial neural networks and fuzzy logic.

Mechanisms of supervised and unsupervised neural networks. Fuzzy Control Systems. Applications in signal processing, communications, control, and other areas. Additional projects required for EE 689. (Lecture-problems 3 hours.) Traditional grading only.

### 590. Special Topics in Electrical Engineering (3)

Prerequisites: Graduate standing in electrical engineering and consent of instructor. Selected topics from recent advances in electrical engineering. Course content will vary from year to year. Topics will be announced in the Schedule of Classes. May be repeated for a maximum of six units. (Lecture-problems 3 hours.) Traditional grading only.

### 605./505. Advanced Engineering Mathematics for Electrical Engineers (3)

Prerequisites: EE 401 or EE 411 or equivalent or consent of the instructor. (Master's students register in EE 505; Ph.D. students register in EE 605.) Boundary-value problems and generalized Fourier (or eigenfunction) expansions. Review of Fourier series. Fourier transforms (FT, FFT and STFT), wavelet transform and its computer implementation. The Z-transform. The Hilbert transform. Solutions of partial differential equations using the methods of separation of variables, Laplace, Fourier and wavelet transforms, conformal mapping, numerical (finite difference, finite element), and experimental techniques. Additional projects required for EE 605. (Lecture-problems, 3 hours.) Traditional grading only.

### 606./506. Theory and Practice of Biomedical Instrumentation (3)

Prerequisites: Graduate standing in engineering or natural sciences and either EE406 or consent of the instructor. (Master's students register in EE 506; Ph.D. students register in EE 606.) Advanced design concepts and practical utilization of biomedical instrumentation. Transduction of physiological parameters. Theory and practice. Additional projects required for EE 606. (Lecture-problems 3 hours.) Traditional grading only.

### 607/507. Advanced Biomedical Systems (3)

Prerequisites: Graduate standing in engineering or natural sciences and either EE 406 or consent of the instructor. (Master's students register in EE 507; Ph.D. students register in EE 607.) Novel trends in biotechnology, design and organization of modern hospital systems and utilization of advanced technologies. Modeling an simulation of physiological and medical systems. Additional projects required for EE 607. (Lecture-problems 3 hours.) Traditional grading only.

### 610. Seminar in Circuit Theory and Design (3)

Prerequisites: EE 509 and EE 510 or EE 513. Intensive study of current professional literature and recent techniques related to circuit theory. (Seminar 3 hours.) Traditional grading only. Course may be repeated to a maximum of 6 units with different topics.

### 614./514. Advanced Circuit Synthesis and Design (3)

Prerequisite: EE 510. (Master's students register in EE 514; Ph.D. students register in EE 614.) Scattering synthesis in (s-z) domains, wave digital filters. Lossless bounded-real two-pair and orthogonal digital filters with an emphasis on structures suitable for VLSI implementation. Additional projects required for EE 614. (Lecture-problems 3 hours.) Traditional grading only.

### 615./715. Advanced Circuit Theory (3)

Prerequisite: EE 514. (Master's students register in EE 615; Ph.D. students register in EE 715.) Characterization of multi-dimensional analog and digital circuits and systems. Transfer function and state space approaches. Passivity, stability and symmetry studies. Nonlinear multi-dimensional circuits. Additional projects for EE 715 students. (Lecture-problems 3 hours.) Traditional grading only.

### 632./532. Analog Signal Processing (3)

Prerequisite: EE 430 or consent of the instructor. (Master's students register in EE 532; Ph.D. students register in EE 632.) Basic CMOS circuit techniques. Low-voltage and current-mode signal processing. Switched-capacitor (SC) and switched-current (SI) circuits such as amplifiers, integrators, S/H circuits, filters, oscillators, comparators, D/A and A/D converters. Advanced

techniques for corrections of nonideal behavior. Analysis and simulation projects. Additional projects required for EE 632. (Lecture-problems 3 hours.) Traditional grading only.

### 633./533. Quantum and Optical Electronics (3)

Prerequisites: EE 430 and 460 or equivalent. (Master's students register in EE 533; Ph.D. students register in EE 633.) Modern quantum and optical concepts of relevance in lasers, fiber optics, optical technology and semiconductor solid state electronics. Basic theory and applications to state-of-the-art electronics engineering. Additional projects required for Ph.D. students. (Lecture-problems 3 hours.) Traditional grading only.

### 640. Seminar in Digital Computer Systems (3)

Prerequisites: EE 540 and EE 545. Study of selected topics in computer systems in which recent significant advances have been made. (Seminar 3 hours) Traditional grading only.

### 651./551. Theory and Applications of DC/DC Converters (3)

Prerequisites: EE 550 or consent of instructor. (Master's students register in EE 551; Ph.D. students register in EE 651.) Modeling, analysis, design and application of DC/DC switch-mode converters. Additional projects for EE 651. (Lecture-problems 3 hours.) Traditional grading only.

### 660./560. Applied Electromagnetics (3)

Prerequisite: EE 460 or consent of instructor. (Master's students register in EE 560; Ph.D. students register in EE 660.) Electromagnetic theory applied to communication, radar, and computer components and systems. Topics include transmission lines, wave guides, fiber optics, phased array antennas, radar cross-section, Fourier optics, near and far field aperture radiation, Doppler radar, quasistatics and DC linear motors. Additional projects required for EE 660. (Lecture-problems 3 hours.) Traditional grading only.

### 668./568. Wavelet Theory and Applications (3)

Prerequisite: EE 505 or consent of the instructor. (Master's students register in EE 568; Ph.D. students register in EE 668.) From Fourier analysis to wavelet analysis. The wavelet transform and time-frequency analysis. Construction and classification of wavelets. Multiresolution analysis, splines, and wavelets. Wavelet decomposition and reconstructions. Orthogonal wavelets and wavelet packets. Linear systems and modeling using wavelets. Applications to signal and image processing. Additional projects required for EE 668. (Lecture-problems 3 hours.) Traditional grading only.

### 669./569. Remote Sensing (3)

Prerequisites: EE 401, 460 and 483. (Master's students register in EE 569; Ph.D. students register in EE 669.) Interaction of electromagnetic waves with surfaces and atmospheres. Scattering of microwaves by surfaces. Microwaves and thermal emission from atmospheres and surfaces. Spectral reflection from surfaces and atmospheres in the near infrared and visible regions. Review of modern spaceborn sensors and associated imaging technology and data analysis. Additional projects required for EE 669. (Lecture-problems 3 hours.) Traditional grading only.

### 670. Seminar in Control Systems (3)

Prerequisite: At least one of EE 570, 572, or 573. Study of selected topics in the areas of synthesis and design of optimum control systems. (Seminar 3 hours.) Traditional grading only.

### 672./572. Linear Quadratic Control (3)

Prerequisites: EE 471, 501. (Master's students register in EE 572; Ph.D. students register in EE 672.) In depth study of the Linear Quadratic Regulator (LQR) problem. Stochastic control and the Linear Quadratic Gaussain (LQG) problem. Robustness properties and Loop Transfer Recovery. Additional problems required for EE 672. (Lecture-problems 3 hours.) Traditional grading only.

### 673./573. Robust Multivariable Control (3)

Prerequisite: EE 572. (Master's students register in EE 573; Ph.D. students register in EE 673.) Multivariable control. Matrix fraction description and the factorization approach to control system design. Robust control of uncertain systems. Introduction to H-infinity control. Additional projects required for EE 673. (Lecture-problems 3 hours.) Traditional grading only.

674./574. Robot Dynamics and Control (3)

Prerequisite: EE 501 or consent of instructor. (Master's students register in EE 574; Ph.D. students register in EE 674.) Basic methodology for analysis and design of robotic manipulators. Classification of robots. Homogeneous transformations, kinematics, dynamics, trajectory planning and control of robots. Force control. Additional projects required for EE 674. (Lecture-problems 3 hours.) Traditional grading only.

675./775. Non-Linear Control Systems (3)

Prerequisite: EE 501 or consent of instructor. (Master's students register in EE 675; Ph.D. students register in EE 775.) Methodologies and results dealing with stability and robust stabilization of nonlinear systems which can be applied to robotics, aerospace, artificial neural network, circuit theory etc. Phase plane analysis and limit cycles, Lyapunov stability theory and its extension. Positive real transfer matrix and passive systems, feedback linearization, feedback stabilization and tracking and robust control. Additional projects for EE 775 students. (Lecture-problems 3 hours.) Traditional grading only.

680. Seminar in Communication and Signal Processing Systems (3)

Prerequisite: At least one of EE 580, 581, 583 or 685. Study of selected topics in communication systems and signal processing. (Lecture-problems 3 hours.) Traditional grading only.

683./583. Digital Image Processing (3)

Prerequisite: EE 505 or consent of the instructor. (Masters students register in EE 583; Ph.D. students register in EE 683.) Acquiring Images. Correcting Imaging defects. Image enhancement. Segmentation and thresholding. Processing Binary images. Tomography. Three dimensional Imaging. Some image data compression techniques. Additional projects required for EE 683. (Lecture-problems 3 hours.) Traditional grading only.

684./584. Information Theory and Coding (3)

Prerequisites: EE 482 and 508. (Master's students register in EE 584; Ph.D. students register in EE 684.) Information measures, source coding, Shannon's first theorem, mutual information and channel capacity, Shannon's second theorem, coding techniques for reliable information transmission over noisy channels. Additional projects required for EE 684. (Lecture-problems 3 hours.) Traditional grading only.

685./785. Advanced Digital Signal Processing (3)

Prerequisites: EE 401, 486 or consent of instructor. (Master's students register in EE 685; Ph.D. students register in EE 785.) Advanced topics in digital signal processing including adaptive filters, spectral estimation and multimedia standards: JPEG, MPEG. State space description of linear discrete time systems. Realization and applications. Additional projects for EE 785. (Lecture-problems 3 hours.) Traditional grading only.

689./589. Neural Networks and Fuzzy Logic (3)

Prerequisite: EE 486 or consent of instructor. (Master's students register in EE 589; Ph.D. students register in EE 689.) Principles and applications of artificial neural networks and fuzzy logic. Mechanisms of supervised and unsupervised neural networks. Fuzzy Control Systems. Applications in signal processing, communications, control, and other areas. Additional projects required for EE 689. (Lecture-problems 3 hours.) Traditional grading only.

691./791. Adaptive Systems (3)

Prerequisite: EE 508. (Master's students register in EE 691; Ph.D. students register in EE 791.) Theory of adaptive algorithms and their applications to communication, control and signal processing systems. Additional projects for EE 791 students. (Lecture-problems 3 hours.) Traditional grading only.

697. Directed Research (1-3)

Prerequisites: Graduate Standing. Theoretical and experimental problems in electrical engineering requiring intensive analysis. Traditional grading only.

698. Project or Thesis (3-6)

Prerequisite: Advancement to Candidacy. Planning, preparation and completion of a thesis in electrical engineering. Traditional grading only.

715./615. Advanced Circuit Theory (3)

Prerequisite: EE 514. (Master's students register in EE 615; Ph.D. students register in EE 715.) Characterization of multi-dimensional analog and digital circuits and systems. Transfer function and state space approaches. Passivity, stability and symmetry studies. Nonlinear multi-dimensional circuits. Additional projects for EE 715 students. (Lecture-problems 3 hours.) Traditional grading only.

775./675. Non-Linear Control Systems (3)

Prerequisite: EE 501 or consent of instructor. (Master's students register in EE 675; Ph.D. students register in EE 775.) Methodologies and results dealing with stability and robust stabilization of nonlinear systems which can be applied to robotics, aerospace, artificial neural network, circuit theory etc. Phase plane analysis and limit cycles, Lyapunov stability theory and its extension. Positive real transfer matrix and passive systems, feedback linearization, feedback stabilization and tracking and robust control. Additional projects for EE 775 students. (Lecture-problems 3 hours.) Traditional grading only.

785./685. Advanced Digital Signal Processing (3)

Prerequisites: EE 401, 486 or consent of instructor. (Master's students register in EE 685; Ph.D. students register in EE 785.) Advanced topics in digital signal processing including adaptive filters, spectral estimation and multimedia standards: JPEG, MPEG. State space description of linear discrete time systems. Realization and applications. Additional projects for EE 785. (Lecture-problems 3 hours.) Traditional grading only.

791./691. Adaptive Systems (3)

Prerequisite: EE 508. (Master's students register in EE 691; Ph.D. students register in EE 791.) Theory of adaptive algorithms and their applications to communication, control and signal processing systems. Additional projects for EE 791 students. (Lecture-problems 3 hours.) Traditional grading only.

# ENGLISH

## *College of Liberal Arts*

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Helen C. Hu

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Administrative Aide

Patricia M. Alemán

For information about programs of study in the Department of English, the department office can refer students to one of the coordinating faculty advisors: Undergraduate, Graduate, MFA, Teacher Education, Composition, Creative Writing, Technical and Professional Writing, and the American Language Program. Regular office hours for all English faculty are posted near the department office, and information sheets are available detailing which faculty members regularly advise for specific options. Students should establish a file folder in the department when they first appear for major advising. Unofficial transcripts from other institutions are needed to establish continuity, waive requirements, or substitute equivalent courses.

In the discipline of English, the department's teaching-learning emphasis is on developing and sustaining each student's own critical reasoning, imagination, and expressive skills, including clarity, coherence, and respect for truth and meaning. Just as literature broadens and deepens one's experience of life, the study and practice of language and writing sharpen and clarify one's thinking. Learning to see and to seek out expressive possibilities of language in fiction, drama, poetry, essays, and the mass media also add dimension and meaning to the experiences of life.

The course of study for the undergraduate English major enlarges the literary background of students and prepares them for graduate study, teaching, or careers in business and other professions.

In all options for the major, study of a foreign language is recommended. Ideally, acquaintance with a foreign language should begin before University study, but a student can also gain a great deal by beginning language study at the university level and continuing it through upper-division courses. Because most advanced degrees require knowledge of at least one foreign language, students aiming at such degrees should definitely include language study in their undergraduate programs.

### Bachelor of Arts in English

While planning a program of courses for the major in English, a student should consider the opportunities and limitations of the different options detailed below. For each option, official Program Planners are available in the department office. They require faculty consultation and approval for a graduation audit, but students should consult department faculty for advising when choosing a program in English and regularly after making that choice.

For all options, the major in English consists of 41 units. Because ENGL 100 satisfies a University general education requirement, it is not part of any English option. Some options permit or require courses from other departments; if approved by a faculty advisor, options may also include other courses outside English. Because some courses are required in several options, many students can change options with no great loss of credit toward the required total of 41 units.



In rare instances, a student may accelerate completion of the major in English by taking advantage of the department's credit by examination policy. Certain courses may also be waived or substituted for under certain circumstances. Consult a department advisor for the option concerned.

### Option in Creative Writing (code 2-6831) (124 units)

The Creative Writing option is designed for students who wish to write, as well as to study, fiction, poetry, plays, or media scripts. Exposure to traditional and recent literature is also of significant value for anyone seeking to master the forms and conventions of writing creatively for the literary marketplace.

This option consists of 41 units, 26 of which must be upper division, including the following:

Lower Division: ENGL 184, 205 or 206, 250A,B.

Upper Division: any three classes in creative writing chosen from ENGL 405, 406, 407, 499; FEA 404; THEA 380, 480; three classes chosen from the following in recent literature, literary genres, and literary criticism: ENGL 384, 385, 386, 459, 467A,B, 469, 474, 475, 476, 477A,B, 478, 479; electives to make up a total of 41 units chosen from the classes listed above and/or any upper-division English courses.

### Option in English Education (code 2-6803) (124 units)

The option consists of a 35-unit core combined with a specified subject emphasis of variable units. Completing the English Education option allows students to waive the examination for the Single Subject Teaching Credential in English required by the State of California. Students may choose from nine emphases which vary in number of units for breadth and perspective, but all require the same 35-unit core.

Students must complete the following courses for all emphases: ENGL 184, 310, 327 (or LING 327), 363, 375, 410, 482, LING 329; 1 course from ENGL 250A, 250B; 1 course from ENGL 370A, 370B.

Please note that emphases vary in the number of units they require to provide breadth and perspective. English Education emphases should not be confused with English options or majors in other departments, which have significantly different requirements.

#### Black Studies Emphasis

Students are required to complete the core of thirty-five (35) units and eighteen (18) units to provide breadth and perspective.

Breadth and Perspective (18 units): B/ST 140, 343, 415, 499; select three units from B/ST 155, 201, 370; select three units from B/ST 180, 240, 340, 346.

#### Comparative Literature Emphasis

Students are required to complete the core of thirty-five (35) units and fifteen (15) units to provide breadth and perspective.

Breadth and Perspective (15 units): select three units from C/LT 261, 361; select three units from C/LT 230, 330A, 330B; select three units from C/LT 250, 251, 410, 412I, 451I, 461; select three units from C/LT 234, 235, 236, 403, 415I, 440; select three units from C/LT 310I, 312I, 414I, 421I, 422I, 431, 432, 438.

#### Creative Writing Emphasis

Students are required to complete the core of thirty-five (35) units and eighteen (18) units to provide breadth and perspective.

Breadth and Perspective (18 units): select nine units from ENGL 405, 406, 407, 499; select nine units from ENGL 385, 386, 459, 463, 467A, 467B, 474, 475, 476, 477A, 477B, 478.

#### Journalism Emphasis

Students are required to complete the core of thirty-five (35) units and a minimum of twenty-one (21) units to provide breadth and perspective.

Breadth and Perspective (21 units minimum): JOUR 110, 120, 319, 320, 331, 430; select a minimum of three units from JOUR 300, 312, 323, 370, 422, 431, 490, 499.

#### Language and Linguistics Emphasis

Students are required to complete the core of thirty-five (35) units and eighteen (18) units to provide breadth and perspective.

Breadth and Perspective (18 units): select six units from LING 420, 421, 433; select six units from LING 435, 485 (or ED P 485), 486; select three units from ANTH 421 or LING 472; select three units from ENGL 435, LING 460.

In addition, this emphasis requires 12 units or equivalent of a foreign language.

#### Literacy and Composition Emphasis

Students are required to complete the core of thirty-five (35) units and a minimum of fifteen (15) units to provide breadth and perspective.

Breadth and Perspective (15 units minimum): ENGL 435, 436; select a minimum of six units from ENGL 309, 496, 497, LING 435, 460; select three units from ENGL 300, 317, 405, 406, 407, 417, 418.

#### Literature Emphasis

Students are required to complete the core of thirty-five (35) units and a minimum of fifteen (15) units to provide breadth and perspective.

Breadth and Perspective (15 units minimum): ENGL 384; select three units from ENGL 451, 452, 453, 455, 456, 458, 459; select a minimum of three units from ENGL 474, 475, 476, 477A-B, 478, 479; select three units from ENGL 318I (or FEA 318I), 385, 386, 398; select three units from C/LT 230 or any upper division English course.

#### Speech Communication Emphasis

Students are required to complete the core of thirty-five (35) units and twenty-one (21) units to provide breadth and perspective.

Breadth and Perspective (21 units): select six units from COMM 130, 210 and 210W, 271; select six units from COMM 331, 333, 335; select nine units from COMM 306, 309, 355, 410, 411, 451.

#### Theatre Arts Emphasis

Students are required to complete the core of thirty-five (35) units and twenty-two (22) units to provide breadth and perspective.

Breadth and Perspective (22 units): THEA 101, 114A, 142, 148, 346, 374, 476; select one unit from THEA 310A or 340A.

Emphases in American Studies, Dance, and Radio/TV/Film were discontinued December 1997 in compliance with the Commission on Teacher Credentialing of the State of California.

### Option in Language and Composition (code 2-6829)

The Language and Composition Option has been discontinued. Students who officially declared this option as a degree objective prior to Fall 1996 may complete it with the required courses or approved substitutions. Students wishing to begin a comparable program after Summer 1996 should pursue an option in Language and Linguistics, Literacy and Composition, or Special Emphasis.

### Option in Language and Linguistics (code 2-6825) (124 units)

The Language and Linguistics option is designed for students who desire a balanced program (language and literature, plus some focus on written communication) which emphasizes the linguistic needs of California students and teachers, particularly in a second language context. This option provides background for graduate study in linguistics and other fields, for Teaching English as a Second Language (TESL), for language minority education, and for fields involving intensive language acquisition and communication. (Students seeking a Secondary Credential should complete the Language and Linguistics emphasis of the English Education option.)

This option consists of 41 units total, 29 of which must be upper division, including the following:

Lower division: ENGL 184, 250A or 250B.

Upper division: ENGL 370A or 370B, LING 329; LING 325, 327 or 363I; three courses from ENGL 426, LING 420, 421, 426; two courses from LING 428, 485, 486; one course from ENGL 300, 310, LING 460; electives to complete 41 units from courses listed and/or ENGL 499, 481, 482.

### Option in Literacy and Composition (code 2-6826) (124 units)

The literacy and composition option is designed for students who desire a balanced program of composition, literature, and language study with particular emphasis on the ways literacy is defined and promoted in our society. This option prepares students for graduate study in English, rhetoric and composition, and literacy studies, for teaching on virtually all levels, and for fields involving intensive writing and communication skills.

This option consists of 41 units, 29 of which must be upper division, including the following:

Lower Division: ENGL 184, 250A, B.

Upper Division: ENGL 410, 436; one course in composition: either 309 or 310; two courses from ENGL 435, 496, 497, LING 329; two courses from ENGL 300, 317, 337, 405, 407, 417, 418, 419; electives to make up a total of 41 units. Recommended additional courses, ENGL 370A, 370B, 385, 390, 421, 423, 426, 482.

### Option in Literature (code 2-6830) (124 units)

The literature option is designed for students who desire a thorough grounding in English and American literature, particularly those planning on graduate study in English. Students aiming at advanced degrees should take as many of the recommended electives as possible.

This option consists of 41 units, 29 of which must be upper division, including the following:

Lower Division: ENGL 184, 250A,B.

Upper Division: ENGL 384; three courses in English literature: 363 and either two courses from the 450 series or one course from the 450 series and one course from 462, 463, 467A,B, 468; three courses in American literature: 370A,B and one course from 474, 475, 476, 477A,B, 478; one senior seminar: 469 or 479; electives to make up a total of 41 units. Recommended: 431 (Classical Background); additional courses in the 450, 460, 470 series; 405, 406, 407, 499, C/LT 330A,B.

### Option with Special Emphasis (code 2-6827) (124 units)

Some students wishing to major in English have special interests or career objectives so different from those for which the other options are designed that another pattern of courses would better serve their personal educational needs. For those students, the Special Emphasis option offers an opportunity to pursue individually designed 41-unit programs of study. Student programs may center on technical writing, for example, or other writing goals; they may focus on American or English literature or literature in a particular genre, a particular historical period, or a particular theme.

Students wishing to take the Special Emphasis option should prepare a detailed program proposal early in their college careers. Such programs will be recognized only if planned in consultation with a faculty advisor in the Department of English, approved in writing by the advisor, given signed approval by the Department Chair, and carried out under the advisor's continuing supervision. Students must complete at least 15 upper-division units applicable to their Special Emphasis program after it has been officially approved.

The only specific course requirements and limitations are the following: ENGL 184, Composition and Literature (four units); ENGL 384, Principles of Literary Study (three units).

Electives in English and related fields are needed to make up a total of 41 units. These electives may not include ENGL 100 or 101.

### Minor in English

#### Creative Writing (code 0-6831)

The minor in English (Creative Writing) requires a minimum of 21 units and includes the following: ENGL 184; three units from ENGL 205 or 206, three units from ENGL 405 or 406; three units from ENGL 385 or 386; and eight units of electives from ENGL 405, 406, 407, 459, 467A,B, 474, 475, 476, 477A,B, 499. (Note: ENGL 405 and 406 may be repeated for credit to a maximum of six units by consent of instructor.)

## Language and Composition (code 0-6829)

The Minor in English (Language and Composition) requires a minimum of 20 units and must include: ENGL 310, 497, LING 325, 420, 421, and 428. Also recommended are three units from ENGL (or LING) 423 or 426.

## Literature (code 0-6830)

The minor in English (Literature) requires a minimum of 21 units and must include: ENGL 184; eight units from ENGL 250A,B, 370A,B, and nine units of electives from ENGL 363, 385, 386, 390, 398 and/ or any courses from the 450, 460, or 470 series.

## Special Emphasis (code 0-6828)

The Special Emphasis minor in English requires a minimum of 21 units in a program developed, approved, and supervised in the same manner as the Special Emphasis major. ENGL 184 is required of all students, with the rest of the program constructed in consultation with a faculty advisor.

## Teaching Emphasis (code 0-6803)

The Teaching Emphasis minor in English requires a minimum of 21 units and includes the following: eight units from ENGL 250A,B, 370A,B; ENGL 310; ENGL 320; ENGL 482; three units of approved electives. This minor meets State of California requirements for a supplemental teaching area in the Single Subject Credential.

## Certificate in Honors English (code 1-6000)

This Certificate Program offers students the opportunity to follow their own reading schedules, fill in gaps in their knowledge, and develop interests in a wide range of subjects offered by the English Department.

In order to apply, students must have senior status and a GPA of 3.0 or better overall and 3.2 or better in their English concentration.

In addition to completing a degree program in English, a candidate must pass two comprehensive and critical examinations. Passing the first, a qualifying examination which is mainly objective, entitles the student to take the second. Passing the second, an essay examination consisting of an analysis of one or more specific texts, completes the requirements.

## Certificate Program in Teaching English as a Second Language (code 1-6050)

The Certificate Program in Teaching English as a Second Language is conducted by the Linguistics Department faculty. Please refer to the Linguistics sections of this Catalog.

## Certificate Program in Technical and Professional Writing (code 1-6060)

The Department of English offers a Certificate in Technical and Professional Writing to students interested in careers in writing and editing. Application forms and advising materials may be obtained from the department office.

### Prerequisites

1. Formal consultation with a faculty advisor in the Technical and Professional Writing (TPW) Certificate program;
2. Submission of an application to enter the program, supported by transcripts;

3. Upper division or post-baccalaureate standing at CSULB with a grade point average of at least 2.75 overall;
4. Admission to a degree program in this university or possession of a degree from an accredited university;
5. Successful completion of English 317, Technical Writing, with a letter grade of "C" or higher.

### General Requirements

1. A baccalaureate degree, which may be taken concurrently with the Certificate in Technical and Professional Writing;
2. A minimum of 24 units in courses approved for the Certificate Program at this University, preferably completed within 10 years of the first credit granted toward the Certificate (consult an advisor concerning any transfer or extension credit that may be allowable);
3. A letter grade of "C" or higher in every course in the Certificate program (a grade of "CR" is acceptable in no more than one course);
4. Completion of a program of courses in Areas I through IV, developed in consultation with an advisor in the Technical and Professional Writing Certificate program, and approved by the Program Director and the Dean of the College of Liberal Arts (or the Dean's designee);
5. Demonstrations (in or outside the program of courses) of competence in the use of computers and graphic media;
6. Development of a portfolio of reports, written and edited by the student during enrollment in the Certificate program, for review and approval by faculty in the Technical and Professional Writing Certificate program (required for a grade in English 492A/B, Area IV).

### Course Requirements

For each of the following courses, TPW Certificate students have been granted enrollment rights equal to those of students majoring in the Department offering the course. Substitutions are possible, especially in more advanced courses, with approval by the Program Director.

Area I: Technical and Professional Writing (9 units):

ENGL 417, 418, and one from the following courses: ART 307, 309; CE 305; CRIM 302; ET 300; ENGL 419; GEOL 420; JOUR 355, 455.

Area II: Language Studies (4 units):

ENGL 319, 320 or LING 325.

Area III: Electives chosen from the following courses (minimum 8 units):

Analytical Reading: ENGL 384, 423, 498 (topic: Science as Literature); GEOG 380; HIST/PHYS 400I; PHIL 381; COMM 301;

Business/Professional Skills: ACCT 201; FIN 222, JOUR 370; MKTG 300, 330, 480; COMM 334, 335, 344;

Computer Applications: CE/CS 174, 175; C/ST or SOC 200; IS 240; JOUR 331; MGMT 426; NSCI 200;

Creative Writing: ENGL 405, 406, 407; FEA 204, 304, 404; THEA 380;

Intercultural Communication: ANTH 412I, 413; COMM 451;

Visual Communication: ET 170; GEOG 200; JOUR 305; ME 172.

Area IV: Practical Writing (3 units): ENGL 491 (1 or more units), 492A (2 or more units). No grade in ENGL 492 will be assigned without an approved portfolio, as indicated in Paragraph 6, General Requirements.

## GRADUATE PROGRAMS

The Department of English offers two graduate degrees, an M.A. in English and an MFA in Creative Writing. Teaching assistantships are available in both. Application information may be obtained from the Department office, (562) 985-4223.

### Master of Arts in English (code 5-6830)

The Department of English offers graduate study leading to the Master of Arts degree. The candidate must satisfy the general requirements stated in this Catalog as well as the specific departmental requirements stated here and, more fully, in the Master of Arts brochure issued by the department (copies of which are available upon request). The candidate must file transcripts of all college work with the Department and must consult a graduate advisor to plan a tentative program. The deadline for submitting an application for Fall semester is May 1; the deadline to apply for Spring is October 15.

#### Prerequisites

An applicant may be admitted to the M.A. program in English only after satisfying University requirements for admission and the following prerequisites to this degree:

1. A Bachelor of Arts degree in English from an accredited institution or a bachelor's degree from an accredited institution with 24 units of upper division English courses that offer a broad coverage of English and American literature.

Any deficiencies will be determined by the Department Graduate Advisor in consultation with the Graduate Studies Committee. Courses used to remove course or unit deficiencies may not be included in the M.A. program.

2. A 3.2 GPA in upper division English courses.

#### After Admission to Program

Students must be formally admitted to the program before they can enroll in ENGL 696, which is pre-requisite or co-requisite to all other 600-level courses.

#### Advancement to Candidacy

1. The student must satisfy the general requirements of the University, including passing the Writing Proficiency Examination (WPE).
2. The student's M.A. program must be approved by a faculty graduate advisor, the Department Graduate Advisor, and the Department Chair before submission to the Associate Dean of Liberal Arts.
3. Advancement to candidacy should take place upon completion of at least six units (and preferably no more than nine units) in the M.A. program. Advancement to candidacy must take place no later than the semester preceding the awarding of the degree.

#### Requirements

1. A minimum of 30 units of approved upper division (indicated in the Catalog with an asterisk\*) and graduate courses including 24 units in English;

2. A minimum of 20 units in the 500 and/or 600 series in English at this University, 16 of which must be in the 600 series, including ENGL 696, which is to be completed before or concurrently with other 600-series courses. (A student will not be granted credit for 600-series courses unless admitted to the M.A. program);

3. A minimum of one seminar in the 600 series in English literature before 1800;

4. Foreign language requirement, which may be fulfilled in one of the following ways:

- a. completing college course work in a foreign language equivalent to sophomore proficiency (normally 201B at this University) with "C" or better;

- b. completing college course work in a foreign language equivalent to freshman proficiency (normally 101B at this University) with "C" or better and completing either ENGL 550 or ENGL 551 with "B" or better;

- c. earning a passing score equivalent to sophomore proficiency on the Graduate School Foreign Language Test, administered by the University's Testing Office (passing scores: French 570, German 610, Russian 500, Spanish 560);

- d. passing a special examination or demonstrating native proficiency in any foreign language accepted by the Graduate Studies Committee.

NOTE: Students planning to enter a doctoral program should strive for sophomore-level proficiency in at least one foreign language, whether demonstrated by course work or examination. Most institutions granting doctorates in English demand reading proficiency in two foreign languages. Ph.D. aspirants should also consider taking both ENGL 550 and ENGL 551, since some doctoral programs require Old and Middle English.

5. Successful completion of a final comprehensive examination in a specified specialty area. (Students who fail the examination may retake it once only.) A thesis may be written in lieu of the examination;

6. Appropriate filing for Graduation Check and for Diploma. Teaching assistantships are available in the Department of English. In addition, the Department's tutoring program, the Writer's Resource Lab, employs a number of graduate and undergraduate students each semester. Application for both of these programs may be obtained from the Department office at (562) 985-4223.

### Master of Fine Arts in Creative Writing (code 7-6831)

The Master of Fine Arts degree in Creative Writing is the recognized terminal degree which offers the minimum professional training deemed necessary by the major schools in the United States for university and college teaching and for positions in the publishing industry. It is also the degree most frequently held by professional writers. The Department of English at California State University, Long Beach is a fully accredited program that meets the standards of the State of California:

### Criteria for admission to the program:

1. Students applying for admission to the MFA degree program generally have completed a bachelor's or master's degree in English from an accredited institution with a 3.2 GPA in upper division English courses, meet university admission requirements, and submit evidence of creative ability in fiction or poetry (20 pages poetry, 30-40 pages fiction). For each annual cycle, applications are due by February 15, when review will begin.
2. When an undergraduate degree has been completed in a program having different requirements from those of CSULB or in some field other than English, additional preparation may be required before the student can be considered for classified status in the degree program.
3. At the time of the student's conditional classification into the program, an examining diagnostic committee consisting of at least two instructors in the student's field of specialization and at least one other faculty member must approve and evaluate the student's work no later than the end of his/her first full year in residence and judge whether the student should continue in the program.
4. In order to obtain a full classified status, the student must obtain satisfactory evaluation from his/her committee at the end of the first full year in residence. Both the student's coursework and the student's portfolio will be evaluated. The appeals procedure for unfavorable portfolio evaluation is as follows:

If the student feels that his/her work has been unfairly evaluated, that student has recourse any time to discuss the matter informally with the MFA Coordinator in order to resolve the issue. If the issue cannot be resolved on that basis, the following procedure shall be followed:

  - a. The student shall present a written appeal to the MFA Coordinator.
  - b. Within ten (10) working days of receipt of a written appeal by a student, the MFA Coordinator shall refer the appeal to an ad hoc committee consisting of three tenured creative writing faculty not involved with the issue.
  - c. The committee shall meet in formal sessions holding hearings at separate times for the student and for the faculty involved to gather information and evidence relevant to the issue.
  - d. After deliberation, the committee shall present its findings to the creative writing coordinator within thirty (30) working days from the origination of the committee. (Working days do not include periods of time between semesters.)
  - e. The MFA Coordinator shall inform the concerned student in writing of the committee's decision.
5. Advancement to candidacy
  - a. Attain fully classified status.
  - b. Remove all undergraduate deficiencies as determined by the graduate advisor, the department chair, and the dean of graduate studies.
  - c. Must have satisfied the Writing Proficiency Examination.
  - d. Submit a program of courses for approval by the student's faculty advisor.

6. Up to 24 units of credit from a Master of Arts program in Creative Writing may be acceptable after review and approval by the faculty evaluation committee.
7. Requirements for the Master of Fine Arts in Creative Writing
  - a. The MFA degree is a sixty-unit degree normally requiring full-time residency. Course requirements are arranged according to the following structure.

Core Courses: (39 units, to be chosen on the basis of consultation with a faculty advisor, to include): ENGL 505A,B or 506A,B; 590A; 590B; 605A,B or 606A,B; 584; 590; 598; 696; 698.

Elective Courses: (21 units, to be chosen on the basis of consultation with a faculty advisor, to include): ENGL 523, 526,535, 537, 550, 551, 552, 553, 554, 555, 556, 558, 559, 562, 567A, 567B, 568, 574, 575, 576, 577A, 577B, 578, 583, 652, 653, 655, 656, 657, 659, 672, 673, 674, 681; FEA 404; \*THEA 380, \*THEA 480.

\* may be counted for graduate credit
  - b. Both fiction and poetry specializations share a common core of courses which offer study in literary history, theory, and research. The remainder of the courses offer students the opportunity to develop additional skills in their particular area of related interest. The program culminates in a major creative project (novel, short story collection, or poetry collection) of publishable quality.

### Courses (ENGL)

#### Lower Division

Please check the section on "Application Procedures and Admissions Requirements" of this Catalog for CSU system-wide writing proficiency requirements.

#### 001. Writing Skills (3)

Required of all entering students who score between 142 through 150 on the English Placement Test and who have not taken an equivalent writing skills course in another department. Does not count toward graduation but does count toward course load. A basic course in writing, offering intensive practice in every stage of the writing process from the generation of ideas to final proofreading. Reviews organization, paragraph and sentence development, appropriate word choices, and conventional mechanics, including spelling. Credit/No Credit grading only.

#### 001E. Writing Skills (4)

An equivalent, yet more intensive, ENGL 001 course. Students who score 147 or below, and who have not taken equivalent writing courses in another department, are eligible for enrollment in this course. Does not count toward graduation but does count toward course load. A basic course in writing, offering intensive practice in every stage of the writing process from generating ideas to final proofreading. Reviews and teaches organizational strategies and includes strategies for paragraph and sentence development and for making appropriate word choices. Teaches conventional mechanics, spelling, and the grammar of standard edited written English. Credit/No Credit grading only.

#### 100. Composition (3)

Prerequisite: A recorded total score of 151 or above on the English Placement test, or credit in ENGL 001 (or its equivalent) and consent of the instructor. Writing non-fiction prose, with emphasis on exposition. Readings may be assigned. Satisfies the baccalaureate degree requirement for one course in English composition. (CAN ENGL 2)

### 100W. Composition (3)

Prerequisites: A recorded total score of 151 or above on the English Placement Test, or credit in ENGL 001 (or its equivalent) and consent of the instructor. Integrating a large group lecture (1 hour) and small lab (2 hours) setting, writing non-fiction prose, with emphasis on exposition. Readings may be assigned. Satisfies the baccalaureate degree requirement for one course in English composition.

### 101. Composition (3)

Prerequisite: ENGL 100. Writing expository prose, with emphasis on the research paper.

### 180. Appreciation of Literature (3)

Study of works representing the scope and variety of themes and types of imaginative literature. (Not applicable toward an English major. Not open to students with credit in ENGL 184.)

### 184. Composition and Literature (4)

Prerequisite: ENGL 100. Introduction to the major literary genres and to methods of critical expository writing, including methods of research and documentation. Required of all English majors. Open to non-majors with consent of instructor.

### 200. Critical Reading and Writing (3)

Prerequisite: ENGL 100. Analytical reading and persuasive writing with emphasis on logic and argumentation.

### 205. Introduction to Creative Writing: Fiction (3)

Prerequisite: ENGL 100. Practice in the basic elements of fiction writing: character sketch, plot development, description, dialog.

### 206. Introduction to Creative Writing: Poetry (3)

Prerequisite: ENGL 100. Theory and techniques of poetry. Practice in creative work, with group discussions and individual conferences.

### 250A,B. Survey of English Literature (4,4)

Prerequisite: ENGL 100. Representative selections from English writers to and since the late eighteenth century. (CAN ENGL 8, 250A; CAN ENGL 10, 250B)

### 283. Science Fiction (3)

The literature of science fiction, from Frankenstein and H.G. Wells to the present, emphasizing the relevance of science and technology to literary fantasy.

## Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study. Therefore, ENGL 100 or its equivalent is a prerequisite for all upper division courses.

An asterisk (\*) next to a course number means the course is acceptable for the M.A. degree. An "I" next to a course number means the course is acceptable for Interdisciplinary Credit in General Education.

### 300. Advanced Composition (3)

Writing expository prose, with emphasis upon organization, style and diction.

### 309. Applied Composition: Explorations in Children's Writing (4) F,S

An advanced composition course also incorporating the study of the evolution of written discourse and emergence of rhetorical structures in the writing of pre-adolescents. The course includes a 30-hour tutorial/research component. Discussion/Laboratory.

### 310. Applied Composition (4)

Prerequisite: ENGL 101 or 184 or 317 or a baccalaureate degree. Intensive practice in writing, correcting and evaluating compositions, with specific reference to contemporary classroom situations and problems. The course includes a 30-hour tutorial component in which students work as composition tutors. Required for all English credential candidates.

### 317. Technical Writing (3)

Expository writing on technical subjects dealt with in industry, science, and government. Long and short forms including reports, proposals, manuals, and journal articles, with emphasis on the longer research paper or technical report.

### 318I. Theory of Fiction and Film (3)

Prerequisites: ENGL 100 and upper division status. Examination of the narrative methods and conventions of American and British fiction and the methods and conventions of film; consideration of the relationships between the artistic structure of fiction and film; study of theoretical and practical approaches to fiction and film. Same course as FEA 318I.

### 319. Technical Editing (4)

An introduction to the editing of written technical and business communication formats such as manuals, brochures, booklets, and newsletters. Students will demonstrate competence in the principles of English grammar, of checking for accuracy, and of document design and production in professional settings.

### \*320. English Grammar (4)

Advanced study of the principles of English grammar.

### 327. Essentials of the English Language (3)

Prerequisites: ENGL 100 or its equivalent. Introduction to the essentials of English language study for credential candidates, including the history of the English language, key models of English grammar, and a variety of applied topics ranging from semantics and dialect study to current research in the teaching of English. Same course as LING 327.

### 337. Technology in the English Classroom (3)

Meets Title 5 computer-education requirements for the Single Subject, Clear Teaching Credential in English and the Multiple Subject, Clear Teaching Credential with English Concentration. Focuses on: (1) issues in the use of computer-based technologies in society; (2) basic components and operations of computer-based technology; (3) computer applications/programs and video tape/film for teaching problem-solving, critical thinking, writing, and literature. Applications include brainstorming, outlining, word processing, document checking, desktop publishing, data processing, document checking, desktop publishing, data bases, telecommunications, networking, program development, drills, and instructional management.

### 363. Shakespeare I (4)

Principal plays of Shakespeare. Not open to students with credit in ENGL 464 or 464A.

### 370A,B. Survey of American Literature (4,4)

Representative selections from American writers to and since about 1865.

### 372I. Wit and Humor in America (3)

Prerequisite: ENGL 100 and upper division status. A study of the history of American humor from beginnings to the present. Most of the representative works studied will be from literature; however, considerable attention will be devoted to manifestations of American tradition of humor found on stage, in film, in song, and in signs. Theories of comedy will be included in discussion.

### 375. Contemporary American Ethnic Writers (3)

American Ethnic Writers is a survey course that will examine the literature of non-European writers of various ethnic writers who are contributing major American literature in all genres. Traditional grading only.

### 382. Women and Literature (3)

Images of women in English literature; works in various genres that present the range and complexity of women's lives; feminist critical approaches and bibliographic resources. Same course as W/ST 382.

### 384. Principles of Literary Study (3)

Prerequisite: ENGL 184. Fundamental issues of literary study such as literary history; literary forms; themes and conventions; major critical approaches. Intense written practice in literary analysis.

### 385. The Short Story (3)

The short story as a literary genre, with emphasis on analysis of individual stories.

386. Poetry (3)  
Poetry as a literary genre, with emphasis on analysis of individual poems.
- \*390. Studies in Contemporary Literature (3)  
Reading and analysis of literary works, British and American, written since 1945. Topics, themes, limitations for each section will be announced in the Schedule of Classes. May be repeated once with a different topic.
- \*398. Modern Drama (3)  
Continental, English, and American drama from Ibsen to the present.
- \*405. Creative Writing: Short Story (3)  
Prerequisite: ENGL 205 or consent of instructor. Writing short stories, with a detailed study of published models and with emphasis on the creative process. (May be repeated for credit to a maximum of 6 units by consent of instructor.)
- \*406. Creative Writing: Poetry (3)  
Prerequisite: ENGL 206 or consent of instructor. Writing poetry, with a detailed study of published models and with emphasis on the creative process. (May be repeated for credit to a maximum of 6 units by consent of instructor.)
- \*407. Creative Writing: Novel (3)  
Prerequisite: Consent of instructor. Writing long fiction, with a detailed study of published models and with emphasis on the creative process. (May be repeated for credit to a maximum of 6 units by consent of instructor.)
- 410./510. Theories of Writing and Literacy (3)  
Prerequisite: ENGL 309 or 310 or consent of instructor. Focuses on several cross-disciplinary theories of producing written discourse. Studies how writing is learned, taught, viewed by the public, and used in social and academic interchange.
417. Proposal Writing (3)  
Intensive writing of proposals in their various forms as letter, memo, and grant application. The main focus will be on the formal proposal as a marketing strategy.
418. Manual Writing (3)  
Writing of original manuals of various types in technical and professional fields. Company publications will be studied as models.
419. Writing in Science and Technology (3)  
Intensive practice in writing on topics in science and literature. Traditional and contemporary examples will be studied as models.
- 423./523. Semantics (3)  
Study of meaning in language. Same course as LING 423.
- 426./526. History of the English Language (3)  
Development of the English language from its beginnings to the present day. Same course as LING 426. Not open to students with credit in ENGL 323.
- \*431. Classical Background of English Literature (3)  
Greek and Roman literature, in translation, in relation to English literature; the interrelations of classical literature with philosophy and art. Not open to students with credit in ENGL 331.
435. Teaching Composition (3)  
Prerequisite: Consent of instructor. Intensive examination and study of composition teaching practices, research and evaluation in public schools, including community colleges.
436. Theories and Practices of Reading (3)  
Intensive investigation of theories and practices of reading with attention to how experienced and inexperienced readers construct text.
- 451./554. Medieval Literature of the British Isles (3)  
Representative selections of Old and Middle English prose and poetry read for the most part in modern English including Beowulf, the romance, medieval drama, Chaucer, and the ballad.
- 452./552. Literature of the Renaissance (1500-1603) (3)  
Prose and poetry of Marlowe, Sidney, Raleigh, Spenser, and other predecessors and contemporaries of Shakespeare, noting the influence of Humanism and the emergence of literary identity.
- 453./553. Literature of the Late Renaissance (1603-1660) (3)  
Poetry and prose (chiefly non-dramatic) of Milton, Bacon, Jonson, Donne and the 'Metaphysicals,' and their contemporaries.
- 455./555. English Literature of the Enlightenment (1660-1798) (3)  
Prose and poetry (chiefly non-dramatic) of Swift, Dryden, Pope, Johnson, Boswell, and their contemporaries, with emphasis on major satires such as Gulliver's Travels and The Rape of the Lock. Not open to students with credit in ENGL 454.
- 456./556. English Literature of the Romantic Period (1798-1832) (3)  
Poetry and prose (chiefly non-dramatic) of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries, emphasizing the modern Romantic spirit, theories of literary art, and the concept of the self.
- 458./558. English Poetry and Prose of the Victorian Age (1832-1900) (3)  
Poetry and prose of Tennyson, Browning, Arnold, Carlyle, Mill, and others, emphasizing literary, social and political issues, and religious controversies. Not open to students with credit in ENGL 457.
- 459./559. English Literature of the Twentieth Century (1900-Present) (3)  
Prose and poetry of Shaw, Conrad, Yeats, Lawrence, Joyce, Woolf, and others, emphasizing artistic experimentation and the development of modern value systems.
- \*461. Essentials of Old/Middle English (3)  
The Old English and Middle English languages and dialects are studied through the exploration of representative literature.
- 462./562. Chaucer (3)  
Works of Geoffrey Chaucer in Middle English.
- \*463. Shakespeare II (3)  
Prerequisite: ENGL 363. Advanced study of some of the plays of Shakespeare. Not open to students with credit in ENGL 464B.
- 467A,B./567A,B. The English Novel (3,3)  
History and development of long prose fiction in the British Isles to and since 1832.
- 468./568. English Drama (3)  
Readings from the history of English drama, excluding Shakespeare, including Marlowe, Jonson, and Restoration comedy. Not open to students with credit in ENGL 468A or B.
- \*469. Critical Studies in Major English Writers (4)  
Prerequisites: At least senior standing, 12 units of upper division English. Intensive study of one to three major English authors. May be repeated for credit with different authors to a max. of 8 units, but no more than 4 units may be used to satisfy the requirements for the English major. Topics include:  
A) Behn  
B) Dickens  
C) Donne  
D) Eliot, G.  
E) Hardy  
F) Joyce  
G) Keats  
J) Lawrence  
K) Milton  
L) Shaw  
M) Spenser  
N) Woolf  
O) Wordsworth/Coleridge  
P) Yeats  
Q) Yeats/Joyce  
R) Austen
- 474./574. Twentieth Century American Literature (3)  
American literature from about 1914 to the present.
- 475./575. The American Short Story (3)  
History and development of the short story and its criticism in the United States.

476./576. American Poetry (3)

History and development of poetry and its criticism in the United States.

477A,B./577A,B. The American Novel (3,3)

History and development of the novel and its criticism in the U. S. to and since the 1920's. Not open to students with credit in ENGL 477.

478./578. American Drama (3)

History and development of drama and its criticism in the United States.

\*479. Critical Studies in Major American Writers (4)

Prerequisites: At least senior standing, 12 units of upper division English including ENGL 370A,B. Intensive study of one to three major American authors. May be repeated for credit with different authors to a max of 8 units, but no more than 4 units may be used to satisfy the requirements for the English major. Topics include:

- A) Barth/Nabokov
- B) Dickinson
- C) Faulkner
- D) Fitzgerald/Hemingway
- E) Fitzgerald/West
- F) Hawthorne
- G) Hawthorne/Melville
- J) Hemingway
- K) James
- L) Jeffers
- M) MacLeish/Sandburg
- N) Melville
- O) O'Neill
- P) Eliot, T.S.
- Q) Twain
- R) Whitman
- S) Williams, W.C.
- T) Toni Morrison
- U) Richard Wright
- V) Langston Hughes

481. Children's Literature (3)

Survey of literature suitable for children.

482. Literature for Adolescents (3)

Prerequisite: One college course in literature. Survey of literature suitable for adolescents.

483. Women in the Early Modern Era (3)

Prerequisites: Upper division status. Study of representations and realities of women's lives, 1500-1800, from international and interdisciplinary perspectives. Critical methodology of history and literature; analysis of literary and historical texts to explore women's experiences of law and economics; religion; education and culture; marriage, sex, and health; politics and revolution.

484./584. Contemporary Literary Theory (3)

Study of the principal theories of literature including Structuralism, Hermeneutics, theory of genre, and theory of criticism.

491. Applied Technical Writing (1-3)

Prerequisite: Admission to Certificate Program in Technical and Professional Writing. Writing and editing technical reports and papers. Independent production of a report in a technical or scientific area under faculty supervision. May be repeated to a maximum of 4 units.

492A-B. Internship Technical- Professional Writing and Editing (1-3)

Prerequisite: Admission to Certificate Program in Technical and Professional Writing. At least 90 hours writing and editing with co-operating agencies and companies on- and off-campus under direction and with evaluation of faculty in consultation with supervisors of the participating agency or company. May be repeated to a maximum of 4 units.

496. California Writing Project (1-4)

Specifically designed for teachers, prospective teachers, school administrators, and writers. Focus is on successful classroom practices in teaching writing; writing and responding to others'

writing; and on the theory and research behind successful literacy training. CSULB - South Basin Writing Project is an affiliate of both the California and National Writing Project.

497. Directed Studies in Composition (3)

Prerequisite: One upper division writing course in English or permission of instructor. Theory and practice of writing and language instruction. Recommended for prospective K-12 and college-level teachers. On-site participation in an educational setting required as a basis for research project.

\*498. Topics in English (3)

Exploration of topics in language and literature, specific topics to be announced in the Schedule of Classes. May be repeated with different topics, but no more than 6 units may be applied to the 41 units required for the English major. Topics include:

- A) American Novel/Film
- B) American 20's/30's
- C) Bible in American Literature
- D) Children's Literature/Film
- F) Finnegans Wake
- G) Hemingway on Film
- J) Medieval Society
- K) Literature and Psychoanalysis
- L) Poetry and the Self
- M) Romanesque Spirit
- N) Science as Literature
- O) Short Fiction/Film

499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of 4 units. Not applicable toward the Master of Arts in English.

## Graduate Division

See Comparative Literature and Classics Department for course offerings applicable to the M.A. in English.

505A. Seminar in Fiction Writing (4)

Prerequisite: Admission to the MFA in Creative Writing. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.

505B. Seminar in Fiction Writing (4)

Prerequisites: Admission to the MFA in Creative Writing and ENGL 505A. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.

506A. Seminar in Poetry Writing (4)

Prerequisite: Admission to the MFA in Creative Writing. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.

506B. Seminar in Poetry Writing (4)

Prerequisites: Admission to the MFA in Creative Writing and ENGL 506A. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.

510./410. Theories of Writing and Literacy (3)

Prerequisite: ENGL 309 or 310 or consent of instructor. Focuses on several cross-disciplinary theories of producing written discourse. Studies how writing is learned, taught, viewed by the public, and used in social and academic interchange.

523./423. Semantics (3)

Study of meaning in language.

526./426. History of the English Language (3)

Development of the English language from its beginnings to the present day. Not open to students with credit in ENGL 323.

535 Theories and Practices in Composition (3)

Prerequisite: ENGL 435 or consent of instructor. Focuses on the formation of composition studies in the latter half of the Twentieth Century. Studies relationships among theories, practices, and research concerned with the teaching of writing, particularly at the college level.



537. Special Topics (3)  
Designed for in-service teachers. Intensive studies and research in special, timely topics (as announced in the Schedule of Classes) related to the teaching of English. May be repeated to a maximum of 6 units with different topics.  
A. Teaching Language  
B. Teaching Composition and Literature
550. Old English Language and Literature (4)  
Prerequisite: ENGL 461 or consent of instructor. Beowulf and other representative selections from Anglo-Saxon literature in the original language.
551. Middle English Language and Literature (4)  
Prerequisite: ENGL 461 or consent of instructor. Chaucer and other representative selections from Middle English literature in the original language.
- 552./452. Literature of the Renaissance (1500-1603) (3)  
Prose and poetry of Marlowe, Sidney, Raleigh, Spenser and other predecessors and contemporaries of Shakespeare, noting the influence of Humanism and the emergence of literary identity.
- 553./453. Literature of the Late Renaissance (1603-1660) (3)  
Poetry and prose (chiefly non-dramatic) of Milton, Bacon, Jonson, Donne and the "Metaphysicals" and their contemporaries.
- 554./451. Medieval Literature of the British Isles (3)  
Representative selections of Old and Middle English prose and poetry read for the most part in modern English including Beowulf, the romance, medieval drama, Chaucer, and the ballad.
- 555./455. English Literature of the Enlightenment (1660-1798) (3)  
Prose and poetry (chiefly non-dramatic) of Swift, Dryden, Pope, Johnson, Boswell, and their contemporaries, with emphasis on major satires such as Gulliver's Travels and The Rape of the Lock. Not open to students with credit in ENGL 454.
- 556./456. English Literature of the Romantic Period (1798-1832) (3)  
Poetry and prose (chiefly non-dramatic) of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries, emphasizing the modern Romantic spirit, theories of literary art, and the concept of the self.
- 558./458. English Poetry and Prose of the Victorian Age (1832-1900) (3)  
Poetry and prose of Tennyson, Browning, Arnold, Carlyle, Mill, and others, emphasizing literary, social and political issues, and religious controversies. Not open to students with credit in ENGL 457.
- 559./459. English Literature of the Twentieth Century (1900-Present) (3)  
Prose and poetry of Shaw, Conrad, Yeats, Lawrence, Joyce, Woolf, and others, emphasizing artistic experimentation and the development of modern value systems.
- 562./462. Chaucer (3)  
Works of Geoffrey Chaucer in Middle English.
- 567A,B./467A,B. The English Novel (3,3)  
History and development of long prose fiction in the British Isles to and since 1832.
- 568./468. English Drama (3)  
Readings from the history of English drama, excluding Shakespeare, including Marlowe, Jonson, and Restoration comedy. Not open to students with credit in ENGL 468A or B.
- 574./474. Twentieth Century American Literature (3)  
American literature from about 1914 to the present.
- 575./475. The American Short Story (3)  
History and development of the short story and its criticism in the United States.
- 576./476. American Poetry (3)  
History and development of poetry and its criticism in the United States.
- 577A,B./477A,B. The American Novel (3,3)  
History and development of the novel and its criticism in the United States to and since the 1920's. Not open to students with credit in ENGL 477.
- 578./478. American Drama (3)  
History and development of drama and its criticism in the United States.
583. Special Topics in Literature (3-4)  
Intensive studies in special topics in literary theory, techniques, types, genres, modes, themes, movements and in the relations of literature with other arts and disciplines, as announced in the Schedule of Classes. May be repeated for credit, on different topics, to a maximum of 8 units. Topics include:  
A) Theory of Fiction  
B) Women Writers  
C) Satire  
D) Tragedy  
E) Modes of Fantasy
- 584./484. Contemporary Literary Theory (3)  
Study of the principal theories of literature including Structuralism, Hermeneutics, theory of genre, and theory of criticism.
590. Directed Reading (3)  
Students will be assigned a reading list developed with the assistance of faculty. There will be a series of conferences in which the works are discussed with the instructor. A comprehensive paper will be due at the end of the semester. Will be taken for two semesters during the student's second year of residency in the MFA program. Traditional grading only. Course may be repeated for a maximum of 6 units.
598. Directed Studies (1-3)  
Prerequisites: Baccalaureate degree, consent of instructor. Independent creative writing activity under the supervision of a creative writing faculty member.
- 605A. Advanced Seminar in Fiction Writing (4)  
Prerequisites: Admission to the MFA in Creative Writing, ENGL 505A, and 505B. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.
- 605B. Advanced Seminar in Fiction Writing (4)  
Prerequisites: Admission to the MFA in Creative Writing, ENGL 505A, 505B, and 605A. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.
- 606A. Advanced Seminar in Poetry Writing (4)  
Prerequisites: Admission to the MFA in Creative Writing, ENGL 506A, and 506B. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.
- 606B. Advanced Seminar in Poetry Writing (4)  
Prerequisites: Admission to the MFA in Creative Writing, ENGL 506A, 506B, and 606A. Discussion, criticism, and detailed evaluation of works in progress. Traditional grading only.
652. Seminar in the English Renaissance (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in the literature of the period, chiefly Elizabethan.
653. Seminar in the Age of Milton (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Stuart and Commonwealth periods, including Milton.
655. Seminar in Restoration and Eighteenth Century Literature (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Restoration and eighteenth century.
656. Seminar in Romantic Literature (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Romantic period.
657. Seminar in Victorian Literature (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Victorian period.

659. Seminar in Twentieth Century English Literature (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature from about 1900 to the present.
672. Seminar in the Nineteenth Century American Renaissance (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in American literature from about 1820 to about 1865.
673. Seminar in American Realism (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in the development of realism in American literature.
674. Seminar in Twentieth Century American Literature (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies of 20th Century American writers.
681. Seminar in Major Authors (4)  
Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in the works of specific authors as announced in the Schedule of Classes. Not open to students with credit in ENGL 469 or 479 covering the same author. May be repeated for credit, on different authors, to a maximum of 12 units. Topics include:  
A) Shakespeare  
B) Chaucer  
C) Yeats  
D) Melville  
E) Joyce  
F) John Fowles
683. Seminar in Special Topics in English Studies (4)  
Prerequisites: ENGL 696 or its equivalent (may be taken concurrently). Intensive explorations of special topics in English studies. May be repeated for credit, on different topics, for a maximum of eight units. Traditional grading only. Topics include:  
A) Feminism/Modernism  
B) Autobiography  
D) Current Issues in Rhetoric and Composition  
E) Teaching Literacy
696. Seminar in Literary Criticism and Research (4)  
Study of major critical approaches to literature and basic literary research methods. Introduction to the discipline of literary criticism, various critical methodologies, techniques of bibliography and research, important literary reference works. Writing of critical research papers. A student will not be allowed to take ENGL 696 unless admitted to the M.A. program. (An English M.A. candidate may not be enrolled in any other 600 course without completion of or concurrent enrollment in ENGL 696.)
697. Directed Research (1-3)  
Prerequisites: ENGL 696 and consent of instructor. Individual research or intensive study under the guidance of a faculty member.
698. Thesis (1-6)  
Prerequisites: ENGL 696 and consent of instructor. Planning, preparation, and completion of a thesis under supervision of a faculty committee. Must be advanced to candidacy. Must be taken for a total of 6 units.

# COLLEGE OF ENGINEERING

Dean

J. Richard Williams

Associate Dean for Instruction

Mihir K. Das

Associate Dean for Curricula and Outreach

Tesfai Goitom

Associate Dean for Research and Administration

Linda Tiggs-Taylor

Director of Development

Terri McDermot

Administrative Services Manager

Rosario Yeung-Lindquist

Facilities Coordinator and Safety Officer

Mike Berg

College Office

ECS - 610

College Secretaries

Vickie Messina

Kim Truesdelle

Departments

Aerospace Engineering (A.E.)

Tuncer Cebeci, Chair

Chemical Engineering (Ch.E.)

Lloyd Hile, Chair

Civil Engineering (C.E.)

Ali Eshett, Chair

Computer Engineering and Computer Science (C.E.C.S.)

Sandra Cynar, Chair

Electrical Engineering (E.E.)

Fumio Hamano, Chair

Engineering Technology (E.T.)

Emanuel Jarasunas, Chair

Mechanical Engineering (M.E.)

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The College of Engineering offers four-year curricula leading to Bachelor of Science degrees in the disciplines of engineering, computer science, and engineering technology. These programs provide broad education and training for entry to the professions and for continuing academic work toward advanced degrees. Master of Science degrees are offered in aerospace, civil, computer, electrical, mechanical engineering, and in computer science. The Master of Science in Engineering is also offered in interdisciplinary areas. The Ph.D. in Engineering and Industrial Applied Mathematics is offered jointly with The Claremont Graduate School. Undergraduate programs provide opportunities to specialize in the areas of biomedical, chemical, civil, computer, electrical, industrial-management, manufacturing, materials, mechanical, ocean engineering, computer science and engineering technology. The engineering programs are accredited by EAC of ABET. The engineering technology programs are accredited by TAC of ABET (Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710). The Computer Science program is accredited by CSAB (Computer Science Accreditation Board, Two Landmark Square, Suite 209, Stamford, CT 06901, phone: 203-975-1117) and the Construction Engineering Management program is accredited by American Council for Construction Education (ACCE, 1300 Hudson Lane, Suite 3, Monroe, LA 70201-6054, phone: 318-323-2816). Several certificate programs are also offered. Evening sections of most of the regular courses are offered primarily for those employed in local industries.

## *Engineering Facilities*

The engineering and engineering technology buildings house the College of Engineering in a complex of six nearby buildings including a modern six-story Engineering and Computer Science (ECS) building, providing modern laboratories and offices for faculty. The buildings feature advanced and comprehensive engineering, computer science, and technology facilities, totalling over 70,000 square feet of laboratory space.

## *Engineering Advisory and Development Councils*

The College of Engineering has Advisory and Development Councils, one for the entire college, one for each of the seven departments, and one for the minority engineering program. These councils consist of outstanding engineers and executives from industry and government in Southern California. Their function is to form a liaison between the University and industry and to keep the administration and faculty informed of modern engineering practices. This helps to ensure that the curricula are kept up-to-date. They also advise on placement opportunities before and after graduation.

## *Programs at a Glance*

### ABET Accreditation

The Bachelor of Science degrees followed by an asterisk (\*) are accredited by EAC or TAC of the Accreditation Board for Engineering and Technology (ABET) as appropriate, (\*\*) is accredited by the Computer Science Accreditation Board (CSAB) and (\*\*\*) is accredited by American Council for Construction Education (ACCE).

### Baccalaureate Degrees

- B.S. in Aerospace Engineering
- B.S. in Chemical Engineering \*
- B.S. in Civil Engineering \*
- B.S. in Computer Science
  - Option in Computer Engineering\*
  - Option in Computer Science\*\*
- B.S. in Construction Engineering Management\*\*\*
- B.S. in Electrical Engineering \*
- B.S. in Manufacturing Engineering
- B.S. in Mechanical Engineering \*
- B.S. in Engineering
  - Option in Industrial-Management Engineering
  - Option in Materials Engineering
  - Option in Ocean Engineering (inactive)
  - Option in Biomedical and Clinical Engineering
- B.S. in Engineering Technology
  - Option in Computer Technology\*
  - Option in Electronics Technology\*
  - Option in Environmental Technology
  - Option in Manufacturing Technology\*
  - Option in Quality Assurance Technology\*

### Graduate Degrees

- M.S. in Aerospace Engineering
- M.S. in Civil Engineering
- M.S. in Computer Science
  - Option in Computer Engineering
  - Option in Computer Science
- M.S. in Electrical Engineering
- M.S. in Engineering (Interdisciplinary)
- M.S. in Mechanical Engineering
- Civil Engineer (professional degree)
- Ph.D. in Engineering and Industrial Applied Mathematics (jointly with The Claremont Graduate School)

For detailed descriptions, see departmental listings for Aerospace Engineering, Chemical Engineering, Civil Engineering, Computer Engineering and Computer Science, Electrical Engineering, Engineering Technology, and Mechanical Engineering.

Students should submit applications early in August for the following Spring Semester and November for the following Fall Semester, or as soon as possible thereafter. Applications may be accepted at later dates, particularly for upper-division transfer students from community colleges and from students applying for masters or doctoral programs.

### Certificate Programs

- Certificate in Waste Engineering and Management (offered by C.E. Department)
- Certificate in Energy Conversion and Power Systems Engineering (offered by M.E. and E.E. Departments)
- Certificate for Industrial Plastics Processing and Design (offered by M.E. and Ch.E. departments)
- Certificate in Facilities Operations (offered by E.T. Department)
- Certificate in Safety Operations (offered by E.T. Department)

### Minority Engineering Program

A comprehensive recruitment and retention program, conducted by the College of Engineering, assists minority students in the rigorous engineering, computer science, and engineering technology disciplines. The Minority Engineering Program (MEP) arose out of recognition that Native Americans, African-Americans, and Latinos are underrepresented in the engineering fields. Pre-college programs are administered by MESA (Mathematics, Engineering, Science Achievement) with the goal of increasing minority engineering student enrollment. The College of Engineering has a Minority Engineering Advisory and Development Council consisting of senior representatives from local industry with interests in supporting the minority engineering students.

### Academic Standards

#### *Preparation for Admission to the College of Engineering*

The high school student planning to enter engineering, engineering technology, or computer science is advised to pursue a program with courses in biology, physics, chemistry, advanced algebra, and trigonometry. In addition, the general requirements for admission to the University must be satisfied. Deficiencies in some of the above areas may result in an extension of the time required to complete a program in engineering, technology, or computer science. Full-time students can complete any baccalaureate degree in engineering, engineering technology, or computer science in four years.

The curricula are also designed to accommodate students transferring from other colleges such as the community colleges and liberal arts colleges. Full-time students who complete two years at a community college can complete the B.S. degrees in two years. Transfer students should note and follow, where possible, the appropriate curriculum as outlined in later sections. None of study programs are impacted. Only general admission requirements of University apply and must be met.

#### *General Academic Requirements*

In addition to technical knowledge, skills and training, the College of Engineering values good communication skills. The University in its General Education courses provides the basic communication skills and measures them with the graduation requirement of the Writing Proficiency Examination. Students are advised that all College of Engineering courses and student course work require not only correct analysis, competent design and professional presentation but also clear and concise written and oral communication in English. While individual specific course requirements vary depending on the nature of the course, good communication skills, both in written and oral reports, are expected of all students and will normally constitute a portion of the student's grade.

A grade of "C" or better must be achieved in prerequisites for courses required of engineering majors. English 100 or equivalent is a prerequisite to upper division laboratory courses.

Admission to any one of the graduate degree programs in the College of Engineering normally requires a minimum GPA of 2.7 in the last 60 units taken.

A student must pass the Writing Proficiency Examination (WPE) before qualifying for any degree.

### ***Letter Grade Policy***

Letter grades ("C" or better) are required for prerequisites for required courses of Engineering, Computer Science, and Engineering Technology majors.

Required English, Speech, and Upper Division Interdisciplinary (IC) courses must be taken for a Letter Grade, not Credit/No Credit.

### ***Concurrent and/or Summer Enrollment in Another College***

Students who wish to take coursework in a community college or another college to meet curricular requirements while enrolled as an undergraduate in the College of Engineering must petition the appropriate department for prior approval to enroll in specific courses. This policy is for either concurrent enrollment or summer enrollment. University policy must also be complied with. (See "Concurrent Enrollment" and "Transfer of Undergraduate Credit" in this Catalog.) Courses not receiving prior approval will not be accepted for credit by the department.

### ***Dual Degree Program***

Students wishing to combine an engineering degree with one in business, education, fine arts, humanities or the sciences may enter the Dual Degree Program. The College of Engineering at CSULB has agreements with other Colleges within the University and with other institutions which allow students to do this. After three years at the first institution, students transfer to CSULB as juniors to complete the two final years of engineering study. At the end of the first year at CSULB, students who have completed all of the requirements for their first degree are awarded those degrees by the appropriate College or institution. At the end of their fifth year, students who have completed all engineering requirements receive their engineering degrees. As an option, students may choose to complete both degrees simultaneously.

### ***Course Availability***

Full-time students without deficiencies in the principal College of Engineering programs can comfortably complete their degree requirements in four years, or in two years after completing two years at a community college. Most of the required courses are offered in multiple sections every semester. In addition, many required courses are also offered during Summer Sessions.

### ***Humanities and Social Sciences Requirement for Engineering Majors***

Engineering and engineering technology majors have somewhat modified general education programs depending upon the catalog year and enrollment status. Students, especially returning and transferring students and those in the ABET accredited programs, meet with an advisor in the de-

partment to work out a plan which meets both the campus General Education and ABET humanities and social sciences requirements. The College of Engineering has specified thematic clusters within which the upper division, interdisciplinary General Education courses are to be taken.

To ensure that engineering and engineering technology graduates are fully aware of their social responsibilities and the effects of technology on society, courses taken in the humanities, social sciences, and related nontechnical areas are an integral part of engineering and engineering technology programs. The ABET policy with regard to general education in the area of humanities and social sciences is as follows:

Studies in the humanities and social sciences serve not only to meet the objectives of a broad education, but also to meet the objectives of the engineering and engineering technology profession. Therefore, studies in the humanities and social sciences are planned to reflect a rationale or fulfill an objective appropriate to the engineering and engineering technology professions and the institution's educational objectives. In the interests of making engineers and engineering technologists fully aware of their social responsibilities and better able to consider related factors in the decision-making process, institutions require coursework in the humanities and social sciences as an integral part of the engineering and engineering technology programs. This philosophy cannot be overemphasized. To satisfy this requirement, the courses selected will provide both breadth and depth and not be limited to a selection of unrelated introductory courses. Such coursework meets the generally accepted definitions that humanities are the branches of knowledge concerned with humanity and human culture, while social sciences are the studies of individual relationships in and to society. Examples of traditional subjects in these areas are philosophy, religion, history, literature, fine arts, sociology, psychology, political science, anthropology, economics, and foreign languages. Non-traditional subjects are exemplified by courses such as technology and human affairs, history of technology, and professional ethics and social responsibility. Courses that instill cultural values are acceptable, while routine exercises of personal craft are not. Consequently, courses that involve performance must be accompanied by theory or history of the subject.

Subjects such as accounting, industrial management, finance, personnel administration, engineering economy, and military training may be appropriately included either as required or elective courses in engineering curricula to satisfy desired program objectives of the institution. However, such courses do not fulfill the objectives of the humanities' and social sciences' General Education requirements.

### **General Education Themes in Humanities and Social Sciences**

Because engineers, engineering technologists, and computer scientists are significant agents for social change, they should be sensitive to the human setting in which that change takes place. Humanities and Social Sciences courses are emphasized within the curricula to increase the student's awareness of the human and social implications of professional practice. The Humanities include subject areas such as literature, philosophy, foreign languages and the fine arts. The Social Sciences include areas such as anthropology, political science, history, sociology, psychology and economics.

The following themes have been designed to cluster a group of upper-division courses with in-depth and substantial knowledge in the area of humanities and social sciences. All engineering and engineering technology students take at least two upper division Interdisciplinary General Education courses in at least one of the themes listed below:

**THEME 1: Human Understanding and Development**

"Human Understanding and Development" is an integrated approach to antiquity - its history, achievements and legacy - and the on-going development of modern civilization. Its purpose is to develop an understanding of our civilization, its achievements, problems, and prospects. Courses included are:

Category C: AMST 350I, ART 375I, C/LT 320I, C/LT 349I, C/LT 411I, C/LT 415I, C/LT 420I, HIST 303I, LING 363I, MUS 363I, R/ST 302I R/ST 383I.

Category D: ANTH 311I, ANTH 412I, DANC 373I, EDP 373I, GERN 400I, HIST 307I, KPE 338I, POSC 461I, PSY 300I, SOC 335I, SOC 410I, SOC 441I, SOC 485I.

Category E: DANC 373I, EDP 373I, HDEV 307I, HDEV 357I, HSC 420I, HSC 425I, KPE 338I, SOC 461I.

**THEME 2: Human Diversity: The Global Perspective**

"Human Diversity: the Global Perspective" provides an international perspective of the development of modern civilization. Its purpose is to develop and increase understanding from a global perspective of the continuing development of human civilization. Emphasis is on developing and understanding of cultural diversity and its prospects for the future. Courses included are:

Category B: ENGR 370I

Category C: CLSC 310I, R/ST 302I, R/ST 315I, R/ST 383I, C/LT 320I, C/LT 325I, C/LT 326I, HIST 303I, LING 363I.

Category D: A/ST 300I, A/ST 301I, ANTH 311I, CHLS 390I, ENGR 302I, GEOG 312I, GEOG 320I, HIST 307I, HIST 414I, I/ST 319I, SOC 410I, SOC 485I, U/ST 401I, W/ST 401I.

Category E: H SC 420I.

**THEME 3: Social and Economic Dimensions Of Engineering**

"Social and Economic Dimensions" provides an understanding of the human and economic aspects of engineering practice. The impacts of new technologies and engineering on modern society are addressed, as well as social/political aspects of societal development. Courses included are:

Category B: ENGR 370I

Category C: C/LT 411I, AMST 350I, HIST 303I.

Category D: A/ST 301I, ANTH 307I, ANTH 311I, ANTH 412I, ENGR 302I, ENGR 375I, GEOG 307I, HDEV 307I, HIST 306I, HIST 308I, HIST 474I, I/ST 317I, I/ST 318I, KPE 332I, POSC 461I, POSC 494I, PSY 350I, SOC 335I, SOC 410I, U/ST 401I.

Category E: ECON 309I, ENGR 375I, FIN 309I, FCS 309I, HDEV 307I, HDEV 357I.

**THEME 4: The Engineer In Society**

"The Engineer in Society" is intended to provide an understanding of the complex interrelationships of the engineer with modern society and the global environment. The

objective is to enhance understanding of the role of the engineer in the modern world and to ensure that the engineer is well equipped to deal with social problems of the coming decades. Courses included are:

Category B: ENGR 370I

Category C: C/LT 411I, HIST 303I.

Category D: AMST 350I, ANTH 307I, ANTH 311I, ANTH 412I, DANC 373I, EDP 373I, ENGR 302I, ENGR 375I, FCS 312I, HDEV 307I, HIST 306I, HIST 307I, HIST 474I, I/ST 317I, I/ST 318I, POSC 461I, POSC 494I, PSY 300I, SOC 335I, U/ST 401I.

Category E: DANC 373I, ECON 309I, EDP 373I, ENGR 375I, FIN 309I, FCS 373I, HSC 420.

**THEME 5: Health and Well-Being**

This theme provides a basis for understanding the physical, emotional, cultural, and philosophical aspects of self as they relate to personal well being. The focus is on concerns of enduring importance to the human experience of all individuals as members of national and world communities. Emphasis is on providing a background of learning that will encourage self-actualization to the fullest extent. Courses included are:

Category C: C/LT 411I, HIST 303I, ART 360I, C/LT 454I.

Category D: DANC 373I, EDP 373I, GERN 400I, FCS 312I, HDEV 307I, PSY 300I, HDEV 357I, KPE 338I, W/ST 401I.

Category E: DANC 373I, EDP 373I, HDEV 307I, HDEV 357I, HSC 420I, HSC 425I, HIST 309I, KPE 338I, REC 340I, SOC 461I.

**THEME 6: The Creative Experience In Human Development**

"The Creative Experience in Human Development" explores various aspects of the creativity of human beings. Students examine thought processes employed in human inquiry through a study of the culture, history, and physical nature of the world in which they live. Several courses are oriented toward the enhancement of creativity as it relates to human and societal development. Courses included are:

Category B: ENGR 370I, HIST 400I, PHYS 400I

Category C: ART 360I, ART 375I, C/LT 320I, C/LT 411I, C/LT 415I MUS 363I, MUS 364I, C/LT 454I, ENGL 318I, R/ST 391I, FEA 318I, THEA 324I.

Category D: PSY 300I, SOC 410I.

Category E: HDEV 307I, HDEV 357I, HIST 400I, PHYS 400I.

**THEME 7: The Individual in a Complex Society**

"The Individual in a Complex Society" addresses the relationships of the individual to an increasingly complex and technologically advanced modern world. The impacts of societal change on the individual, and the ability of the individual to cope with these changes, is addressed. The objective is to provide a background of understanding that will assist the student to prosper in a rapidly evolving world. Courses included are:

Category B: ENGR 370I

Category C: HIST 303I, C/LT 411I.

Category D: ANTH 305I, ANTH 307I, ANTH 412I, ANTH 311I,

C/LA 350I, ENGR 375I, GERN 400I, HIST 306I, HIST 308I, HIST 482I, KPE 338I, KPE 322I, POSC 461I, POSC 494I, PSY 300, SOC 335I, SOC 441I.

Category E: ECON 309I, ENGR 375I, FIN 309I, HDEV 307I, HDEV 357I, FCS 309I, HSC 425I, KPE 338I REC 340I, SOC 461I.

#### THEME 8: Human Values, Society and Technology

"Human Values, Society and Technology" addresses the impact of technology on human values and the profound effects these changes are having on modern society. Students gain an enhanced understanding of the impact of technology on human mores and culture. The continuing changes in our modern world brought about by rapid technological advance are addressed as they relate to human behavior and societal change. Courses included are:

Category B: ENGR 370I, PHIL 302I

Category C: C/LT 411I, C/LT 451I, ENGL 318I, HIST 303I, C/LA 350I, R/ST 391I.

Category D: A/ST 301I, ANTH 307I, ANTH 412I, ENGR 302I, ENGR 375I, GEOG 307I, POSC 461I, POSC 494I, I/ST 317I, I/ST 318I, I/ST 319I, ANTH 311I, ECON 305I, GERN 400I, HIST 306I, HIST 308I, HIST 474I, HDEV 307I, PSY 300I, PSY 350I, SOC 335I, SOC 410I, U/ST 401I.

Category E: ECON 309I, ENGR 375I, HDEV 307I, HDEV 357I, FIN 309I, FCS 309I, OCST 388I.

#### THEME 9: Gender and Human Experience

This theme provides an integrated disciplined inquiry into the status and implications of gender differences, exploring the meaning and significance of these basic factors in human experience and societal development. Courses introduce students to the biological basis of gender differences, gender in relation to cultural and societal institutions, the meaning of sex in gender and their cultural expressions, the evolving roles of men and women in modern society, gender changes in the professions, and prospects for rational evaluation of gender organization. Courses included are:

Category C: HIST 303I, W/ST 365I.

Category D: FCS 312I, KPE 338I W/ST 401I.

Category E: HSC 425I, W/ST 365I, HIST 309I, KPE 338I.

#### THEME 10: Ethnicity and Cultural Pluralism

This theme provides perspective on the diverse ethnic aspects of our global society and provides a greater understanding of the important role that ethnic and cultural diversity plays in human and societal development. Courses included are:

Category C: AMST 350I, A/ST 300I, A/ST 495I, CLSC 310I, C/LT 415I, R/ST 302I, R/ST 315I, R/ST 331I, R/ST 341I.

Category D: A/ST 300I, A/ST 301I, A/ST 485I, CHLS 390I, GEOG 312I, GEOG 320I, SOC 485I.

Category E: HSC 420I.

#### THEME 11: Human Maturity and Growth: Prospects and Problems

This theme addresses major life issues that confront individuals as they mature and provides an integrated academic approach to the study of human maturation through examination of the biological bases, the social and psychological implications of maturity and aging, approaches to ensuring

full enjoyment of life and continuing self actualization through the later years and the literary and philosophical concepts of aging. Courses included are:

Category B: ENGR 370I

Category C: C/LT 320I, C/LT 411I, HIST 303I.

Category D: DANC 373I, EDP 373I, GERN 400I, FCS 312I, HDEV 307I, KPE 332I, PSY 350I, SOC 410I, SOC 441I.

Category E: DANC 373I, EDP 373I, HIST 309I, HDEV 307I, HDEV 357I, REC 340I, SOC 461I.

#### THEME 12: Our Interdependent World/International Studies

"Our Interdependent World/International Studies" addresses the theme of internationalization of the human perspective. The objective is to provide a better global perspective of human and societal problems to better enable the student to assist in resolving these problems in the coming years. Courses included are:

Category B: ENGR 370I

Category C: R/ST 383I, AMST 350I, C/LT 320I, C/LT 324I, THEA 324I.

Category D: A/ST 300I, A/ST 301I, ANTH 307I, ANTH 412I, ENGR 302I, ENGR 375I, GEOG 307I, GEOG 312I, GEOG 320I, POSC 461I, POSC 494I, I/ST 317I, I/ST 318I, I/ST 319I, HIST 308I, CHLS 390I, PSY 300I.

Category E: ENGR 375I, HSC 420I.

#### THEME 13: Human Emotions and Reasoning

"Human Emotions and Reasoning" is aimed at improving self actualization by enhancing the student's understanding of the complex relationship between emotions and rational thought. The student gains a better understanding of reasoning process and how decision making results from a synthesis of emotion and logic. Courses included are:

Category C: C/LT 320I, C/LT 454I, HIST 303I, LING 363I, R/ST 302I.

Category D: ANTH 311I, DANC 373I, EDP 373I, FCS 312I, HIST 310I, PSY 300I, PSY 350I, KPE 332I, SOC 335I, SOC 410I, SOC 441I, SOC 485I.

Category E: DANC 373I, EDP 373I, HDEV 307I, HDEV 357I, HSC 425I.

#### THEME 14: Classical and Modern Civilization

"Classical and Modern Civilization" provides a greater understanding of the development of human civilization from medieval times up to the present. Courses included are:

Category B: ENGR 370I

Category C: C/LT 320I, C/LT 411I, C/LT 420I, C/LT 349I, C/LT 421I, C/LT 422I, HIST 323I, HIST 414I.

Category D: A/ST 301I, AMST 350I, ANTH 307I, ANTH 412I, HIST 307I, POSC 461I, POSC 494I, I/ST 319I, HIST 414I, R/ST 383I.

Category E: SOC 461I.

#### THEME 15: Arts and Human Enrichment

This theme focuses on the arts as a vehicle for enrichment of human experience. Students are exposed to classical and modern arts, thereby gaining a better appreciation for the important role of the arts and humanities for human enrichment. Courses included are:

Category C: ART 360I, ART 375I, C/LT 320I, C/LT 412I, MUS 363I, MUST 364I, C/LT 324I, C/LT 349I, C/LT 415I, C/LT 421I, C/LT 422I, C/LT 451I, ENGL 318I, GERM 370I, HIST 323I, HIST 404I, HIST 414I, THEA 324I, THEA 421I, HIST 414I.

Category D: HIST 404I, HIST 414I.

#### THEME 16: Language, Thought and Cultural Development

"Language, Thought and Cultural Development" encompasses the perspectives of language and thinking processes and the development of modern culture. These courses provide an enhanced understanding of modern cultural developments and addresses future prospects. Courses included are:

Category C: MUS 364I, C/LT 415I, C/LT 420I, C/LT 454I, CLSC 310I, C/LT 451I, HIST 323I, HIST 404I, LING 363I.

Category D: HIST 404I, HIST 482I, PSY 300I, SOC 485I.

#### THEME 17: Contemporary Culture and Society

This theme is concerned with modern society and the social/political forces that created it. The social and technological forces that are changing modern society are addressed, as are the challenges of tomorrow. Courses included are:

Category B: ENGR 370I

Category C: C/LT 320I, C/LT 411I, C/LT 412I, C/LT 415I, C/LT 451I, R/ST 302I, R/ST 383I.

Category D: ENGR 302I, ENGR 375I, HIST 307I, HIST 474I, KPE 332I, POSC 461I, POSC 494I, PSY 350I, SOC 335I, SOC 410I, W/ST 401I.

Category E: ENGR 375I, HSC 420I, HIST 309I, KPE 338I, REC 340I, SOC 461I.

#### THEME 18: Science, Environment, and Public Policy

"Science, Environment, and Public Policy" explores the scientific considerations that have an impact on the natural environment. It reviews the moral obligation of humanity toward the environment and societal attitudes toward nature as revealed by the arts. The student also explores the historical development of attitudes toward the environment, and the way in which the political process is brought to bear on environmental concerns. Courses included are:

Category B: ENGR 370I

Category C: C/LT 411I, C/LA 350I.

Category D: ANTH 307I, ENGR 302I, ENGR 375I, HIST 307I, POSC 461I, POSC 494I, I/ST 319I, SOC 410I, W/ST 401I.

Category E: ENGR 375I, HSC 420I, SOC 461I.

#### THEME 19: The Modern Age

"The Modern Age" considers the modern technological world in its broadest context. The potentials and the problems of technological advance for society are studied so that students are able to make better judgments regarding policy and their own responsibilities in an age that faces the possibility of human extinction through nuclear conflict or global environmental disaster. Courses included are:

Category B: ENGR 370I.

Category C: C/LT 320I, C/LT 411I, C/LA 350I.

Category D: ANTH 307I, ANTH 412I, ENGR 302I, ENGR 375I, POSC 494I, GEOL 305I, HIST 307I, HIST 474I, PSY 300I, SOC 410I, SOC 441I, W/ST 401I.

Category E: ENGR 375I, HSC 420I, SOC 461I.

#### THEME 20: Perspectives on Evolution

"Perspectives on Evolution" is intended to provide a foundation for understanding human and societal evolution in its broadest context, including the origins of the universe, the earth, life forms, and past and continuing evolutionary changes in societal development. Perspectives of evolution from antiquity to the present and its impact on the culture of the twentieth century are explored. Courses included are:

Category B: ENGR 370I, HIST 400I, PHYS 400I.

Category C: CLSC 310I, HIST 414I.

Category D: HIST 310I, SOC 410I.

Category E: HDEV 307I, HDEV 357I, HIST 400I, PHYS 400I.

#### THEME 21: World Urban Environment: Ecology and Urban Issues

"World Urban Environment: Ecology and Urban Issues" contributes to an understanding of urbanization, its causes and consequences, and focus on the city as a particular type of human habitat, with emphasis on the relation of urban issues to ecology and human experience. Courses included are:

Category B: ENGR 370I

Category C: C/LT 411I, C/LA 350I, AMST 350I.

Category D: ANTH 307I, HIST 307I, HIST 474I, POSC 494I, PSY 300I, SOC 441I, W/ST 401I.

Category E: REC 340I, SOC 461I.

#### THEME 22: Development and The Third World

The Third World is characterized by severe social tension and staggering challenges. Immigration pressures are a continuing source of conflict and the competition for resources will become more acute. These courses address the physical limits and possibilities of Third World Development, an appreciation of human and economic aspects affecting social and economic change in the Third World, appropriate technologies for Third World development, and the dynamic interplay among the arts, religion, and cultural values of the Third World. Courses included are:

Category C: A/ST 300I, CLSC 310I, R/ST 331I, R/ST 341I.

Category D: A/ST 301I, ENGR 302I, GEOG 312I, GEOG 320I, HIST 474I, I/ST 317I, I/ST 318I, I/ST 319I, POSC 461I.

Category E: HSC 420I.

#### THEME 23: Technology and the Future of Mankind

This theme concerns societal impacts of technological advances and prospects for resolving major problems facing humanity, including war, overpopulation, famine and disease. These courses help students in technological fields to address prospects and limitations for using new technologies to solve societal problems. Courses included are:

Category B: ENGR 370I

Category C: C/LT 411I.

Category D: ANTH 307I, ENGR 302I, ENGR 375I, HIST 307I, HIST 474I, I/ST 319I, POSC 461I, PSY 300I, SOC 410I.

Category E: ENGR 375I, HSC 420I, OCST 388I, SOC 461I.

#### THEME 24: Humanity, the Earth, and the Environment

"Humanity, the Earth, and the Environment" deals with the human and social perspective of environmental protection. The student gains an appreciation for the complex interrelationships of social systems, the use of land and materials,



and the environmental impacts derived therefrom. The objective is to provide the student a proper perspective on environmental protection leading to effective political and professional action to reverse current trends in environmental degradation. Courses included are:

Category B: ENGR 370I

Category C: C/LT 411I, AMST 350I.

Category D: ANTH 307I, ENGR 302I, ENGR 375I, HIST 307I, HIST 474I, POSC 494I, SOC 410I, W/ST 401I.

Category E: ENGR 375I

#### Requirements for the ABET Accredited Degree Programs

Students working for an ABET accredited degree will meet with an academic advisor in their department as early as possible to make themselves fully aware of the ABET requirements, not only in General Education as outlined above, but also in other areas, such as math/science requirements. In particular, majors in the ABET accredited programs take a minimum of 32 units of basic science and mathematics not including units earned in courses prerequisite to calculus I; students should see the departmental advisor early to determine whether they must take a biological science to complete their science requirement. Integrated design throughout the curriculum is a required feature of all accredited study programs.

#### BS in Manufacturing Engineering (code 3-4305)

The objective of the Bachelor of Science in Manufacturing Engineering (BSMfgE) program is to educate engineers who can design, build and manage competitive production systems. In accomplishing this objective, the program has been developed to include a resource of manufacturing knowledge that can be used to infuse manufacturing theory, principles and practices into all other disciplines in the College of Engineering.

#### Requirements (137 units)

- I. General Education (36 units, not counting 9 units of Math/Science)  
Required GE categories:
  1. Communication and Critical Thinking (Category A)
  2. Physical Universe (Category B)
  3. Humanities and the Arts (Category C)
  4. Social and Behavioral Sciences (Category D)
  5. Self Integration (Category E)
- II. Basic Sciences (13 units): CHEM 111A, PHYS 151, PHYS 152
- III. Basic Mathematics (15 units): MATH 122, MATH 123, MATH 224, MATH 370A
- IV. Engineering Sciences(16 units): EE 212, CE 205, ME 205, ME 371, ME 373
- V. Engineering Topics (11 units): ENGR 170, ME 172, ENGR 223, ENGR 264
- VI. Manufacturing Engineering Core (36 units):
  1. Design for Manufacturing (9 units): ENGR 360, ME 376, ME 405A
  2. Manufacturing Materials and Processes (9 units): ME 322, ENGR 330, CH E 385
  3. Manufacturing Systems and Automation (9 units): ME 405B, ME 474, ENGR 483
  4. Manufacturing Management, Quality and Productivity (9 units): ENGR 311, ENGR 418, ENGR 461

#### VII. Emphasis Electives

The student selects 9 units from one of the following specialized emphases:

1. Engineering Emphasis: ME 429, ME 445, ME 476, ENGR 460,
2. Mechanical Engineering Emphasis: ME 324, ME 409A, ME 428, ME 495
3. Chemical Engineering Emphasis: CH E 335, CH E 425, CH E 435, CH E 437
4. Aerospace Engineering Emphasis: AE 315, ME 428, AE 472, AE 483
5. Electrical Engineering Emphasis: EE 330, EE 350, EE 450

#### Minor in Environmental Engineering (code 0-4307)

This interdisciplinary Minor in Environmental Engineering is designed for undergraduates from various engineering and science backgrounds who are interested in applying engineering approaches to environmental issues. Coursework in the minor focuses on engineering solutions to problems in preserving the quality of air, water, and soil by developing procedures and designing processes, consistent with current government regulation, to improve the environment and prevent pollution.

#### Requirements

A minimum of 6 units selected from the following core: CH E 475 or C E 364; CH E 455 or C E 469. Additional courses to complete the 18 unit minor may be selected from: CH E 405, 415, 445, 465, 485; C E 460, 462, 464, 466; M E 405C.

Most of the courses in the minor require some background in engineering and/or chemistry. Upper division students majoring in Biology, Chemistry, Chemical Engineering, Civil Engineering, or Mechanical Engineering may have sufficient background to select from the above choices without needing additional prerequisites. Those majoring in other branches of science and engineering may need several additional courses in engineering and/or chemistry to meet prerequisite requirements of courses in this minor. All prerequisites to the courses in the minor must be completed with a grade of "C" or better.

#### Graduate Programs

Graduate Program Director

Mihir K. Das, Associate Dean for Instruction

#### Master of Science in Engineering (code 6-4301)

The College of Engineering offers graduate study programs for the Master of Science in Engineering degree. Typical tasks and responsibilities undertaken by students in the curriculum would not fall within one of the traditional specialties in engineering, e.g. aerospace, chemical, civil, electrical and mechanical engineering, or computer science and engineering. The student may pursue an interdisciplinary program, approved by a Graduate Advisor, by selecting courses from the various departments of engineering. Additional information concerning the programs, special facilities, laboratories and research possibilities may be obtained from the College of Engineering.

#### Prerequisite

1. A bachelor's degree in an ABET accredited curriculum in engineering with a minimum GPA of 2.70 or:

2. A bachelor's degree with a minimum GPA of 2.70 in engineering, mathematics or a natural science or other discipline with the requirement that essential undergraduate prerequisites in engineering be satisfied;
3. Graduate students must consult with a graduate advisor, with whom they will be working, for information concerning procedures and requirements for appropriate approval of their courses of study prior to enrolling in their graduate programs.
4. The Writing Proficiency Examination (WPE) must be passed during the first semester in residence. Courses taken after the first semester without having passed the WPE will not be counted toward the graduate degree.

#### Advancement to Candidacy

1. Removal of all undergraduate deficiencies as determined by the Graduate Advisor;
2. Students may, at the discretion of the Graduate Advisor, be required to take examinations in some chosen areas;

#### Requirements

1. Completion of a minimum of 30 units beyond the bachelor's degree in upper division and approved graduate courses, including:
  - A. A minimum of 18 units of 500 and/or 600 level courses in engineering;
  - B. Six units of electives selected from approved upper division or graduate courses from appropriate areas;
  - C. Completion of an acceptable thesis or project and/or comprehensive examination.

Note: Students are strongly advised to read and be familiar with the campus regulations described under "Graduate Programs" elsewhere in this Catalog.

### Certificate in Systems Engineering (code 1-4301)

Director: Dr. Mihir K. Das, Associate Dean for Instruction

The 18-unit Post Baccalaureate Certificate Program in Systems Engineering (SE) is designed to provide the interested students or practicing engineers with the very latest in SE capability and the ability to plan and execute complex SE projects. The Certificate Program is focused toward development and management of complex systems. Each such complex system requires a clear SE Master Plan, a set of SE Methodologies, appropriate tools, a rigorous requirements flow-down technique, and a comprehensive Project Management Plan to enable system design and project management for effective and efficient human interaction.

#### Requirement

1. Completion of an accredited baccalaureate degree in engineering or equivalent;
2. Satisfactory completion of 18 units listed below;
3. File a program application card with Admissions and Records, and file for the Certificate at least one semester prior to completion;
4. The Certificate may be awarded concurrently or subsequently to baccalaureate degree.

### Required Courses

The Certificate Program requires a minimum of 18 semester units, as indicated below.

1. System Engineering Core Courses, 6 units of the following: ENGR 532 and ME 508.
2. Elective Engineering Management Courses, 6 units from the following: CECS 521, ME 506 and 507
3. Elective Manufacturing Courses, 3 units from the following: ENGR 574, 595 and ME 574
4. Advanced Engineering Mathematics/Analysis, 3 units from the following: AE 502, EE 505, 508, ME 501 and 502

### Ph.D. in Engineering and Industrial Applied Mathematics (code 8-4303)

#### Program Advisors

Contact Department Chairs

Ph.D. in Engineering and Industrial Applied Mathematics, offered jointly by the College of Engineering at California State University, Long Beach and The Claremont Graduate School, allows students to pursue doctoral programs in most areas of engineering and applied mathematics.

The College of Engineering at California State University, Long Beach (CSULB) has the primary responsibility for the engineering portion of the program, and the Department of Mathematics at The Claremont Graduate School (CGS) has the primary responsibility for the applied mathematics portion. The program of study for each Ph.D. candidate is carefully integrated to ensure the interdisciplinary nature of each student's research.

#### Application Deadlines

Admission will be granted to qualified students, applications should be submitted as early as possible. Applications are encouraged from men and women, and particularly from members of underrepresented groups. Completed applications are due to either institution preferably by February 20 for the Fall semester and October 31 for the Spring semester, although later applications may be allowed at the discretion of the Program Committee. Students will be jointly admitted to both the institutions.

#### Admission Requirements

To be admitted to the joint Ph.D. program, an applicant must have received a bachelor's or a master's degree in science, engineering, or mathematics from an accredited institution. The applicant must have attained a good scholastic record and present confidential recommendations indicating that he or she is qualified to pursue, with distinction, advanced study and research. In some cases examinations may be required.

Scores on the General Section of the Graduate Record Examination (GRE) are required. Applicants, whose first or native language is not English, are required to submit the results of the Test of English as a Foreign Language (TOEFL) as part of their application procedure. A minimum score of 550 is required.

Submit completed applications to: David McFadden, Director of Enrollment Management, The Claremont Graduate School, Claremont, CA 91711.

### ***Program Planning and Supervision***

Within a semester of beginning study in the Ph.D. program, the student contacts the Program Committee for an advisor in Mathematics at CGS and an advisor in Engineering at CSULB. The student's program of study will be arranged individually by each student in collaboration with the advisors. However, the student's overall performance will be monitored by the Program Committee.

### ***Plan of Study***

After consultation with the advisors, the student prepares and files with the Program Committee before the end of the first semester a Plan of Study for completing the course requirements for the degree. The Plan of Study indicates the areas of study that the student will be taking in preparation for the preliminary examination, and study to be undertaken to meet the language requirement. In exceptional circumstances, a Plan of Study may be altered at a subsequent time by petition to the Program Committee.

A minimum of 72 units of course work, independent study, and research (including transfer credits) are required. Transfer credits of up to 24 units of related courses at the master's level is permissible on approval of the Program Committee; provided that this course work has been completed with at least a grade of "B" or its equivalent at an accredited institution and is directly related to the joint program and to the student's Ph.D. goals. Of the 72 units, a minimum of 24 units is normally completed in the graduate engineering program at CSULB and a minimum of 24 units in the graduate mathematics program at CGS. Both sets of 24 units must conform to the area requirements of the relevant institution and must be approved by the Program Committee.

### ***Preliminary Examinations***

After the completion of the required 24 units of course work (including transfer credits at CGS and at CSULB) the student will undertake written preliminary examinations. These examinations consist of four examination areas: two in engineering and two in mathematics. In each area there is a three-hour examination. The two engineering examinations are taken during the same month, and the two mathematics examinations are taken during the same month. These examinations are given twice a year (January and May). Should a student fail either set of examinations, one retake of that set may be allowed through a petition to the Program Committee.

### ***Doctoral Committee***

During entry to the program and through the period of the main body of course work at CGS and CSULB, a student's progress will be monitored by the Program Committee. On successful completion of the preliminary examinations, the student may petition the Program Committee to constitute the Doctoral Committee. This committee is chosen by the student with advice from the faculty and with approval of the Program Committee, and includes at least two faculty members, one each from CGS and CSULB, providing both breadth and depth in mathematics and engineering. The Doctoral Committee supervises the student's progress through research preparation and dissertation writing, and administers the qualifying and oral examinations for the degree. The Chair of the Doctoral Committee is the dissertation supervisor.

### ***Research Preparation***

In addition to completion of at least 48 units of course work (including transfer units) and the completion of the preliminary examinations and research tool tests, a student undertakes the Ph.D. dissertation. In preparation for the dissertation, the student takes advanced graduate courses, seminars, or directed reading courses (as part of the 48 units course requirement), where exposure to research is emphasized. From these and other sources the student gains the ability to understand the motivation for research in engineering and applied mathematics, and learns to apply research techniques.

### ***Research Tools***

A student in the joint Ph.D. program must demonstrate proficiency in problem-solving ability using computer programs. This demonstration may take different forms depending on the student's engineering sub-discipline, but it must include evidence that the student has used an appropriate computer language and algorithmic methods to solve engineering problems.

### ***Research Proposal and Qualifying Examination***

With advanced courses as background, and with the guidance of the Doctoral Committee, the student defines an area of proposed research and prepares a written Dissertation Proposal containing an outline of the research to be undertaken and references to relevant source materials. The Dissertation Proposal is presented to the Doctoral Committee at least two weeks prior to the qualifying examination. The qualifying examination is an oral presentation to the Doctoral Committee by the student describing the research planned. The student is expected to present evidence both as to the mathematical content and to the engineering applications of the proposed research. The Doctoral Committee judges the fitness and quality of the Dissertation Proposal from this presentation and from the written proposal, and subsequently communicates its recommendation to the Program Committee. Upon a positive recommendation, the student embarks on a dissertation. In the event of failure, the qualifying examination may be retaken once again, after petition to the Program Committee.

### ***Dissertation and Final Oral Examination***

On completion of the research, the student will prepare the dissertation in accordance with application regulations. A final draft of the dissertation will be presented to each member of the Doctoral Committee at least three weeks prior to the final oral examination. The oral defense will be held on the campus of the dissertation supervisor.

### ***Residency Requirements***

To meet the requirement of the Ph.D. degree, a minimum of 72 units of course work, independent study, and research, including transfer credit, must be completed. No more than 12 units per semester or per summer session may be counted toward the requirement of 72 units.

All degree requirements must be completed within seven years from the time a student begins graduate study. Work for which transfer credit is granted will be counted as part of the seven years; e.g., if transfer credit of 24 units (one year) is granted, the time limit will be six years. The seven-year maximum time period for the Ph.D. degree is reduced by six months for 12 units or less of transfer credit and 12 months for 13 to 24 units of transfer credit. The Program Committee will consider petitions for extensions.

The residency requirement for the Ph.D. degree may be met either by two semesters of full-time study in a 24-month period or by the completion of 48 units of course work within a 48-month period, including work in the Summer Session, on either or both campuses.

Students who receive transfer credit for 12 units or less may meet the residence requirement either by completing two full-time semesters of course work within a 24-month period or by completing 36 units within a 48-month period. Those receiving transfer credit for 13 to 24 units may meet the residence requirement by completing 24 units within a 36-month period.

If a student withdraws from the program after completing a substantial portion of the course work, a master's degree at either or both institutions is still possible by satisfaction of the appropriate requirements. Both CGS and CSULB require 30 semester units of course work for master's degrees.

### *Teaching Practicum*

Students who have completed coursework equivalent to a master's degree and who intend to pursue a career in university education may enroll in a Teaching Practicum for three units of credit. The student will receive instruction in teaching techniques and, under the supervision of a senior faculty member, will teach an undergraduate class in engineering or mathematics. In addition, opportunities are available for qualified Ph.D. candidates to teach undergraduate courses as part-time lecturers.

## Courses (ENGR)

### Lower Division

#### 090. Special Topics in Engineering (1)

Selected topics from recent advances of interest to beginning engineering students. Course content will vary from year to year and may be repeated to a maximum of three units. (Lecture problems 1 hour.)

#### 101. Introduction to Engineering Profession (1)

Freshman orientation seminar on careers in engineering. Speakers from various fields illustrate opportunities and challenges in the engineering profession. (Lecture-problems 1 hour.) Traditional grading only.

#### 170. Engineering Drawing (3)

Graphic communication and drawing, use of instruments, lettering, dimensions, and detailing of engineering drawings, drafting procedures. Introduction to blueprint reading and computer-aided drafting. (Lecture 1 hour, laboratory 3 hours.) Traditional grading only.

#### 202. Computer Methods in Engineering (3)

Prerequisite: MATH 122. Introduction to FORTRAN programming with applications in Engineering. Structured programming techniques with numerical methods applications. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

#### 205. Surfing the Information Superhighway – Internet Resources and Services (3)

Prerequisite: ENGL 100. Overview of Internet resources, services and networked information systems for nonspecialists. Instructional and learning methods include a combination of lecture, on-line demonstrations, class discussions, guest speakers, and computer lab exercises. (Lecture-problems 3 hours.) Traditional grading only.

#### 223. Fundamentals of Manufacturing Processes (2)

Prerequisites: CHEM 111A, PHYS 151, MATH 122, and ME 172. Overview and basic concepts of manufacturing processes in the areas of mechanical, electrical, chemical, and aerospace manufacturing. Welding, soldering, and brazing. (Lecture-problems 2 hours.) Traditional grading only.

#### 264. Tooling and Fixtures Design (3)

Prerequisites: ENGR 223. Operations and use of conventional and non-conventional machine tools. Laboratory exercises not open to students with previous machine tools experience. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

### Upper Division

#### 3021. International Developments in Renewable Energy and Cultural/Environmental Impacts (3)

Prerequisites: Upper Division Standing, ENGL 100. Renewable energy sources, available world resources, market, trends, and technology. Energy conservation and practical alternatives, social, cultural and economic impacts, environmental aspects of power generation, air pollution, depletion of ozone layer and greenhouse effect. (Lecture-problems 3 hours.) Traditional grading only.

#### 303. Engineering System Analysis I (3)

Prerequisite: MATH 224. Formulation of engineering problems and methods for their analysis. Engineering systems modeled by ordinary and partial differential equations. Analyzing responses of linear systems using Laplace transforms and linear algebra, and with the aid of computer. Introduction to state variable descriptions of linear systems and stability analysis. Computer aided analysis using MatLab, MathCad, etc. (Lecture 2 hours, Laboratory 3 hours.) Traditional grading only.

#### 311. Quality and Productivity Tools (3)

Prerequisite: Upper division standing. Quality assurance principles and practices in industry and analytical tools for continuous process improvements. Quality management principles, national and international quality standards, engineering a quality product, reliability, maintainability, productivity, teamwork and supplier management. Tool engineering, inspection, statistical process control, non-destructive testing, metrology, cost of quality, and product liability. (Lecture-problems 3 hours.) Traditional grading only.

#### 330. Manufacturing Processes (3)

Prerequisites: ENGR 223 and ME 322. Primary manufacturing processes for metals, plastics, composites, and ceramics such as casting, metal-forming, injection molding, blow molding, and powder processing. Computer simulation. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

#### 340. Guitar Electronics (3)

Prerequisites: Upper Division standing. ENGL 100. Electrical safety, physiology and physics of the ear, hearing loss, electric guitar components including pickups, volume and tone controls, amplifiers, special effects devices. Laboratory experiments: magnetic and piezo-electric pickups, volume and tone controls, active filters, tube and transistor amplifiers. Special effects projects. (Lecture 2 hours-laboratory 3 hours.)

#### 350. Computers, Ethics and Society (3)

Prerequisites: One computer programming course plus 3 units from GE Category A.1 (Writing), and 3 units from GE Category C.2 .b (Philosophy) or GE Category D (Social and Behavioral Science). An examination of the social impact of information technologies. Topics include a survey of the technology (software, hardware and key applications), ethical obligations of specialists, the computer in the workplace, shifts of power, privacy, and legal issues related to computing. (Lecture-problems 3 hrs.)

#### 360. Manufacturing Process Control and Instrumentation (3)

Prerequisite: EE 212. Basic analog and digital control circuits for manufacturing processes and systems. Properties of thermal, mechanical and optical transducers with associated signal conditioning methods. Features inherent in manufacturing process control loops. Simple closed loop control concepts, tuning of process parameters and basic concepts of discrete event systems.

Laboratory exercises in developing and measuring various control systems. (Lecture- problems 2 hours, laboratory 3 hours.) Traditional grading only.

### 370I. Astronautics and Space (3)

Prerequisites: ENGL 100 or its equivalent and upper division status. This course combines the disciplines of space engineering with economics, human physiology, satellite meteorology, earth resources and environmental science, astronautics and space exploration. Emphasis on oral and written communications, numeracy and use of computers. Extensive use of computer animation, videographics and the Internet. (Lecture-problems 3 hours.) Traditional grading only.

### 371. Impact of Astronautics and Space on Science, Business and Commerce (3)

Prerequisite: ENGR 370I. Impact of space and astronautics on commercial and scientific fields such as communication, remote sensing, weather forecasting, global position systems and earth resources. Economics and human physiology aspects of working in space. Current and future exploration of the moon and Mars. Satellite imagery and data using the Internet. (Lecture-problems 3 hours.) Traditional grading only.

### 375I. Total Quality and Continuous Improvement (3)

Prerequisites: ENGL 100 or its equivalent and upper division status. Total Quality approach to goal setting and disciplined approach to planning. Techniques for identification and alignment of all forces towards meeting the set goals. Strategies for creating an environment which nurtures continuous improvement. Total Quality tools and methodologies. Variability Reduction approach and concepts. Measurement systems for tracking progress from the working level to the overall goal. American competitiveness and corporate cultural change to meet the global challenge. (Lecture-problems 3 hrs) Traditional grading only.

### 381. Resources, Technology (3)

Prerequisites: ENGL 100 and a Critical thinking course (A3 category of GE) or consent of instructor. Occurrence and setting of renewable and non-renewable resources. Opportunities for the useful development of resources, inherent risk, and the responsibilities of engineers in the decision process. Population, resources, environment, energy, economics, technology and their interrelationships. Role of engineering and technology in resource conservation and development, pollution control, recycling, waste reduction, imports and exports. The philosophical, sociological, and institutional implications of engineering-based risk and decision making. (Lecture-Problems 3 hours.)

### 390. Exploring Electronics (3)

Prerequisites: Upper division standing and ENGL 100. Applications of electricity and electronics in consumer apparatus such as digital high definition television, compact discs, VCR, personal computers, cellular phone, bar coding, fax machines, medical devices, electronic keyboards and many others. Socio-economic and human physiological aspects of the continuing evolution of electronics. (Lecture 2 hours - laboratory 3 hours.)

### 391. Engineering and Civilization (3)

Prerequisites: ENGL 100 and a Critical Thinking course (A3 category of GE) or consent of instructor. Study of the interaction between human beings, the environment, resources, engineering and science, including the impact of engineering on society. Readings and lectures providing perspective and insight into current problems at the interfaces between engineering and other disciplines, especially anthropology, art, ecology, economics, philosophy, psychology, science and the social sciences. (Lecture-Problems: 3 hours.)

### 392. Water in Society (3)

Prerequisites: ENGL 100 and a Critical Thinking course (A3 category of GE) or consent of instructor. Water as a vital resource, its utilization and control. Economics, Environmental Engineering, and aesthetics for human well being in historical and modern contexts. Competing social and economic priorities for use of this vital resource. Identification of technical alternatives and socio-economic problems that arise during or as a consequence of implementation of water resources policies. Evaluation in so-

cio-political, economic, environmental, aesthetic, ethical and macro-technical terms. (Lecture-Discussion: 3 hours.)

### 409. Our Technological World (1-3)

Prerequisite: Consent of the instructor. Advanced work related to the latest technological changes affecting our society. Articulating these developments with High School and Community College students to promote the profession of Engineering, Computer Science or Engineering Technology. Course may be repeated to a maximum of 3 units.

### 418. Management of Manufacturing Enterprises and Cost Analysis (3)

Prerequisite: ENGR 330. Principles and practices of manufacturing management and techniques for improving manufacturing productivity: application of methods analysis, work measurement, and cost reduction projects for maximum production economy. Motion economy, micro and macro motion analysis, operations analysis and evaluation, worker-machine activity relationship, time study, predetermined time standards, human factors required for maximum quality and productivity, and financial analysis of capital equipment investment alternatives. (Lecture-problems 3 hours.) Traditional grading only.

### 460. Electronics Packaging Manufacturing (3)

Prerequisite: ENGR 418. Principles and practices of electronics packaging and manufacturing processes, based on hybrid and printed circuit board technology. Fabrication methods and processes. Assembly, surface mount technology, semi-automated and automated fabrication. Component preparation and attachment technologies, flow-soldering and solder reflow methods, materials, testing methods and equipment. (Lecture-problems 3 hours.) Traditional grading only.

### 461. Manufacturing Resource Planning (3)

Prerequisites: Upper division standing and ENGR 418. Basic principles of manufacturing resources planning, operations management, and control. Forecasting techniques, production planning and scheduling procedures, and analysis of manufacturing resources. Material inventory activities, facilities and physical plant layout, production process and equipment, and productivity and quality. Team projects using computer modeling software. (Lecture-problems 3 hours.) Traditional grading only.

### 483. Computer Integrated Manufacturing (3)

Prerequisite: ENGR 430. Principles and practices of the function of computers in controlling the manufacturing process, including: hardware and software requirements for computer automation; computer architectures used in manufacturing; computer-aided design; manufacturing systems; computer controlled manufacturing equipment; simulation; quality assurance; programming the factory. (Lecture-problems 3 hours.) Traditional grading only.

### 492B. Internship In Engineering (3)

Prerequisite: Upper division standing and permission of the instructor. A Co-Op field experience. Students who qualify can be placed in a major- or career-related, pre-professional experience as an employee in private industry or in public agencies. May be repeated a maximum of six units. (Lecture-problems 3 hours.)

### 511. Quality Assurance in Manufacturing (3)

Prerequisites: CE 406 or consent of instructor, and graduate standing. In-depth studies of planning for quality, productivity and competitive positioning in manufacturing. Understanding the TQM process. Inspection and standardization and product reliability strategies. Case study projects. (Lecture-problems 3 hours.) Traditional grading only.

### 532. Logistics Principles and Practice (3)

Prerequisite: Graduate standing or consent of instructor. Logistics concepts, history, industry and military practice, lessons learned, and the complete product life cycle. Logistics processes including maintainability, support resource identification and technical documentation and training. Engineering design influence on product maintenance and material and operational support. (Lecture-problems 3 hours.) Traditional grading only.

572. Automation in Computer Integrated Manufacturing (3)

Prerequisites: CECS 242, AE 555, or consent of instructor and graduate standing. In-depth of view of automated manufacturing systems, looking at the system architecture, hardware, software and communications required to facilitate the operation, monitoring and control of a modern manufacturing system. Specific and the overall requirements, specifications necessary to operate a CIM system in aerospace and other industries. (Lecture-problems 3 hours). Traditional grading only.

574. Advanced Manufacturing Technology and Processes (3)

Prerequisites: ENGR 572 or consent of instructor, and graduate standing. Build from manufacturing process into factory integration, study of advanced manufacturing processes including composites, electronics manufacturing, automated material handling, assembly, inspection, warehousing, factory and office of the future. Automation, robotic applications, flexible manufacturing systems, group technology and the economics of the automated systems. (Lecture and Computer Laboratory, 3 hours). Traditional grading only.

590. Special Topics in Engineering (3)

Prerequisite: Graduate standing or consent of instructor. Each offering is based on an area in an Engineering or Engineering-related discipline. Repeatable to a maximum of 6 units with consent of the College of Engineering. (Lecture-problems 3 hours.) Traditional grading only.

597. Independent Studies (1-3)

Prerequisite: Consent of instructor. Independent study of topics of current interest in Engineering or Engineering-related disciplines. May be repeated up to a total of 6 units with written permission from the College of Engineering. Traditional grading only.

790. Advanced Special Topics in Engineering (4)

Prerequisite: MS or equivalent and formally admitted to the Ph.D. program. Each offering is based on an area of Engineering in which recent advances have been made. Specific topics will be recorded on student's transcripts. Repeatable to a maximum of 8 units with different topics. Course Survey Form must be completed. Traditional grading only.

795. Advanced Directed Studies (4)

Prerequisite: MS or Equivalent and formally admitted to the Ph.D. program. Explorations of theoretical and experimental (if applicable) Engineering problems in great depth with emphasis on mathematical modeling and analysis. Students must present the findings in a formal report and a seminar. Repeatable to a maximum of 8 units. Course Survey Form must be completed. Traditional grading only.

798. Doctoral Dissertation (4-12)

Prerequisites: Enrollment is limited to students formally admitted to the Ph.D. program who have passed the preliminary examinations and research tool tests on completion of at least 48 units of course work. A written dissertation proposal containing an outline of the research to be undertaken and references to relevant source material must be submitted. Only upon a positive recommendation a student may embark on a dissertation. Minimum 4 units per semester. May be repeated till the work is completed. Traditional grading only.

# CENTER FOR ENVIRONMENTAL STUDIES

*College of Natural Sciences and Mathematics*

## Director

Roswitha B. Grannell

## Location

Peterson Hall 3 (PH3), Room 130

## Telephone

(562) 985-4927 or (562) 985-4809

## Certificate in Environmental Studies (code 1-7000)

The Center for Environmental Studies has as its objectives (1) creation of an awareness of the kind and scope of environmental problems, (2) preparation to analyze environmental problems and issues and (3) training in research in, and solution of, environmental problems.

The Center offers the Environmental Studies Certificate Program which is comparable to an academic minor. It has three components: natural environment prerequisites (or corequisites), core requirements, and elective courses distributed in human behavior, resources and analysis and application.

The pattern of completion for the certificate is directed toward both the technically trained, research oriented student and the liberal arts, humanistically oriented student. Students in both areas must contact the Director, Center for Environmental Studies, for entry into the program. This contact should be made as early as possible in the student's academic career so that he or she may receive counseling in the most appropriate course work.

## Requirements

1. A bachelor's degree (may be completed concurrently);
2. Consultation with the director of the program;
3. Overall GPA of 2.0 in all work attempted;

## 4. 33 units distributed as follows:

A. Prerequisite or Corequisite Courses (nine units outside the major department selected from the three categories below; at least one laboratory course from categories A. or B. must be included, and a second is highly recommended);

(1) Life Sciences: At least three units from BIOL 200, 201, 313, 324, 350, 351, 353, 427, 450, 453, 464; MICR 211, 441;

(2) Physical Sciences: At least three units from CHEM 100, 111A, 111B, 202, 302; GEOL 102, 104, 105, 160, 163, 465; PHYS 100A, 100B, 104, 151, 152;

(3) Geography: 140, 440, 442, 444;

B. Core requirements (nine units; upon petition to the Director, three units of E/ST 499 may be substituted for one of the following):

(1) PHIL 360;

(2) E/ST 490 (2 units)

(1 unit), taken concurrently (only the sections entitled Environmental Field Studies may be used; the prerequisite for these courses is prior completion of six units of Section A, above, including the laboratory);

C. Elective Requirements (15 units, distributed over the following three categories; nine of these units must be outside the major department, six units must be outside the College, and six units must be at upper division level);

(1) Human Behavior: At least three units outside the major department from MICR 303; POSC 442; PSY 351 or SOC 335I; SOC 350;

(2) Man and Resources: At least three units outside the major department from BIOL 100; CH E 475; C E 364, 460; GEOG 160, 304, 455, 460, 467; GEOL 190, 191; H SC 422; SOC 410I;

(3) Analysis and Application: Three units from BIOL 260; ECON 380; GEOG 486; H SC 485; MATH 180; PSY 310. (Upon approval of the Director, one additional course from this category may be used to fulfill Section C, Elective Requirements in lieu of a course from A. or B. above).

## Courses (E/ST)

### 490. Special Topics in Environmental Studies (1-3)

Prerequisite: Consent of instructor. Topics of current interest in environmental studies selected for intensive development. May be repeated (with change of topic) for a maximum of six units of credit. Topics will be announced in the Schedule of Classes. Upon approval of the director of the Center for Environmental Studies, this course is acceptable for credit in lieu of equivalent units in Section C, Elective Requirements. (Lecture 3 hrs.)

### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Independent study under the supervision of a faculty member. Upon approval of the director of the Center for Environmental Studies this course is acceptable for credit toward the Environmental Studies Certificate in lieu of equivalent units in Sections B and C (Core Requirements and Elective Requirements).

# ENGINEERING TECHNOLOGY

## *College of Engineering*

Department Chair

Emanuel Jarasunas

Department Office

ET-101

Telephone

(562) 985-4271

<http://www.engr.csulb.edu/et>

<http://www.engr.csulb.edu/cem>

Faculty

Professors

Anastassios G. Chassiakos

Tesfai Goitom

Emanuel Jarasunas

Tulin E. Mangir

Ray R.T. Wang

Donald E. Zimmerman

Associate Professors

Tom L. Robinson

Parviz Yavari

Assistant Professors

Nezih Gunal

Undergraduate Advisors

Ray R. T. Wang (Computer and Electronics)

Tesfai Goitom (Construction Engineering  
Management and Environmental Technology)

Parviz Yavari (Manufacturing and Quality Assurance)

Certificate Advisors

Emanuel Jarasunas (Safety Operations)

Tesfai Goitom (Facilities Operations)

General Education Advisor

Emanuel Jarasunas

Department Secretary

Eleanor L. Caplan

Students desiring detailed information should contact the department office for referral to one of the faculty advisors.

### *Construction Engineering Management and Engineering Technology Advisory Council*

The advisory council, composed of leaders actively engaged in areas of construction and technology with which the programs are concerned, continually provides information and guidance about industrial developments in methods, materials and techniques so that the programs reflect the best of current practices. The members examine various aspects of the programs and make recommendations for changes in course content, methods and/or facilities. Present membership in the council is made up of representatives from the different sectors of the American industries or corporations.

Students desiring information should contact the department office for referral to one of the faculty advisors.

### Bachelor of Science Degree in Construction Engineering Management Program

The four-year in Construction Management leads to the Bachelor of Science degree which is accredited by the American Council for Construction Education (ACCE) (American Council for Construction Education, 1300 Hudson Lane, Suite 3, Monroe, LA 70201-6054, phone: 318-323-2816). Major emphasis is placed on organizing and managing the construction phase of society's efforts to improve the environment. The constructor is an important member of the building team and requires a professional knowledge of techniques, materials, equipment, job planning and cost control to add to the contributions of the planning and design professions. Graduates of this program can help supply the urgent needs of the construction industry and its related fields.

Every effort is made to provide a well-integrated program which will give the student the opportunity to develop the proficiencies necessary for a successful, professional career in construction. The program is also designed to accommodate students who may wish to enter the University in a four-year program, or who may wish to transfer credits earned to other colleges or approved technical or military service Schools. It is recommended that prospective students, prior to submitting an application for admission, be advised by a member of the Construction Engineering Management faculty to discuss departmental requirements and the admission requirements of the University.

### Bachelor of Science Degree in Engineering Technology Program

The Engineering Technology Program, accredited by TAC of ABET (Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710), is designed for students who demonstrate an aptitude and promise for high level technical work with related administrative and management responsibility.



Leadership awareness and ability are integral to the curricula and accomplished through a combination of lectures, seminars, discussions and workshops which expose the student to the real world of industry and the leadership challenges that it offers. Emphasis is placed on the technological as well as the sociological and managerial aspects of modern industry.

The Engineering Technology program has been developed to accommodate students who may wish to enter the University in a four-year program, or who may wish to transfer credits earned to other colleges or approved technical or military service Schools. It is recommended that prospective students, prior to submitting an application for admission, be advised by a member of the Engineering Technology faculty to discuss departmental requirements and the admission requirements of the University.

The five options in Engineering Technology are:

### Computer Technology Option

The primary objective of the Computer Technology Option program is to prepare graduates to pursue career related to manufacturing, management, and support of computers, components, and systems and the application of computers in industry and administration of computer networks and systems. Emphasis is placed on specific job skills required to entry-level professionals in computer industry including systems analysis and design, data administration, oral and written communication, and management principles. The Computer Technology Option major is available to students interested in the manufacturing of computers and the applications and operations aspects of computer hardware and software. The major is designed to meet TAC of ABET criteria for accredited programs in engineering technology. The graduates of this program will specifically find employment in industry and other organizations where a combination of practical hardware and software background is important.

### Electronics Technology Option

The goal of the program in Electronics Technology is to serve students who choose to pursue employment in the technical areas of electronics technology, instrumentation, digital technology, and related areas. The primary objective of the Electronics Technology program is to provide a solid technical foundation to its graduates which will enable them to perform well in a variety of employment situations. The program focuses on applications of current electrical, electronics and digital technologies to solving real-world problems by offering a broad curriculum which covers current trends in the industry. The program prepares the student for a position as a technologist, primarily in manufacturing industries such as aerospace, computers, communications, biomedical, power, and etc. Students are offered a wide range of training in topics such as instrumentation, controls, microprocessors, microelectronics, biomedical electronics, communications, motors and generators, robotics, computer applications, programming and interfacing. Moreover the program emphasizes written and oral communication skills as well as modern methods of industrial administration and supervision. The major is designed to meet TAC of ABET criteria for accredited programs in engineering technology.

### Environmental Technology Option

The Environmental Technology Option program is to provide career educational opportunities to students whose technological interests and aptitudes are essentially application-oriented. The goal is to produce occupational-ready college graduates with salable skills and potential for growth to meet defined technical manpower needs, primarily for California environmental industry. To achieve these goals, emphasis is placed on meeting students' needs through lecture and laboratory teaching, through the co-op program with local industry, and through other relevant learning experiences.

In addition to acquiring technical knowledge and skills, graduates will be able to communicate well. They will be prepared not only for immediate employment but for continuing development as citizens and responsible human beings as well. This will be accomplished by requiring appropriate courses in technical fields, communications, and in general education courses. Furthermore the ethical considerations of environmental issues will have a major role throughout the curriculum. Finally, every effort is made to help the student in proper job placement upon graduation.

### Manufacturing Technology Option

The objective of the Manufacturing Technology Option program is to prepare graduates to pursue careers in the applied application of manufacturing systems required by industry to produce products. Emphasis is placed on specific job skills required to entry-level professionals in manufacturing technology such as the evaluation and implementation of manufacturing process and equipment, plant planning and layout, quality control systems tool design, manufacturing standards and cost control, computers applications, safety, automation, and integrated product and process development. Additional emphasis is placed on oral and written communication skills and manufacturing management and leadership principles. Graduates of the program will be employed in the manufacturing engineering, production, production control, procurement and materials management departments of both large and small companies in all areas of the manufacturing industry. The major is designed to meet TAC of ABET criteria for accredited programs in engineering technology.

### Quality Assurance Technology Option

The objective of the Quality Assurance Technology Option program is to prepare graduates to pursue careers in the practical application of quality systems required to produce quality products in both the manufacturing and service industry. Emphasis is placed on specific job skills required of entry-level professionals in quality technology such as the evaluation and implementation of quality systems to support manufacturing processes, quality assurance, process improvement, quality inspection systems, measurement science, quality related computer hardware and software applications, product safety, reliability and maintainability, statistical process control and industrial designed experiments, and integrated process development, also included are oral and written communication skills, and quality management and leadership principles. Graduates of the program will find jobs in the quality engineering, quality assurance, product assurance, supplier assurance, configuration and data management, procurement, software quality assurance, production, operations, material

management, and industrial engineering departments of both large and small companies in all areas of the manufacturing industry and service industry. The major is designed to meet TAC of ABET criteria for accredited programs in engineering technology.

### Engineering Technology Facilities

The multi-million dollar building for Engineering Technology is designed with laboratories and modern equipment for instruction in planning and scheduling, foundry and pattern-making, metallurgy and heat treating, metrology, quality assurance, construction and industrial materials testing, structures and environment; and modern processes, including electronic systems and testing, electro-chemical processes, microelectronics, industrial electricity, plant layout, robotics and control, and CAD/CAM.

### Bachelor of Science in Construction Engineering Management (code 3-4374) (135 units)

All Construction Engineering Management students must receive a minimum grade of "C" in each of the prerequisite courses before enrolling in any Construction Engineering Management course. In addition to any other all-university requirements regarding grade point averages for graduation, a Construction Engineering Management student must achieve a minimum 2.0 average in all Construction Engineering Management courses.

Students enrolled in the Construction Engineering Management B.S. program must complete a minimum of 135 units. These courses cover the broad disciplines and functions of the Construction Engineering Management.

#### Requirements

Lower Division Basic Engineering Science Courses:  
CHEM 111A, MATH 117, MATH 120, PHYS 100 A & B, CEM 101, 202, 121, 204, 205, 205L.

Construction Engineering Management Courses:

Lower Division: CEM 221, 225, 225L, 232, 235, 235L, 201

Upper Division: CEM 304, 309, 321, 322, 323, 323L, 325, 326, 327L, 328, 330, 410, 421, 422, 423, 424, 426, 428, 431, 440, ET 300, ECON 300.

Upper Division Elective Courses: Plus nine units of approved electives selected in consultation with an advisor from: CEM 409, 432, 433, 434, 436, 438, CE 433, FIN 342, ET 374.

### Bachelor of Science in Engineering Technology (pre-code 3-4375)

All Engineering Technology students must receive a minimum grade of "C" in each of the prerequisite courses before enrolling in any Engineering Technology course. In addition to any other all-university requirements regarding grade point averages for graduation, an Engineering Technology student must achieve a minimum of 2.0 average in all Engineering Technology courses.

Students enrolled in the Engineering Technology B. S. program must complete a minimum of 135 units. These courses cover the broad disciplines and functions of Engineering Technology.

#### Requirements

Core Engineering Technology Courses:

Lower Division: CHEM 111A, MATH 117, MATH 120, PHYS 100 A & B, ET 101, 170, 202, 204, 205, 205L.

Upper Division: ECON 300, ET 300, 301, 301L, 306, 306L, 307, 309, 311, 410.

### Option in Computer Technology (code 3-4380) (135 units)

Lower Division: ET 250, 250L, 252, 252L, 255, 255L, either ET 286, 286L, or CECS 172.

Upper Division: ET 386, 386L, 387, 387L, 388, 388L, 442, 442L, 486, 486L, 488, 488L, 489, 489L, 491, 491L, 492, 492L, 494, 494L.

Select at least four units of approved electives in consultation with an adviser from the following: ET 312, 390, 390L, 409E, 418, 461, 487, 487L, 497, 497L; CECS 325, 448, 449.

### Option in Electronics Technology (code 3-4377) (135 units)

Lower Division: ET 250, 250L, 252, 252L, 255, 255L, 260, 260L.

Upper Division: ET 341, 341L, 350, 350L, 360, 360L, 386, 386L, 441, 444, 445, 445L, 447, 447L, 460, 460L.

Select at least six units of approved electives in consultation with an advisor from the following three emphasis:

I. Biomedical Emphasis:

ET 409B, 446, 446L, 448, 448L.

II. Digital Emphasis:

ET 409B, 488, 488L, 489, 489L, 492, 492L.

III. Linear Electronics and Control Emphasis:

ET 387, 387L, 390, 390L, 409B, 418, 461.

### Option in Environmental Technology (code 3-4381) (135 units)

Lower division: ET 206, 209, 209L, 210, 213

Upper division: ET 303, 319, 329, 329L, 333, 333L, 400, 400L, 407, 449, 449L

Select at least six units of approved electives in consultation with an adviser from the following: ET-390/L, 409F, 476, 485.

### Option in Manufacturing Technology (code 3-4378) (135 units)

Lower Division: ET 244, 244L, 264, 264L.

Upper Division: ET 302, 302L, 304, 361, 361L, 363, 365, 365L, 371, 371L, 390, 390L, 418, 461, 465, 472, 472L, 474, 474L, 498.

Select at least five units of approved electives in consultation with an advisor from the following: ET 312, 315, 374, 387, 387L, 409C, 412.

### Option in Quality Assurance (code 3-4379) (135 units)

Lower Division ET 220, 244, 244L, FIN 222.

Upper Division: ET 302, 302L, 312, 313, 313L, 320, 361, 361L, 371, 371L, 390, 390L, 416, 418, 419, 420, 461, 496.

Select four units of approved electives in consultation with an adviser from the following: ET 314, 315, 318, 374, 409D, 412, 472, 472L.

## Fieldwork Requirements

Fieldwork experience is required for the BS in Construction Engineering Management and the BS in Engineering Technology (all options), consisting of no less than three months (or equivalent part-time) of employment in an approved industry or governmental agency. The student must continuously hold a position equivalent to a technician or higher which affords the opportunity to exercise responsibility usually given to those who have completed two years of college. The fieldwork must be completed prior to graduation, be certified and approved by the faculty of the Department.

## Facilities Operations Certificate (code 1-4010)

The Certificate Program in Facilities Operations is designed to qualify the graduate to serve in plant engineering, industrial construction coordination, facilities development and design, plant layout, and facilities project management. Examples of the myriad positions available to the graduate of this program include facilities planner, construction supervisor, facilities or plant supervisor, facilities project analyst, and facilities designer analyst.

This program provides the Facilities Operations graduate with a depth of technical knowledge in facilities operations-oriented technical courses, as well as the knowledge of behavioral sciences essential for managing technical functions.

### Requirement

1. The Certificate in Facilities Operations may be earned concurrently with or subsequent to the baccalaureate degree.
2. This program is open to all majors who have fulfilled the prerequisites as stated below.
3. The program requires a total of 25 units as specified below.
  - a. The completion of supporting technical courses chosen in consultation with an advisor.
  - b. The following 25 units of facilities operations oriented courses are required: ET 221, 374, 410; CEM 321, 431, 432, 433, 434, 436.
4. Any deviation from this program requires the written permission of the program advisor.

## Safety Operations Certificate (code 1-4020)

The Certificate Program in Safety Operations is designed to prepare students for safety positions that require a strong background in the technology of safe industrial environments. Examples of this kind of position are manufacturer's safety representative, manufacturing facilities safety analyst, traffic safety analyst, and representative of California or Federal agencies involving public safety. This interdisciplinary program provides the student with a depth of technical training in safety, and related technical courses, including the experiences in human resources management necessary to effectively supervise safety programs.

### Requirements

1. The Certificate of Safety Operations may be earned concurrently with or subsequent to the baccalaureate degree.
2. This program is open to all majors who have fulfilled the required prerequisites as stated below.

3. The program requires a total of 24 units as specified below:
  - a. The completion of supporting technical courses chosen in consultation with an advisor.
  - b. The following 24 units of safety operations-oriented courses are required: ET 207, 307, 308, 309, 310, 401, 404 and 410.
4. Any deviation from this program requires the written permission of the program advisor.

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## Engineering Technology Courses (ET)

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All courses in this Department are Traditional Grading Only unless otherwise stated.

### Lower Division

**101. Introduction to Engineering and Industrial Technology (1)**  
Prerequisite: Sophomore standing. Survey of the professional activities and environments of the engineering and industrial technologist. Course covers the role of the technologist in American industry, the history of technology and the growth and future of those professionals who hold the Bachelor of Science degree in Engineering and Industrial Technology. Credit/No Credit grading only. (Lecture-Discussion 1 hour.)

**170. Engineering Drafting (2)**  
Prerequisite: Sophomore standing. Graphic communication and drawing, use of instruments, lettering, dimensioning, and detailing of engineering drawing, drafting procedures. Introduction to blueprint reading and computer aided drafting. (Lecture 1 hour, laboratory 3 hours.) Lab fee: \$15. Traditional grading only.

**202. Probability and Statistics for Technology (4) F,S**  
Prerequisite: High School Algebra. Statistics and probability theories, sampling, correlation, regression as applied to Engineering technology. Laboratory. (Simulation using statistical packages.) (Lecture 3 hours, lab 2 hours.) Traditional grading only.

**204. Applied Mechanics-Statics (3)**  
Prerequisites: MATH 120, PHYS 100A. Force systems acting on structures, moments, equilibrium, centroids, trusses, beams, cables, frames, machines, friction, section properties, masses, both U.S. and S.I. units of measurements. (Lec 2 hours, activity 2 hours.) Traditional grading only.

**205. Computer Applications (1)**  
Survey of computer applications in business, manufacturing, research and simulation. (Lecture-Discussion 1 hour.)

**205L. Computer Applications Lab (1)**  
Corequisite: ET 205. Laboratory exercises in Basic programming to solve problems in business, manufacturing, research and simulation. (Laboratory 3 hours.) Lab fee: \$15.

**206. Introduction to Environmental Hazardous Materials and Waste Technology (3)**  
Prerequisites: CHEM 111A, PHYS 100A. Overview of the environmental effects of industrial pollution and the history of environmental legislation. Study of industrial processes and the generation of waste streams in selected industries. Introduction to the concepts of sustainable development, energy conservation, waste minimization and waste treatment. (Lecture-Discussion 3 hours.) Traditional grading only.

**207. Ergonomics (3)**  
Prerequisite: sophomore standing. Interface between people and machine related to work area, design and use of equipment, protective equipment and life-support requirements for hazardous environments. (Lec-Discussion 3 hrs)

**209. Environmental Applications of Physical and Organic Chemistry (2)**  
Prerequisite: CHEM 111A; corequisite: ET 209L. Applications of physical and organic chemistry in environmental science and engineered environmental systems. (Lecture-Discussion 2 hours.) Traditional grading only.

**209L. Environmental Applications of Physical and Organic Chemistry Laboratory (1)**

Prerequisite: CHEM 111A; corequisite: ET-209. Laboratory exploration of the application of physical and organic chemistry in environmental science and engineered environmental systems. (Laboratory 3 hours.) Traditional grading only.

**210. Hazardous Material and Waste Management (3)**

Prerequisites: CHEM 111A, ET 206. A study of the requirements of federal, state and local regulations relating to the management of hazardous materials and hazardous wastes. Particular focus on compliance with shipping, storage, labeling, sampling, and inventory and release reporting requirements. (Lecture-Discussion 3 hours.) Traditional grading only.

**213. Environmental Health, Safety and Emergency Response (3)**

Prerequisites: CHEM 111A, BIOL 211A, ET 206. Hands-on instruction in safety and emergency response to chemical and physical exposures in industrial and field settings. Acute and chronic health effects produced by exposure to chemical agents. (Lecture-Discussion 3 hours.) Traditional grading only.

**220. Fundamentals of Inspection (2)**

Theory and application of inspection procedures, variables and attribute inspection, inspection exercises. (Lec 1 hr, activity 2 hrs)

**244. Machine Tools (1)**

Prerequisite: None. Operations and use of the conventional and non-conventional machine tools. Not open to students with previous machine tools credit. (Lecture-Discussion 1 hour.)

**244L. Machine Tools Laboratory (1)**

Prerequisite: None. Corequisite: ET 244. Laboratory exercises using conventional and non-conventional machine tools. Not open to students with previous machine tools experience. (Laboratory 3 hours.) Lab fee: \$15.

**250. Circuit Analysis I (2)**

Prerequisites: PHYS 100 A&B; corequisite: ET 250L. Fundamentals of DC theory, units of measurements, systems of units. Current, voltage, resistance, Ohm's law, power, energy. Series and parallel circuits. Methods of analysis and selected topics. Network theorems such as superposition, Thevenin's, Norton's and Millman's theorems. (Lecture-Discussion 2 hours.)

**250L. Circuit Analysis I Laboratory (1)**

Prerequisites: PHYS 100 A&B; corequisite ET 250. Laboratory exercises will be conducted on AC and DC circuits using proto boards and power supplies, multi-meters, function generators, oscilloscopes and frequency counters. (Laboratory 3 hours.) Lab fee: \$15.

**251. Medical Devices and Instrumentation Technology (3)**

Prerequisite: Consent of instructor. Overview of the types of devices and instrumentation used in various applications of clinical medicine, including organ systems. Examination of the following items: (1) Organ Systems, (2) Instrumentation, and (3) Contemporary Issues in Medical Device Development. Discussion of the state of the art in applied medicine, and technological considerations incorporated in the operation of these items. Brief discussion of the physiology and disease process involved with each item. (Lecture-Discussion 3 hours.)

**252. Circuit Analysis II (2)**

Prerequisites: MATH 120, PHYS 100 A&B, ET 250, 250L. Study of circuit analysis techniques in AC, including network theories, mesh and nodal analysis, transients, time domain and phasors, magnetic circuits, sinusoidal and non-sinusoidal wave forms, resonance circuits (series and parallel), filters (low-pass, high-pass, passband and bandstop). (Lecture-Discussion 2 hours.)

**252L. Circuit Analysis II Laboratory (1)**

Prerequisites: MATH 120, PHYS 100 A&B, ET 250, 250L, corequisite: ET 252. Laboratory exercises will be conducted on AC circuits using proto boards and AC power supplies, function generators, oscilloscopes, and frequency counters. (Laboratory 3 hours.) Lab fee: \$15.

**255. Introduction To Digital Electronics (2)**

Prerequisites: ET 250, ET 250L. Combinational logic utilizing Boolean algebra and the binary numbering system as applied to industrial controls and control computers. This beginning course includes Karnaugh maps, truth tables, coding, switching circuits, converters and logic circuit elements. (Lecture-problems 2 hours.)

**255L. Introduction To Digital Electronics Laboratory (1)**

Prerequisites: ET 250, ET 250L; corequisite ET 255. Laboratory exercises in basic logic circuits. Topics included are breadboarding, basic gates, and combinational circuits. (Laboratory 3 hours.) Lab fee: \$15.

**260. Solid-State Electronics I (3)**

Prerequisites: ET 252, 252L. Analysis and design of solid-state electronic circuits using diodes, bipolar, unijunction and field-effect devices. (Lecture-Discussion 3 hours.)

**260L. Solid State Electronics I Laboratory (1)**

Prerequisites: ET 252; corequisite ET 260. Laboratory exercises in breadboarding and measurements of solid-state circuits utilizing all types of electronic measuring equipment. (Laboratory 3 hours.) Lab fee: \$15.

**264. Industrial Tooling (1)**

Prerequisites: ET 170, 205L; corequisite: ET 264L. Design of tools for production. Typical tooling problems include working drawings and hardware. (Lecture-Discussion 1 hour.)

**264L. Industrial Tooling Laboratory (1)**

Prerequisites: ET 170, 205L; corequisite: ET 264. Laboratory experiments in tool design in relation to mass part production. (Laboratory 3 hours.)

**286. Introduction to Object-Oriented Programming (2)**

Prerequisites: ET 205, 205L; corequisite: ET 286L. C++ programming concepts. Introduction to an object-oriented programming language (C++). Problem analysis and software development methodology. Emphasis on applications to technology (Lec-Discussion 2 hrs) Traditional grading only.

**286L. Introduction to Object-Oriented Programming Laboratory (1)**

Prerequisites: ET 205, 205L; corequisite: ET 286. Introduction to an object-oriented programming language (C++). Problem analysis and software development methodology. Emphasis on applications to technology. (Laboratory 3 hours.) Traditional grading only.

## Upper Division

**300. Industrial Communications (3)**

Prerequisites: ET205, 205L, English composition. Written and oral transmission and interpretation of technological information. Communication forms and procedures of industry, with computer applications. (Lecture-Discussion 3 hours.)

**301. Engineering Materials (2)**

Prerequisites: ET 204, CHEM 111A; corequisite: ET 301L. Study of physical and mechanical properties and applications of engineering materials. (Lecture-Discussion 2 hours.) Traditional grading only.

**301L. Engineering Materials Laboratory (1)**

Prerequisites: ET 204, CHEM 111A; corequisite: ET 301. Laboratory investigation and experiments in the application of engineering materials. Field trips. (Lab 3 hrs.) Traditional grading only. Lab fee: \$15.

**302. Industrial Electricity (2)**

Prerequisite: PHYS 100B; corequisite: ET 302L. An overview of electrical principles and applications in electrical manufacturing industries including instrumentation and power distribution. (Lecture 2 hours.) Traditional grading only.

**302L. Industrial Electricity Laboratory (1)**

Prerequisite: PHYS 100B; corequisite: ET 302. Overview of laboratory techniques in electrical engineering technology and applications in the industry. (Laboratory 3 hours.) Traditional grading only.

303. Fundamentals of Environmental Technology (3)  
Prerequisites: CHEM 111A, MATH 120, PHYS 100A. Fundamentals of the techniques and unit operations for pollution control of air, land, surface water and groundwater pollution, as well as design of conveyances for water and wastewater, with an emphasis on their application in an industrial setting. Includes fundamentals of hydrology and fluid flow in environmental engineering technology. (Lecture-Discussion 3 hours.) Traditional grading only.
304. Applied Mechanics Strength of Materials (3)  
Prerequisite: ET 204. Analysis of strength and rigidity of structural members in resisting applied forces, stress, strain, shear, moment, deflections, combined stresses, connections, and moment distribution. (Lecture-Discussion 3 hours.)
306. Manufacturing Processes I (2)  
Prerequisites: ET 301, 301L; corequisite: ET 306L. Survey of a variety of processes of manufacturing such as casting, forming, machining, powder metallurgy and production processes related to ceramics, plastics and composite materials. (Lecture-Discussion 2 hours.) Traditional grading only.
- 306L. Manufacturing Processes I Laboratory (1)  
Prerequisites: ET 301, 301L; corequisite: ET 306. Experiments in the processes of manufacturing such as casting, forming, machining, powder metallurgy and production processes related to ceramics, plastics and composite materials. (Laboratory 3 hours.) Traditional grading only.
307. Industrial Safety (2)  
Prerequisites: ET 300 and Junior Standing. Survey of industrial safety administration, engineering and management. Emphasis is placed on the role of the first line supervisor in establishing and maintaining a safe, healthful work environment for employees. Introduction to supporting computer resources used in the safety field. (Lecture-Discussion 2 hours) Traditional grading only.
308. Systems Safety (3)  
Prerequisite: ET 307. Safety assurance as it relates to management policies, work planning, design, manufacturing methods and the implementation of safety procedures. (Lecture-Discussion, 3 hours.)
309. Industrial Leadership (2)  
Prerequisites: ET 300 and Junior Standing. Theories, principles and concepts of industrial leadership. Emphasis is placed on the supervisory functions of planning, organizing, motivating, directing, controlling and staffing. Introduction to basic models and tools including supporting computer resources. (Lecture-Discussion 3 hours.) Traditional grading only.
310. Industrial Hygiene (3)  
Prerequisite: ET 307. Detection, analysis and control of health hazards that affect the body and atmosphere in the industrial environment. (Lecture-Discussion 3 hours.)
311. Quality Engineering Technology (3)  
Prerequisites: ET 202, Junior standing. Quality engineering technology principles and practices in industry, including management concepts, inspection practices, costs of quality and testing. (Lecture-Discussion 3 hours.) Traditional grading only.
312. Statistical Quality Control (3)  
Prerequisite: ET 311. Statistical process control; including use of statistical methods for analysis and improvement of product quality, control charts, linear correlation; sampling procedures, stratification, cause and effect analysis, process capability and introduction to design of experiments. (Lecture-Discussion 3 hours.)
313. Metrology (1)  
Prerequisites: ET 220, 311. Instrument calibration, standards and precision measurement for quality assurance and reliability. (Lecture-Discussion 1 hr.)
- 313L. Metrology Laboratory (1)  
Prerequisite: ET 220, 311; corequisite: ET 313. Laboratory experiments in instrument calibration, standards and precision measurement for quality assurance and reliability. (Laboratory 3 hours.)
314. Quality and Productivity (2)  
Prerequisite: Junior Standing. Improving productivity through quality. Cultural influences, quality cost reduction. Organizational and leadership influences on industrial productivity. (Lecture-Discussion 2 hours.)
315. Modeling and Simulation in Manufacturing (2)  
Prerequisites: ET 306, 313L. Application of Simulation Modeling in manufacturing and service industry. Topics include: Simulation modeling using microcomputers, writing, editing, and running computer models, construction, testing and using simulation models. (Lecture-Discussion 2 hours.)
318. Food, Drug, and Cosmetic Quality Control (3)  
Prerequisite: ET 311. Technical disciplines and requirements for the control of quality of foods, drugs and cosmetics; regulatory laws governing these fields as well as the accepted practices of quality control are covered. (Lecture-Discussion 3 hours.)
319. Environmental Regulations and Compliance (3)  
Analysis of federal and local administration of environmental laws, including the National Environmental Policy Act of 1969 and litigation of that act in the courts. Special attention paid to California and comparison of the environmental regulation policies of California. Case studies of legislation and political conflict in the environmental issues, and regulatory compliance. (Lecture-Discussion 3 hours.) Traditional grading only.
320. Software Quality Assurance (2)  
Prerequisite: ET 205, 205L. Theory and practices of software Quality Assurance. Course emphasizes Government specifications such as DOD-STD-2167 and DOD-STD-2168. (Lecture-Discussion 2 hours.)
329. Environmental Study of Groundwater and Soils (2)  
Corequisite: ET 329L. Detection, analysis and control of groundwater/soil contamination involving the regulatory hierarchy, distribution network and subsurface formations. Basic tools and procedures utilized in compliance operations. (Lecture-Discussion 2 hours.) Traditional grading only.
- 329L. Environmental Study of Groundwater and Soils Laboratory (1)  
Corequisite: ET 329. Laboratory exercises in the techniques of detection, analysis and control of groundwater/soil contamination. Rules of compliance set by regulatory hierarchy, distribution network and subsurface formations. (Laboratory 3 hours.) Traditional grading only.
331. Environmental Auditing and Reporting (3)  
Concepts, methods and techniques of performing environmental operational audits. Duties and responsibilities of a regulatory auditor within the State and Federal hierarchy. State and Federal compliance forms and procedures in industrial manufacturing processes as required by regulatory agencies. Written and oral transmission and interpretation of compliance information and related resource networks. (Lecture-Discussion 3 hours.) Traditional grading only.
333. Solid Waste Technology (2)  
Corequisite: ET 333L. Survey of regulated hazardous and non-hazardous solid waste generated by common industrial processes. Topics include waste generation, storage, collection, transfer, transport, processing and recovery. Consideration of system performance, legislation, regulations and environmental impact. (Lecture-Discussion 2 hours.) Traditional grading only.
- 333L. Solid Waste Technology Laboratory (1)  
Corequisite: ET 333. Techniques of identification, measurement and assessment of solid waste. Focus on regulated hazardous solid waste from common industrial processes. Topics include waste generation, storage, collection, transfer, transport, processing and recovery. Consideration of system performance, legislation, regulations and environmental impact. (Laboratory 3 hours.) Traditional grading only.
334. Environmental Instrumentation Applications (2)  
Corequisite: ET 334L. Survey of common engineering measurement techniques, pressure gages, strain gages, strain indicators, pressure transducers and thermocouples. Focus on measuring regulated environmental hazards. (Lecture-Discussion 2 hours.) Traditional grading only.

334L. Environmental Instrumentation Applications laboratory (1)

Corequisite: ET 334. Application of engineering measurement techniques, pressure gages, calibration and servicing, strain gages, strain indicators, pressure transducers and instrumentation, thermocouples and instrumentation. Projects in applying measurement techniques to environmental technology problems. (Laboratory 3 hours.) Traditional grading only.

341. Solid State Electronics II (3)

Prerequisites: ET 260, 260L. Miller's Theorem, integrated circuits, feedback, operational amplifiers, Fourier series, distortion, modulation, phase-locked loops, linear and non-linear circuits, and breadboarding. (Lec-Discussion 3 hrs)

341L. Solid State II Laboratory (1)

Prerequisites: ET 260, 260L; corequisite: ET 341. Laboratory exercises in design and measurement of various circuits using operational amplifiers, comparators, regulators, silicon controlled rectifiers, frequency mixers and phase-locked loops. (Lab 3 hours.) Lab fee: \$15.

350. Motors and Generators (2)

Prerequisites: ET 252. Study of electric rotating machinery, its theories, principles, design and applications in automation industries. (Lecture-Problems 1 hour.)

350L. Motors and Generators Laboratory (1)

Prerequisite: ET 252; corequisite: ET 350. Laboratory exercises in applications and design of rotating machines. Topics covered are DC machines, synchronous machines, servomotor, step motor, and control circuits. (Laboratory 3 hours.) Lab fee: \$15.

360. Control Instrumentation (2)

Prerequisites: ET 341, 341L. Application and basic design of analog and digital control instrumentation for industrial processes. Physical and electrical properties of thermal, mechanical and optical transducers with associated signal conditioning. (Lecture-Problems 2 hours.)

360L. Control Instrumentation Laboratory (1)

Prerequisites: ET 341, 341L; corequisite: ET 360. Laboratory exercises in developing and measuring various control systems utilizing operational amplifiers, transducers, thermocouples, bridges, and various pressure devices. (Laboratory 3 hours.) Lab fee: \$15.

361. Physical Metallurgy and Heat Treatment (2)

Prerequisites: ET 306, 306L; corequisite: ET 361L. Structure and properties of engineering materials. Heat treatment of steels, aluminum alloys and titanium alloys (Lecture-Discussion 2 hours.) Traditional grading only.

361L. Physical Metallurgy & Heat Treatment Laboratory (1)

Prerequisites: ET 306, 306L; corequisite: ET 361. Laboratory experiments in the microscopic examination of metals and alloys, structure and property correlations, heat treatment of steels, aluminum alloys and titanium alloys. (Laboratory 3 hours.) Traditional grading only.

363. Kinematics of Mechanisms (3)

Prerequisites: ET 170, 304. Mathematical and graphical approaches to analyze the motion of mechanisms, for further machine development, through studies of displacement, velocity and acceleration of mechanical elements. (Lecture-Discussion 2 hours, Activity 2 hours.)

365. Fluid Power and Control (2)

Prerequisites: PHYS 100A, ET 302, 302L; corequisite: ET 365L. Fundamentals and application of hydraulic, pneumatic and vacuum power as used in current manufacturing plants. (Lecture-Discussion 2 hours.) Traditional grading only.

365L. Fluid Power and Control Laboratory (1)

Prerequisites: PHYS 100A, ET 302, 302L; corequisite: ET 365. Demonstration and operation of fluid power systems. Design and selection of components for specific applications. Computer data acquisition and analysis. (Laboratory 3 hours.) Traditional grading only.

371. Nondestructive Testing (1)

Prerequisites: ET 311, 361L. Theory and concepts on non-destructive testing of materials, including ultrasonic, magnetic particle, eddy current penetrant and radiographic tests. (Lecture 1 hour.)

371L. Nondestructive Testing Laboratory (1)

Prerequisites: ET 311, 361L; corequisite: ET 371. Laboratory exercises in the use of non-destructive equipment. (Laboratory 3 hours.)

374. Plant Planning and Layout (3)

Prerequisite: ET 170. Planning practices, procedures and requirements for laying out industrial facilities. (Lecture-Discussion 2 hours, Activity 2 hour.)

386. Introduction to Microprocessors (2)

Prerequisite: ET 286, 286L; corequisite: ET 386L. Theory and concepts of programming, hardware configuration, and functional capabilities of microcomputer systems including peripheral devices. (Lecture-Problems 2 hours.) Traditional grading only.

386L. Introduction to Microprocessors Laboratory (1)

Prerequisites: ET 286, ET 286L; corequisite: ET 386. Laboratory exercises in programming microcomputers. Topics included are number systems, microcomputer structure, mnemonic, binary code, peripheral devices operations, stand alone operations, and system operations. (Laboratory 3 hours.) Traditional grading only. Lab fee \$15.

387. Robot Programming and Mechatronics (2)

Prerequisites: ET 205, ET 205L; corequisite: ET 387L. Basic concepts of robot manipulators, robot kinematics, robot programming languages. Applications of industrial robots, machine vision systems. Basic concepts of mechatronic systems: combine hardware, software, interface, and system integration to make an intelligent system. Sensors and actuators for robotics and mechatronic systems. Applications of industrial robots, machine vision systems. (Lecture-Problems 2 hours.) Traditional grading only.

387L. Robot Programming and Mechatronics Laboratory (1)

Prerequisites: ET 205, ET 205L; corequisite: ET 387. Laboratory exercises in industrial and educational robot operation and applications. Laboratory exercises on mechatronic systems. Robot systems and their computer language instructions will be used. The experiments include teach pendant programming, high level language programming, workcell applications, continuous path programming. Traditional grading only. Lab fee \$15.

388. Technical Applications Using Programming Languages (2)

Prerequisites: ET 286L; corequisite: ET 388L. Techniques for designing and development of industrial programs that includes composite program design, module coupling, module strength, program testing, top-down structured programming concepts and tools, object oriented programming, and memory management. These concepts are investigated and examined for use in solving complex problems in engineering technology. (Lecture-problems 2 hours.) Traditional grading only.

388L. Technical Applications Using Programming Languages Lab (1)

Prerequisites: ET 286L; corequisite: ET 388. Laboratory experience in techniques for designing and development of industrial programs such as composite program design, module coupling, module strength, program testing, top-down structured programming concepts and tools, object oriented programming, and memory management. These concepts are investigated and examined for use in solving complex problems in engineering technology. (Lab 3 hours.) Traditional grading only.

390. Applied Computer Aided Design and Manufacturing (1)

Prerequisites: ET 170, 205/L; corequisite: ET 390L. An application of CAD/CAM systems, hardware and software, including microcomputer based CAD/CAM, geometric modeling, types of mathematical representations of curves, surfaces and solids. CAD/CAM theory and practice in design and manufacturing applications, part programming for manufacturing, CAD/CAM data exchange including 2D and 3D graphic concepts. (Lecture-Discussion 1 hour.) Traditional grading only.

- 390L. Applied Computer Aided Design and Manufacturing Laboratory (1)  
Prerequisites: ET 170, 205/L; corequisite: ET 390. Use of micro-computer based CAD/CAM hardware and software to solve geometric modeling problems and exercises in both 2D and 3D modeling. Also includes exercises in product design applications, part programming, and CAD/CAM data exchange exercises. (Laboratory 3 hours.) Traditional grading only.
400. Industrial Wastewater Treatment (2)  
Prerequisites: CHEM 111A, BIOL 211A, ET 303, 319; corequisite: ET 400L. Fundamentals of the characterization, minimization, treatment selection and design of industrial wastewater treatment systems. (Lecture-Discussion 2 hours.) Traditional grading only.
- 400L. Industrial Wastewater Treatment Laboratory (1)  
Prerequisites: CHEM 111A, BIOL 211A, ET 303, 319; corequisite: ET 400. Laboratory exploration of fundamentals of the characterization, selection and operation of industrial wastewater treatment systems. (Laboratory 3 hours.) Traditional grading only.
401. Human Factors in Accident Prevention (3)  
Prerequisite: ET 207, 307. Human factors in accident causation; methods of circumventing human limitations; human capabilities in accident prevention. Topics include: environment fatigue; emotional stress; group coordination; human response; case studies in accidents; design requirements; personnel management. (Lecture-Discussion 3 hrs)
404. Investigation of Accidents (3)  
Prerequisite: ET 401. Analysis of mechanical evidence; contribution of environment and human factors in accident causation. Organization of investigative effort; documentation evaluation of cause factors. (Lecture-Discussion 3 hours.)
407. Environmental Systems Safety and Emergency Management (3)  
Prerequisites: ET 303, 311, 319. Emergency management and contingency planning in accordance with U.S. environmental regulations and international standards. Emphasis on training, preparedness, response and recovery. Concepts, methods and techniques of performing environmental operational systems audits in accordance with the International Standards Organization (ISO). (Lecture-Discussion 3 hours.) Traditional grading only.
409. Senior Problems in ET (1-3)  
Prerequisites: Senior standing in ET, consent of instructor. Advanced work of a technical nature within an area of specialization on an experimental or research basis.
- B. Electronics Technology  
C. Manufacturing Technology  
D. Quality Assurance  
E. Computer Technology
410. Cost Engineering and Analysis (3)  
Prerequisites: Economics course, Junior Standing. Introduction to the concepts of capital and operations budgets, capital acquisitions, economic evaluations of capital alternatives and factors of the time-value of money in industrial operations and construction industries. (Lecture-Discussion 3 hours.) Traditional grading only.
412. Expert Systems Applications (3)  
Prerequisite: ET 315. Applications of expert systems to manufacturing and quality systems. Topics include: selecting, implementing and managing expert systems applications software in a manufacturing, quality, and service environment. (Lecture-Discussion 3 hours.)
413. Procurement (3)  
Prerequisites: ET 306. Examination of the acquisition function within the industrial complex. (Lecture-Discussion 3 hours.)
416. Operations Research for Engineering Technology (3)  
Prerequisites: ET 312, 313, 313L, 371, 371L, Junior Standing. Application in operations research using quantitative spreadsheet methods. Optimization and evaluation with a special focus on formulating problems and interpreting results. (Lecture-Discussion 3 hours.) Traditional grading only.
418. Production Methods and Process Analysis (3)  
Prerequisites: ET 306, 410, Junior Standing. Simplification of manufacturing operations; motion and time study, standards, value analysis, planning and control; emphasis on operation analysis for optimum production economy. (Lecture-Discussion 3 hours.) Traditional grading only.
419. Design of Experiments (3)  
Prerequisite: ET 312. Advanced statistical analysis applied to quality functions. Comparative and single factor experiments. Factorial designs and multiple regression. (Lecture-Discussion 3 hours.) Traditional grading only.
420. Reliability and Maintainability (3)  
Prerequisites: ET 419. Principles and Practices of reliability; reliability analysis and design; testing for reliability. Maintainability concepts. (Lecture-Discussion 3 hours.)
441. Theory of Electronic Control (3)  
Prerequisites: ET 360L, 387L. Procedures for the design, preparation, and evaluation of electronic systems that control manufacturing and production processes, simulation analysis for sensing, programming, and actuating operations. (Lecture-Discussion 3 hours.)
442. Computer Circuits (2)  
Prerequisites: ET 255, ET 255L; corequisite ET 442L. Introduction to digital hardware design. Combinational/sequential logic circuits and systems and application of integrated circuits to logic controls. Programmable logic devices, Field-programmable gate array, Circuit synthesis, and analysis. (Lecture-Problems 2 hours.) Traditional grading only.
- 442L. Computer Circuits Laboratory (1)  
Prerequisites: ET 255, ET 255L; corequisite ET 442. Laboratory study of digital computer circuits design and implementation. Standard designing and trouble-shooting procedures will be discussed. Topics covered are multivibrator, register, counter, decoder, arithmetic circuits, and memory. (Laboratory 3 hours.) Traditional grading only. Lab fee: \$15.
444. Telecommunications (3)  
Prerequisite: ET 360L. National Communication Network, decibels, transmission units, transmission lines, characteristic impedance, loading systems, lattice networks, PCM, Nyquist Criterion, Bessel functions, coaxial cable, fiber optics, microwave, impedance matching, and Smith chart. (Lecture-Discussion 3 hours.)
445. Microelectronics (1)  
Prerequisite: ET 341L, 442L. Design, processing and applications of monolithic and hybrid microcircuits for analog and digital systems. (Lecture 1 hour.)
- 445L. Microelectronics Laboratory (1)  
Prerequisite: ET 341L, 442L; corequisite ET 445. Laboratory exercises in the processing of thick-film and thin-film materials, ultrasonic and thermocompression wire bonding and laser resistive trimming. Practical application and equipment utilization is emphasized. (Laboratory 3 hours.) Lab fee: \$15.
446. Bio-Electronic Technology (3)  
Prerequisites: ET 251, ET 341, 341L; corequisite: ET 446L. Discussion of the technology involved in the operation of Bio-Electronic Devices and Instruments. Topics include: Organ Systems, Medical Specialty, and Contemporary Special Topics. Emphasis on the major features of operation of the circuits in each category, and troubleshooting, development and testing of prototypes; Manufacturing and Quality Assurance emphasized. (Lecture-Discussion 3 hours.)
- 446L. Bio-Electronic Technology Laboratory (1)  
Corequisite: ET 446. Laboratory experiments providing experience in the building, testing, documentation, and study of the trade-offs involved with the bio-electronic circuits covered in ET 446. (Laboratory 3 hours.)
447. Industrial Applications of Electronic Circuits (2)  
Prerequisites: ET 341, 341L. An in-depth study of the applications of important electronic circuit concepts in industry. Analysis of circuits and how they work in industrial applications. Techniques for troubleshooting of design circuits. Biomedical electronic circuits which have industrial applications are emphasized. (Lecture-Discussion 2 hours.) Traditional grading only.

**447L. Industrial Applications of Electronic Circuits Laboratory (1)**

Prerequisites: ET 341, 341L. Corequisite: ET 443. Laboratory exercises include constructing circuits which have important applications in industry. Troubleshooting methodology emphasized throughout. Assignments focus on biomedical electronic circuits which have industrial applications. (Laboratory 3 hours.) Traditional grading only.

**448. Human Physiological Systems and the Technology of Related Electronic Instrumentation (3)**

Prerequisites: ET 442, 442L, 443, 443L, 446, 446L. Advanced electronic instrumentation for the study of human physiological systems. The significance of important physiological parameters and how they are measured and controlled by linear and digital electronics. (Lec-Discussion 3 hours.) Traditional grading only.

**449. Environmental Air Quality (2)**

Corequisite: ET 449L. Planning and evaluation of systems for management of air quality. Consideration of system performance, legislation regulations, environmental impacts and socioeconomic factors. Selected case studies. (Lec-Discussion 2 hrs.) Traditional grading only.

**449L. Environmental Air Quality Laboratory (1)**

Corequisite: ET 449. Techniques of measurement and assessment of air quality. Focus on measurement of regulated air quality health hazards. (Laboratory 3 hours.) Traditional grading only.

**460. Electronic Packaging and Design (2)**

Prerequisites: ET 341, 341L. Techniques and materials used in making permanent versions of circuits, including printed circuit, wire-wrap, and various hand soldered methods. Considerations for electronic design and modification of existing designs. Troubleshooting of prototype implementations. Methods of enclosure, including safe handling of AC power. (Lecture-Discussion 2 hours.)

**460L. Electronic Packaging and Design Laboratory (1)**

Prerequisites: ET 341, 341L; corequisite ET 460. Project oriented laboratory exercises in various methods of making permanent versions of circuits. Hands-on exercises in printed circuit boards, wire wrap, vero-strip, circuit sticks, terminal tie points, etc. Metal and plastic enclosures. AC power safety, electronic components. (Laboratory 3 hours.) Lab fee: \$15.

**461. Management of Manufacturing Operations (3)**

Prerequisite: ET 418. Application of analytical planning and control techniques to the resources of industry including the physical plant, equipment, personnel, inventories and supplies use in the production of products and services. (Lecture-Discussion 3 hrs.) Traditional grading only.

**465. Automated Production Systems (3)**

Prerequisites: ET 410, 418. Application of the principles of automation, including consideration of the production function, methods improvements, standardization, flexibility, simplification, and economic factors involved in the manufacturing process. Evaluation of different production conditions to select the best application and level of automation. (Lecture-Discussion 3 hours.)

**472. Computer Aided and Integrated Manufacturing (2)**

Prerequisites: ET 390, 390L, Senior Standing; corequisite: ET 472L. Role of computers in controlling the manufacturing process, hardware and software components for computer automation, computer architectures used in manufacturing, computer-aided design, manufacturing systems, computer controlled manufacturing equipment, simulation, quality control, programming the factory. (Lecture-Discussion 2 hours.) Traditional grading only.

**472L. Computer Aided and Integrated Manufacturing Laboratory (1)**

Prerequisites: ET 390, 390L, Senior Standing; corequisite: ET 472. Computer automation software packages, information and material flow simulation. (Laboratory 3 hours.) Traditional grading only.

**474. Manufacturing Processes II (2)**

Prerequisites: ET 361, 361L; corequisite: ET 474L. Principles and theory of manufacturing processes relative to machinability ratings, numerically controlled machining, chemical milling, grinding, welding, brazing, plating and heat treating. (Lecture-Discussion 2 hours.) Traditional grading only.

**474L. Manufacturing Processes II Laboratory (1)**

Prerequisites: ET 361, 361L; corequisite: ET 474. Experiments on machinability ratings, numerically controlled machining, chemical milling, welding, brazing, quenching rates for various media, programmable heat treating and plating. (Laboratory 3 hours.) Traditional grading only.

**476. Environmental Impact (3)**

Prerequisite: BIOL 306. Required components of environmental impact reports and assessments and the processes involved in their preparation. Special emphasis is placed on the biological portions of EIRs and impact on flora and fauna. (Lecture-Discussion 3 hours.) Traditional grading only.

**485. Environmental Assessment (3)**

Definition and study of problems related to specific issues of environmental impact, mitigating solutions, costs, benefits and consequences. (Lecture-Discussion 3 hours.) Traditional grading only.

**486. Data Structures (2)**

Prerequisite: ET 388L. Data structures and applications. Choice and implementation of appropriate data structures for applications. Treatment of arrays, lists, stacks, queues, lined lists, trees, and assorted algorithms. Introduction to search and sorting. File organization techniques. (Lecture-Problems 2 hours.)

**486L. Data Structures Laboratory (1)**

Prerequisite: ET 388L; corequisite: ET 486. Laboratory exercises in data structures and applications. A recursive programming language will be used. (Laboratory 3 hours.) Lab fee: \$15.

**487. Client/Server Computing Technology (2)**

Prerequisites: ET 386, 386L, 486, 486L; corequisite: ET 487L. Introduction to client/server computing. Hardware and software technology. Protocols, networks, relational database technology. Example applications using client/server computing. Tools and development environments. Groupware, middleware. A design project and class presentation required. (Lecture-Discussion 2 hours.) Traditional grading only.

**487L. Client/Server Computing Technology Laboratory (1)**

Prerequisites: ET 386, 386L, 486, 486L; corequisite: ET 487. Laboratory and programming exercises developing client/server applications. Hardware and software technology. Protocols, networks, relational database technology. Applications using software/hardware tools and development environment. (laboratory 3 hours.) Traditional grading only.

**488. Microcomputer Systems (2)**

Prerequisites: ET 386L; corequisite: ET 488L. Study of available microprocessors and microcomputer systems. Topics cover microcomputer architecture, software structure, assembly language, central processing unit, input/output, memory manipulation, and interfacing applications in Engineering Technology. (Lecture-problems 2 hours.) Traditional grading only.

**488L. Microcomputer Systems Laboratory (1)**

Prerequisites: ET 386L; corequisite: ET 488. Laboratory experience in microcomputer architecture, assembly language programming, and interfacing applications in Engineering Technology. Topics covered are central processing unit function, memory organization, and input/output operation. Available microcomputer systems will be used. Applications in Engineering Technology. (Laboratory 3 hours.) Traditional grading only. Lab fee: \$15.

**489. Computer Interfacing (2)**

Prerequisites: ET 442L, 488L. Study of theories and techniques that are used in peripheral control and interfacing. Topics covered are serial interfacing, Parallel interfacing, timing, handshaking, A/D converters, buffering, and UARTs. (Lecture-Discussion 2 hours.)

**489L. Computer Interfacing Laboratory (1)**

Prerequisites: ET 442L, 488L; corequisite: ET 489. Laboratory exercises in computer interfacing applications and design. Available computer system and its assembly language instructions will be used. (Laboratory 3 hours.) Lab fee: \$15.



#### 491. Microcomputer Development Systems (2)

Prerequisites: ET 489, 489L. Microcomputer development systems and applications. Software and hardware development process, modular program development, complex data structures, linkage with high level language, and in-circuit emulator operation. Introduction to development cycle with in-circuit emulator. (Lec-Problems 2 hrs.)

#### 491L. Microcomputer Development Systems Laboratory (1)

Prerequisite: ET 489, 489L; corequisite: ET 491. Laboratory exercises in microcomputer development systems and applications. In-circuit emulator in software and hardware development process. (Laboratory 3 hours.) Lab fee: \$15.

#### 492. Computer Controlled Industrial Systems (2)

Prerequisites: ET 389, 489L; corequisite: ET 492L. Procedures for the simulation and evaluation of contemporary electronic control systems. Includes analysis and synthesis of the sensing, programming and actuating sub-systems within industrial and educational robots. (Lecture-Discussion 2 hours.) Traditional grading only.

#### 492L. Computer Controlled Industrial Systems Laboratory (1)

Prerequisites: ET 489, 489L; corequisite: ET 492. Laboratory exercises on robotic systems. Emphasis on analysis and synthesis of the sensing, programming and actuating sub-systems within industrial and educational robots. (Laboratory 3 hours.) Traditional grading only. Lab fee: \$15.

#### 494. Applied Systems Development Project (2)

Prerequisites: ET 486L, 491L. Systems development concepts, principles, and practices to a comprehensive systems development project. Hands-on approach is used to analyze, design and document a realistic system. Actual use of project management, interviewing, forms analysis, structured methods, behavioral dynamics, walk-throughs, report writing, and presentations. (Lecture-Discussion 2 hours.)

#### 494L. Applied Systems Development Project Laboratory (1)

Prerequisites: ET 486, 491; corequisite: ET 494. Laboratory exercises on applied system development. Emphasis will be on systems development concepts, principles, and practices to a comprehensive systems development project. (Laboratory 3 hours.) Lab fee: \$15.

#### 496. Adv Quality Systems and Analysis (3)

Prerequisites: ET 419, 420. Quality systems analysis and applications. Course includes in-depth case studies in strategic quality planning, organization and management, integrated product design, application of quality diagnostic techniques and advanced statistical problem-solving methods, product reliability and quality assurance. Students perform a comprehensive systems analysis team project covering and industry application using the continuous process improvement (CPI) methodologies. (Lec-problems 3 hours.) Traditional grading only.

#### 497. Computer Network Technology (2)

Prerequisites: ET 487, 487L; corequisite: ET 497L. Hardware and software technology as it relates to computer networking. LAN, WAN environments and access methods. Ethernet, ATM. Bridges, routers, gateways and intelligent hubs. Networking protocols. Load balancing, use of simulation tools in designing networks. (Lecture-Discussion 2 hours.) Traditional grading only.

#### 497L. Computer Network Technology Laboratory (1)

Prerequisites: ET 487, 487L; corequisite: ET 497. Laboratory exercises using hardware and software technology as it relates to computer networking. Internetworking laboratory. Ethernet, ATM. Bridges, routers, gateways and intelligent hubs. Load balancing. Use of simulation tools. (Laboratory 3 hours.) Traditional grading only.

#### 498. Manufacturing Engineering Technology Capstone Project (3)

Prerequisites: ET 472, 472L, 474, 474L. Group project involving analysis, design, tooling and production processes for product manufacture. Economic, market and capital requirements, manpower analysis. Written reports and oral presentations required. (Lecture 2 hours, Activity 2 hours.) Traditional grading only.

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### Construction Engineering Management Courses (CEM)

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#### 101. Introduction to Construction Engineering Management (1)

Prerequisite: Sophomore standing Survey of the professional activity and environments of Construction Engineering Management. Course covers the roll of the Construction Engineer Manager in the construction industry. The study of construction and the growth and future of construction professionals who hold the Bachelor of Science in Construction Engineering Management. Credit/No Credit grading only. (Lecture-discussion 1 hour.)

#### 121. Construction Drawing I (2)

Use of scale, drawing instruments, lettering and drawing media. Interpretation of plan, elevation, section, perspective and isometric drawings. Blueprint symbols, abbreviations, terminology. Basic design parameters as required by the building code. Familiarity with reference materials and texts, including Sweets Catalogues, laboratory including a simple building design set of drawings. (Lecture 1 hr, laboratory 3 hrs.)

#### 201. Cost Accounting for Engineering Technology (3)

Theoretical Practical and concepts of cost accounting. Variable and fixed costs, break-even point, interrelationships of cost, volume and profits; job-order accounting, general and flexible budgeting, standard costs; product costing methods; cost allocation; inventory planning; control and valuation; joint product and by products; process costing. (Lecture-Problems 3 hrs.)

#### 204. Applied Mechanics-Statics (3)

Prerequisite: MATH 120 and PHYS 100A Force systems acting on a structures, moments, equilibrium, centroids, trusses, beams, cables, frames, machines, friction, section properties, masses, both U.S. and S.I. units of measurements. (Lecture 2 hours, Activity 2 hours.) Traditional grading only.

#### 221. Construction Drawing II (2)

Prerequisite: CEM 121. Advanced construction drawing with emphasis in construction materials and methods incorporated in drawings. Extensive understanding of human proportion in design. Code implications. Permit requirements as incorporated in drawings, basic structural implications on building design. Site planning and usage. Electrical, mechanical and plumbing requirements, handicapped and energy conservation compliance. Standard notes, schedules, legends, etc. Reading and interpretation of blueprints dealing with the aforementioned topics. Lecture in combination with laboratory including a diversified building set of drawings. Orientation to UBC/Barriers Laws/Title 24 State Code. (Lec 1 hr, lab 3 hrs.) Traditional grading only.

#### 225. Construction Surveying (1)

Prerequisites: ET 221 and High school algebra and trigonometry. Fundamentals of surveying methods as applied to construction layout. Use of level and transit for location and control of structures, vertical and horizontal control, area determination, care and use of instruments. (Lecture-problems 1 hour.)

#### 225L. Construction Surveying Laboratory (1)

Prerequisite: ET 221; corequisite: CEM 225. Laboratory exercises on land measurement, differential and profile leveling, construction layout and plotting profiles using tape, leveling and transit instruments. (Laboratory 3 hours.)

#### 232. Fundamentals of Construction (2)

Prerequisite: ET 221. An overview of construction trends. Effects of scientific and engineering advancements on the building team acting as consultants to the architect. Field trips. (Lecture-Discussion 1 hour, Activity 2 hours.)

#### 235. Concrete Construction (1)

Prerequisites: ET 204; CEM 232; CHEM 111A. Concrete terminology, tools, practices and building codes. Includes concrete form construction, erection and stripping, mixing, placing, finishing and curing. Field trips. (Lecture-Discussion 1 hour.)

#### 235L. Concrete Construction Laboratory (1)

Prerequisites: CHEM 111A, ET 204; CEM 232; corequisite: CEM 235. Laboratory exercises in support of CEM 235, Concrete Construction. Develop concrete mix designs and prepare concrete samples for testing, such as compressive strength, slump and air entrainment, and aggregate testing. (Lab 3 hours.) Lab fee: \$15.

304. Applied Mechanics Strength of Materials (3)  
Prerequisite: Math 120. Analysis of strength and rigidity of structural members in resisting applied forces, stress, strain, shear, moment, deflections, combined stresses, connections, and moment distribution. (Lecture-Discussion 3 hours.) Traditional grading only.
321. Construction Supervision (2)  
Prerequisites: CEM 235, 235L. A study of the duties and responsibilities of construction on-site supervisory personnel. Emphasis is placed on the methods and techniques used to ensure an efficient on-schedule operation. (Lecture-Discussion 2 hours.)
322. Mechanical Equipment for Buildings (3)  
Prerequisites: Physics 100B. Principles and current practices in water supply, waste disposal, heating, ventilating, air conditioning and fire protection. (Lecture-Discussion 3 hours.)
323. Soil Mechanics Technology (2)  
Prerequisite: ET 304. Soil composition, description, and classification; soil compaction; determination of physical properties of soils. (Lecture-Problems 2 hours.)
- 323L. Soil Mechanics Technology Laboratory (1)  
Prerequisites: ET 304; corequisite CEM 323. Laboratory investigation and experiments in the phenomena of soil mechanics. Field trips. (Laboratory 3 hours.)
325. Construction Materials and Methods (3)  
Prerequisites: CEM 235L, 323L. Properties and applications of materials for the construction industry. Current practices in fabrication, and erection methods used in industrial, commercial and heavy construction. Field Trips. (Lecture-Problems 3 hours.)
326. Structural Concrete and Masonry Design (3)  
Prerequisite: ET 304. Analysis and design of structural concrete and masonry buildings in compliance with the Uniform Building Code. (Lecture-Problems 3 hours.)
- 327L. Computer Applications for Construction Management Laboratory (1)  
Prerequisites: ET 205, 205L, 221. Laboratory exercises in computer systems to control construction operations in the building industry, development of construction management games. (Laboratory 3 hours.)
328. Construction Safety (2)  
Prerequisites: CEM 225, 225L, 232. Terminology, safety functions, accident costs, workman's compensation and liability laws, O.S.H.A., and many other governmental and non-governmental codes, regulations and field safety methods pertinent to the construction industry. Field trips. (Lecture 1 hour, Activity 2 hours.)
330. Construction Estimating (3)  
Prerequisites: CEM 325, 327L. Theories and systems of building estimating. Quantity survey techniques, standard formats, classification and analysis of work, organization of retails, unit cost determination, simulated bids. (Lecture 2 hours, Activity 2 hours.)
409. Direct Studies in Construction Engineering Management (1-3)  
Prerequisites: Senior standing in ET, consent of instructor. Advanced work of a technical nature within an area of specialization on an experimental or research basis. Traditional grading only.
421. Construction Planning and Scheduling (3)  
Prerequisites: CEM 330. Planning, scheduling and control by graphic charts and PERT/CPM networks. Resource allocation and leveling. Manual and computer methods. Field trips. (Lec-Discussion 3 hrs)
422. Electrical Equipment for Buildings (3)  
Prerequisites: PHYS 100B, lower division construction requirements. Principles and current practices in the application of electrical equipment and material utilization, sound and signal systems. (Lecture-Discussion 3 hours.)
423. Site Analysis (3)  
Prerequisites: CEM 225, 225L. Detailed analysis and investigation of construction sites. Economics and feasibility of land development. Field trips. (Lecture- Discussion 3 hours.)
424. Construction Equipment (3)  
Prerequisites: ET 410; CEM 421. Characteristics, capabilities, limitations, economics and utilization of general building and heavy construction equipment. (Lecture- Discussion 3 hours.)
426. Construction Law (3)  
Prerequisites: CEM 328 and senior standing. Contractors license laws; mechanics lien laws; real estate and subdivision law; public works projects bid and bond requirements, O.S.H.A.; administration, enabling legislation and penalties; citations and appeals; current litigation and legal trends in affirmative action and minority subcontractor quotas, design professional's liability. (Lecture-Discussion 3 hours.)
428. Construction Proposals and Specifications (3)  
Prerequisites: CEM 426. Principles and methods for developing the technical knowledge to structure a construction proposal. Analysis of letters of transmittal, inquiry and bidding specifications. (Lecture-Activities 3 hours.)
431. Construction Cost Control (3)  
Prerequisites: ET 410; CEM 421, and senior standing. Basic application of construction cost control systems and the use of cost information and associated reports. (Lecture-Discussion 3 hours.)
432. Facility Administration (3)  
Prerequisite: ET 374. Management skills for facility management. Emphasis is placed on the management functions of planning, organizing, directing and controlling. topics include: negotiation; communication; performance measurement; job enrichment; motivation; contracting services and interpersonal relationships. (Lecture-Discussion 3 hours.)
433. Facility Finance Management (3)  
Prerequisite: CEM 432. Analysis of financial management strategies associated with facility management. Topics include: buy-lease considerations; building efficiency; leasing considerations; cost control and record keeping; facility capitalization; facility budgeting; cost benefit analysis and financial reports. (Lecture-Discussion 3 hours.)
434. Facility and Property Management (3)  
Prerequisite: CEM 433. Principles of facility and property management. Topics include: property development; cost benefit analysis; site selection; architectural design; layout plans; building engineering; specifications; stacking and blocking plans; aesthetic standards; renovation and contracting standards. (Lec-Disc 3 hrs)
436. Facility Operations Management (3)  
Prerequisite: ET 374. Analysis of the functions of facility operations management. Topics include: building systems; mechanical systems; energy management; electrical systems; trades operations; grounds maintenance; custodial; furniture and equipment; waste removal contracting services; furniture standards; security systems and planned maintenance. (Lecture-Discussion 3 hours.)
438. Structural Steel and Wood Design (3)  
Prerequisite: CEM 326. Analysis and design of structural steel and wood buildings in compliance with the Uniform Building Code. (Lecture 2 hours, Activity 2 hours.)
440. Construction Project Management (3)  
Prerequisites: CEM 424, 428, 431, and senior standing. Principles of project management are applied to a case study of an actual construction project. Topics include site facilities planning, procurement, shop drawings, scheduling coordinating subcontracts and contract administration. Relationships with owners, designers and other officials are analyzed. (Lecture-Discussion 3 hours.)

# FACULTY

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Economics  
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Chemistry and Biochemistry  
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History  
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Comparative Literature and Classics  
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Communicative Disorders  
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Center for Educational Research and Services  
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Anthropology/Linguistics  
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Kinesiology and Physical Education  
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Chemistry and Biochemistry  
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- Colburn, Alan (1995) ..... Assistant Professor  
Science Education  
B.S., Carnegie Mellon University; M.S., University of Illinois; M.S., University of  
Pennsylvania; Ph.D., University of Iowa.
- Cole, Charles L. (1967) ..... Professor  
Economics  
B.A., University of Southern California; M.B.A., Stanford University; Ph.D., University  
of Southern California.  
Emeritus, 1996.
- Collins, Charles T. (1968) ..... Professor  
Biological Sciences  
B.A., Amherst College; M.S., University of Michigan; Ph.D., University of Florida.
- Collins, Keith E. (1969) ..... Professor  
History  
B.A., M.S., Indiana University; Ph.D., University of California, San Diego.
- Colman, Keith R. (1970) ..... Associate Professor  
Psychology  
B.A., California State University, Long Beach; M.A., Ph.D., University of California,  
Los Angeles.
- Connor, Michael E. (1971) ..... Professor  
Psychology  
B.A., California Western University; M.A., California State University, Long Beach;  
Ph.D., University of Hawaii.
- Constas, Michael (1995) ..... Associate Professor  
Accountancy; A.B., J.D., Ph.D., University of California, Los Angeles.
- Contreras, Armando N. (1993) ..... Executive Assistant  
Office of the President  
B.A., Harvard University.
- Cooper, Gene R. (1969) ..... Professor  
Art  
B.A., M.A., University of Hawaii.
- Cooper, Stephen P. (1997) ..... Associate Professor  
English/Film and Electronic Arts  
B.A., University of California, Los Angeles; M.F.A., University of California, Irvine;  
Ph.D., University of Southern California.
- Coots, Jennifer (1997) ..... Assistant Professor  
Educational Psychology, Administration and Counseling  
B.A., Occidental College; M.A., California State University, Los Angeles; Ph.D.,  
University of California, Los Angeles, and CSULA.
- Costa, D. Margaret (1974) ..... Professor  
Kinesiology and Physical Education  
B.S., M.Ed., University of Massachusetts; Ph.D., Ohio State University.
- Councilman, Samuel G. (1968) ..... Professor  
Mathematics  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Cowan, Peter A. (1981) ..... Professor  
Civil Engineering  
A.B., University of California, Berkeley; M.S., Ph.D., Utah State University, Logan.
- Cox, Carole (1988) ..... Professor  
Teacher Education  
B.A., University of California, Los Angeles; M.A., Ph.D., University of Minnesota,  
Minneapolis.
- Craig, Kellina M. (1997) ..... Assistant Professor  
Psychology  
B.A., Wesleyan University; M.A., University of Chicago; M.S., Ph.D., Tulane  
University of Louisiana.
- Crayton, Ce Etta F. (1972) ..... Associate Professor  
Recreation and Leisure Studies  
B.A., Lewis and Clark College; M.S., California State University, Los Angeles.
- Crego, Clyde A. (1983) ..... Director  
Counseling and Psychological Services  
B.A., University of Montana, Missoula; Ph.D., Michigan State University, East  
Lansing.
- Cressy, David A. (1984) ..... Professor  
History  
B.A., M.S., Ph.D., University of Cambridge, England.
- Cretera, Domenic (1986) ..... Professor  
Art  
B.F.A., M.F.A., Boston University.
- Crowther, Simeon J. (1968) ..... Professor  
Economics  
B.S., University of Oregon; Ph.D., University of Pennsylvania.
- Crussemeyer, Jill A. (1997) ..... Assistant Professor  
Kinesiology and Physical Education  
B.S., Long Island University; M.S., University of Massachusetts; Ph.D., University of  
Oregon.
- Culotta, Wendy A. (1973) ..... Librarian  
B.A., University of California, San Diego; M.L.S., University of California, Los  
Angeles, B.S., California State University, Long Beach.
- Curtis, James R. (1995) ..... Associate Professor  
Geography  
B.A., M.A., San Jose State University; Ph.D., University of California, Los Angeles.
- Curtis, Kenneth R. (1990) ..... Associate Professor  
History  
B.A., Lawrence University; M.A., University of Wisconsin; Ph.D., University of  
Wisconsin.

- Cynar, Sandra J. (1986) ..... Professor  
Computer Engineering and Computer Science  
B.S., M.S., California State University, Long Beach; Ph.D., University of California, Irvine.
- D'Amicantonio, A. John (1988) ..... Associate Librarian  
B.A., Siena College; M.S.Ed., State University of New York, New Paltz; M.S.L.S., The Catholic University of America.
- Dahlen, Rebecca D. (1996) ..... Assistant Professor  
Nursing  
R.N., Los Angeles County Medical Center School of Nursing; B.S.N., University of Phoenix; M.S.N., California State University, Los Angeles.
- Danay, Richard (1985) ..... Professor  
American Indian Studies/Art  
B.A., California State University, Northridge; M.A., California State University, Chico; M.F.A., University of California, Davis.
- Dank, Barry M. (1968) ..... Professor  
Sociology  
B.A., Hofstra University; M.A., Ph.D., University of Wisconsin.
- Danson, Carl M. (1965) ..... Professor  
Psychology  
B.A., M.A., Ph.D., Ohio State University.
- Das, Mihir K. (1981) ..... Associate Dean of Instruction  
College of Engineering  
..... Professor  
Mechanical Engineering  
B.S., Bihar Institute of Technology, India; Ph.D., University of Birmingham, England.
- Das, Radhe (1982) ..... Professor  
Electrical Engineering  
B.S., University of Ranchi, India; M.S. University of Calcutta, India; Ph.D., University of Washington, Seattle.
- Daugherty, Emma L. (1997) ..... Associate Professor  
Journalism  
B.S., West Virginia University; M.A., Michigan State University.
- Davidson, David B. (1983) ..... Professor  
Accountancy  
B.S., California State University, Los Angeles; M.A., Ph.D., University of Northern Colorado; CPA Certificate, Colorado.
- Davis, James A. (1985) ..... Professor  
Kinesiology and Physical Education  
B.A., M.A., San Diego State University; Ph.D., University of California, Davis.
- Davis, Jeffrey P. (1997) ..... Assistant Professor  
Sociology  
B.A., M.A., North Carolina Central University; Ph.D., North Carolina State University.
- Davis, Steven W. (1990) ..... Associate Professor  
Philosophy  
B.A., M.A., California State University, Long Beach; Ph.D., Duquesne University, Pittsburgh.
- Debysingh, Molly (1972) ..... Professor  
Geography  
M.A., St. Andrew's College, Scotland; Ph.D., Syracuse University. Emeritus, 1997.
- DeGuire, Linda J. (1990) ..... Professor  
Mathematics  
B.A., Fontbonne College, St. Louis; A.M., Stanford University; M.A., Ed.D., University of Georgia, Athens.
- de Heras, John (1967) ..... Professor  
Art  
B.A., M.A., University of California, Los Angeles.
- Deitch, Kathryn V. (1997) ..... Associate Professor  
Nursing  
B.S., University of Maryland; M.S., Texas Woman's University; M.A., Ph.D., Claremont Graduate School.
- Delgado-Collins, Bettina M. (1993) ..... Psychologist  
Counseling and Psychological Services  
B.A., Wheaton College, Wheaton, IL; M.A., Psy.D., Biola University, La Mirada, CA.
- Demirdjian, Zohrab (1979) ..... Professor  
Marketing  
B.S., M.B.A., Arizona State University; Ph.D., Louisiana State University.
- Demos, George D. (1962) ..... Professor  
Educational Psychology, Administration and Counseling  
B.S., Northern Illinois State College; M.S., University of Illinois; Ph.D., University of Southern California. Emeritus, 1983.
- Dennis, Christopher D. (1985) ..... Professor  
Political Science  
B.A., M.A., California State University, Long Beach; Ph.D. University of Georgia.
- Deschenes, Elizabeth (1994) ..... Associate Professor  
Criminal Justice  
B.A., Colby College, ME; M.A., Ph.D., University of Pennsylvania.
- DeSoto, Simon (1969) ..... Professor  
Mechanical Engineering  
B.M.E., City College of New York; M.M.E., Syracuse University, Ph.D., University of California, Los Angeles.
- Devore, Jerald A. (1969) ..... Professor  
Chemistry and Biochemistry  
B.A., California State University, Chico; M.S., San Diego State University; Ph.D., University of California, San Diego.
- Dick, Wayne E. (1981) ..... Professor  
Computer Engineering and Computer Science  
B.A., M.A., Ph.D., University of California, San Diego.
- Dinielli, Gene L. (1968) ..... Professor  
English  
B.A., M.A., University of Connecticut.
- Domingo-Foraste, Douglas (1990) ..... Associate Professor  
Comparative Literature and Classics  
A.B., University of California, Davis; M.A., Ph.D., University of California, Santa Barbara.
- Donato, Clorinda (1989) ..... Professor  
Romance, German, Russian Languages and Literatures  
B.A., University of California, Berkeley; M.A., Ph.D., University of California, Los Angeles.
- Dorn, Carl H. (1968) ..... Professor  
Mathematics  
B.A., University of California, Berkeley; Ph.D., University of California, Los Angeles.
- Dowell, David A. (1977) ..... Special Assistant to the Provost  
Academic Affairs  
..... Associate Dean  
College of Liberal Arts  
..... Professor  
Psychology  
B.S., Middle Tennessee State University; M.A., Ph.D., University of Tennessee.
- Downey, Sharon D. (1987) ..... Associate Professor  
Communication Studies  
B.S., Florida State University, Tallahassee; M.A., University of Nevada, Las Vegas; Ph.D., University of Colorado.
- Drake, Mabelle (1994) ..... Coordinator  
American Indian Student Services  
B.A., Dartmouth College; Ed.M., Harvard University.
- Druzgalski, Christopher (1970) ..... Professor  
Electrical Engineering  
B.S., M.S., Technical University, Poland; M.S., Ph.D., Ohio State University, Columbus.
- DuBois, Henry J., Jr. (1967) ..... Acting Associate Dean  
..... Librarian  
B.A., M.P.A., California State University, Long Beach; M.L.S. University of California, Berkeley.
- Ducharme, Catherine C. (1990) ..... Associate Professor  
Teacher Education  
B.A., California Polytechnic University, San Luis Obispo; M.S., California State University, Fullerton; Ph.D., The Claremont Graduate School.
- Ebneshahrashoob, Morteza (1990) ..... Professor  
Mathematics  
B.S., University of Tehran; M.S., Ph.D., Oklahoma State University.
- Echevarria, Jana (1993) ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., M.A., California State University, Long Beach; Ph.D., University of California, Los Angeles.
- Edmondson, Betty V. (1964) ..... Professor  
Kinesiology and Physical Education  
B.S. University of Nevada; M.A., San Jose State University.
- Edwards, Alejandra C. (1986) ..... Professor  
Economics  
Licenciado En Economia, Ingeniero Comercial, Universidad Catolica de Chile; M.A., Ph.D., University of Chicago.
- Eisenman, Robert H. (1973) ..... Director  
Institute for the Study of Judeo-Christian Origins  
..... Professor  
Religious Studies  
B.A., Cornell University; M.A., New York University; Ph.D., Columbia University.

- Eliason, Lowell J. (1965) ..... Professor  
Physics and Astronomy  
B.S., Stanford University; Ph.D., University of Utah.
- Ellstrand, Alan E. (1995) ..... Assistant Professor  
Management and Human Resources Management  
B.A., University of Illinois; M.B.A., Northern Illinois University; Ph.D., Indiana University.
- Emmons, Timothy D. (1980) ..... Psychologist  
Counseling and Psychological Services  
B.S., Lewis and Clark College; M.A. Ph.D., Vanderbilt University.
- Esfandiari, Ramin S. (1991) ..... Professor  
Mechanical Engineering  
B.S., M.A., Ph.D., University of California, Santa Barbara.
- Eshaghian, Mary M. (1995) ..... Associate Professor  
Computer Engineering and Computer Science  
B.S., M.S., Ph.D., University of Southern California.
- Eshett, Ali (1966) ..... Professor  
Civil Engineering  
B.S. Technion, I.I.T., Haifa, Israel; M.S., Ph.D., Colorado State University.
- Espana-Maram, Linda N. (1997) ..... Assistant Professor  
Asian & Asian American Studies  
B.A., M.A., California State University, Fullerton; M.A., Ph.D., University of California, Los Angeles.
- Evans, Dale W. (1988) ..... Professor  
Health Science  
B.S., M.S., George Williams College; H.S.D., Indiana University, Bloomington.
- Evans, Edward N. (1970) ..... Professor  
Computer Engineering and Computer Science  
B.S., University of California, Berkeley; M.S., E.E., California Institute of Technology; Ph.D., University of California, Irvine.
- Evashwick, Connie J. (1993) ..... FHP Foundation Endowed Chair  
..... Director  
Center for Health and Behavior Studies  
..... Professor  
Health Science  
A.B., M.A., Stanford University; M.Sc., Sc.D., Harvard School of Public Health, Massachusetts.
- Eveland, Vern K. (1984) ..... Professor  
Biological Sciences  
B.S., State University of Iowa, Iowa City; M.S., Ph.D., University of Iowa, Iowa City.
- Eylar, Harry D. (1963) ..... Associate Professor  
Mathematics  
B.A., Montana State University; M.S., University of Washington.
- Farber, Stuart (1960) ..... Director  
Student Life and Development  
M.S., California State University, Long Beach; B.A., Ph.D., University of California, Los Angeles
- Farmer, Gail (1985) ..... Professor  
Health Science/Sociology  
B.A., M.A., California State University, Long Beach; D.P.H. University of California, Los Angeles.
- Farrell, Michael J. (1969) ..... Professor  
Economics  
B.A., Pomona College; M.A., Ph.D., Stanford University.
- Fata, Frank J. (1986) ..... Associate Dean  
College of Liberal Arts  
..... Professor  
Comparative Literature and Classics  
A.B., Columbia College, New York; Ph.D., The Johns Hopkins University.
- Fayek, Mamdouh M. (1989) ..... Associate Professor  
Design  
B.F.A., College of Fine Arts, Cairo; M.A., California State University, Long Beach.
- Feldman, Stephen ..... Vice President  
University Relations and Development  
..... Professor  
Finance, Real Estate and Law  
B.B.A., M.B.A, Ph.D., City College of New York.
- Ferreira, Armando T. (1957) ..... Professor  
Art  
B.A., M.A., University of California, Los Angeles. Emeritus, 1995
- Fiebert, Martin S. (1965) ..... Professor  
Psychology  
B.S., Queens College, Flushing, New York; Ph.D., University of Rochester.
- Fine, David M. (1968) ..... Professor  
English  
B.A., M.A., University of California, Los Angeles; M.A., California State University Los Angeles; Ph.D., University of California, Los Angeles.
- Finney, Robert G. (1977) ..... Professor  
Film and Electronic Arts  
A.B., Marietta College; M.A., Ph.D., Ohio State University.
- Finney, Stanley C. (1986) ..... Professor  
Geological Sciences  
B.S., M.S., University of California, Riverside; Ph.D., Ohio State University.
- Finot, Patricia (1977) ..... Professor  
Dance  
B.A., Occidental College; M.A., University of Southern California.
- Fischer, David W. (1986) ..... Professor  
Public Policy and Administration  
B.S., Trinity University; M.S., Michigan State University; Ph.D., Colorado State University.
- Fisher, Janet M. (1989) ..... Professor  
Kinesiology and Physical Education  
B.S., Ohio University; M.Ed., Ph.D., University of Toledo.
- Fisher, Steven A. (1990) ..... Professor  
Accountancy  
B.S., M.S., University of Akron; D.B.A., Kent State University; CPA Certificate, Colorado.
- Fleck, Stephen H. (1993) ..... Assistant Professor  
Romance, German, Russian Languages and Literatures  
B.A., Sonoma State University; Ph.D., University of California, Davis.
- Flores de Apodaca, Roberto (1978) ..... Professor  
Psychology  
B.A., Sarah Lawrence College; Ph.D., University of Rochester.
- Forney, Kristine K. (1978) ..... Professor  
Music  
B.M., Southern Illinois University; M.A., Ph.D., University of Kentucky, Lexington.
- Forouzesh, Mohammed R. (1987) ..... Professor  
Health Science  
B.S., University of Oregon, Eugene; M.P.H., University of Tennessee, Knoxville; Ph.D., University of Tennessee, Knoxville.
- Foster, L. Sheila (1967) ..... Professor  
Computer Engineering and Computer Science  
B.A., Ohio Wesleyan University; M.A., Ph.D., University of Southern California.
- Francis, Robert D. (1987) ..... Associate Professor  
Geological Sciences  
B.A., University of California, San Diego; Ph.D., University of California, San Diego (Scripps).
- Frank, Gail C. (1989) ..... Professor  
Family and Consumer Sciences  
B.S., Texas Tech University; M.A., Ph.D., Tulane University.
- Franklin, Barbara J. (1967) ..... Professor  
Kinesiology and Physical Education  
B.S., Memphis State University; M.S., University of Washington.
- Frates, Janice E. (1997) ..... Associate Professor  
Health Care Administration  
B.A., University of California, Los Angeles; M.S.W., University of California, Berkeley; Ph.D., University of Southern California.
- French, Lisa J. (1995) ..... Assistant Professor  
Art  
B.F.A, California State University, Long Beach.
- Fressemann, Keith W. (1979) ..... Associate Professor  
Kinesiology and Physical Education  
B.S., Upper Iowa University; M.A., University of Northern Iowa.
- Fried, Elliot (1970) ..... Professor  
English  
B.A., M.A., California State University, Long Beach; M.F.A., University of California, Irvine.
- Friis, Robert H. (1988) ..... Professor  
Health Science  
A.B., University of California, Berkeley; A.M., Ph.D., Columbia University.
- Fung, Henry C., Jr. (1966) ..... Associate Dean  
College of Natural Sciences and Mathematics  
..... Professor  
Biological Sciences  
B.A., University of California, Berkeley; M.T., University of California, Medical School at San Francisco; M.A., San Francisco State University; Ph.D., Washington State University.



- Galt, Charles P. (1973) ..... Professor  
Biological Sciences  
B.A., University of California, Santa Barbara; M.S., Ph.D., University of Washington.
- Garhammer, John J. (1985) ..... Professor  
Kinesiology and Physical Education  
B.S., Pennsylvania State University; M.S., Lehigh University, Pennsylvania; M.S., Ph.D., University of California, Los Angeles.
- Garrott, Roy C. (1969) ..... Assistant Professor  
English  
B.A., M.A., Western Kentucky University.
- Garvey, Daniel E. (1976) ..... Professor  
Journalism  
B.A., Harvard College; M.A., Ph.D., Stanford University.
- Gau, Yihnan D. (1988) ..... Professor  
Mathematics  
B.S., National Taiwan University; Ph.D., Purdue University.
- George, Barbara C. (1961) ..... Professor  
Finance, Real Estate and Law  
B.A., Bennett College, Greensboro, North Carolina; J.D., State University of Iowa, Member, Iowa State Bar, California State Bar, U.S. Supreme Court Bar.
- George, Larry N. (1989) ..... Associate Professor  
Political Science  
B.A., University of California, Irvine; M.A., Ph.D., Princeton.
- George, Simon (1961) ..... Professor  
Physics and Astronomy  
B.Sc., University of Travancore, India; M.Sc., University of Saugar, India; Ph.D., University of British Columbia.
- Gessford, John E. (1990) ..... Professor  
Information Systems  
B.S., M.S., Ph.D., Stanford University. Emeritus, 1997.
- Gharakhanian, Editte (1990) ..... Associate Professor  
Biological Sciences  
B.A., George Mason University; Ph.D., University of California, Los Angeles.
- Gibson, J. William (1991) ..... Associate Professor  
Sociology  
B.A., University of Texas, Austin; M.A., Ph.D., Yale University.
- Gilpin, C. Barclay, (1966) ..... Professor  
Mechanical Engineering  
B.S., University of Wisconsin; M.S., Ph.D., Carnegie Institute of Technology.
- Gilsdorf, Jeanette W. (1989) ..... Professor  
Information Systems  
B.A., Creighton University; M.A., Ph.D., University of Nebraska.
- Gimmillaro, Brian S. (1992) ..... Head Coach  
Women's Volleyball  
B.A., California State University, Long Beach.
- Gittleman, Arthur P. (1966) ..... Professor  
Computer Engineering and Computer Science  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Glenn, Constance W. (1973) ..... Director  
University Art Museum  
..... Professor  
Art  
B.A., University of Kansas; M.A., California State University, Long Beach.
- Glezakos, Constantine (1968) ..... Professor  
Economics  
B.A., Athens School of Economics; M.A., Ph.D., University of Southern California.
- Goddard, Kathryn E. (1969) ..... Director  
Student Services/College of Education  
B.A., University of California, Berkeley; M.S., Indiana University; Ed.D., University of Southern California
- Godfrey, R. Michael (1989) ..... Associate Professor  
Information Systems  
B.A., Amherst College; M.P.A., Ph.D., University of Southern California.
- Goitom, Tesfai (1983) ..... Associate Dean  
College of Engineering  
..... Professor  
Engineering Technology  
B.S., National University, Ethiopia; B.S., University of Wisconsin, Platteville; M.S., Ph.D., Michigan State University.
- Gold V. Yvonne (1972) ..... Professor  
Teacher Education  
B.A., M.A., California State University, Long Beach; Ed.D., University of Southern California.
- Goldenberg, Claude N. (1994) ..... Associate Professor  
Teacher Education  
A.B., Princeton University; M.A., Ph.D., University of California, Los Angeles.
- Goldish, Dorothy M. (1958) ..... Professor  
Chemistry and Biochemistry  
B.S., Stanford University; Ph.D., University of California, Berkeley.
- Goldstein, Avery E. (1990) ..... Associate Professor  
Family and Consumer Sciences  
B.A., University of California, Los Angeles; M.A., University of the Pacific; Ph.D., Purdue University.
- Golez, Felipe V. (1997) ..... Associate Professor  
Teacher Education  
B.A., University of California, Santa Barbara; M.A., California State University, Los Angeles; Ph.D., University of New Mexico.
- Gonsalves, John, Jr. (1969) ..... Professor  
Kinesiology and Physical Education  
B.A., M.A., California State University, Long Beach.
- Goodman, Catherine C. (1985) ..... Professor  
Social Work  
B.A., University of California, Berkeley; M.S.W., D.S.W., University of California, Los Angeles.
- Gordon, Joanne L. (1989) ..... Professor  
Theatre Arts  
B.A., M.A., University of Witwatersrand, South Africa; Ph.D., University of California, Los Angeles.
- Gosselin, Edward A. (1969) ..... Professor  
History  
B.A., Yale University; M.A., Ph.D., Columbia University.
- Gossette, Franklin E. (1987) ..... Professor  
Geography  
B.A., University of Oregon, Eugene; M.A., University of Oregon; Ph.D., University of California, Los Angeles.
- Granger, Jean M. (1972) ..... Professor  
Social Work  
B.A., Fisk University; M.S.W., Fordham University; Ph.D., University of California, Irvine.
- Grannell, Roswitha B. (1967) ..... Professor  
Geological Sciences  
B.A., Pomona College; Ph.D., University of California, Riverside.
- Gray, Todd (1997) ..... Assistant Professor  
Art  
B.F.A., M.F.A., California Institute of the Arts.
- Green, Jack (1970) ..... Professor  
Geological Sciences  
B.S., Virginia Polytechnic Institute; Ph.D., Columbia University.
- Green, James N. (1996) ..... Assistant Professor  
History  
B.A., Earlham College; M.A., California State University, Los Angeles, Ph.D., University of California, Los Angeles.
- Green, Kenneth F. (1968) ..... Professor  
Psychology  
B.A., Brown University; M.S., Ph.D., University of Massachusetts.
- Greenberg, Suzanne A. (1995) ..... Assistant Professor  
English  
B.A., Hampshire College; M.F.A., University of Maryland.
- Greene, Gary M. (1993) ..... Associate Professor  
Educational Psychology, Administration and Counseling  
B.A., University of California, Los Angeles; M.A., University of Southern California; Ph.D., University of California, Riverside.
- Gregory, Kenneth M. (1973) ..... Professor  
Biological Sciences  
B.A., Ph.D., University of California, Berkeley.
- Grenot-Scheyer, Marquita (1988) ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., M.A., California State University, Los Angeles; Ph.D., University of California, Los Angeles/California State University, Los Angeles.
- Grey, Jennifer Jen (1975) ..... Professor  
Art  
B.F.A., Bradley University; M.F.A., Hoffberger School of Painting of the Maryland Institute.
- Griffin, Peter (1990) ..... Associate Professor  
Economics  
B.A., San Diego State University; M.A., Ph.D., University of California, Santa Barbara.

- Griffin, Wendy (1991) ..... Associate Professor  
Women's Studies Program  
B.A., M.A., Ph.D., University of California, Irvine.
- Griffith, William H. (1989) ..... Vice President  
Administration and Finance  
B.S., University of Illinois; M.S., National College of Education.
- Grimmett, Dixie Ann (1965) ..... Professor  
Kinesiology and Physical Education  
B.S. Brigham Young University; M.A., Washington State University; Ed.D., Brigham Young University.
- Grobar, Lisa M. (1989) ..... Associate Professor  
Economics  
B.A., Smith; Ph.D., University of Michigan, Ann Arbor.
- Gross, Mark W. (1988) ..... Professor  
Physics and Astronomy  
B.S., Washington University, St. Louis; M.S., Ph.D., University of Chicago.
- Grote, Karl-Heinrich (1984-1986, 1990) ..... Professor  
Mechanical Engineering  
Dr.-Ing., Technical University Berlin, Germany.
- Guerriere, Daniel (1969) ..... Professor  
Philosophy  
B.A., M.A., Ph.D., Duquesne University.
- Gunal, Nezh (1989) ..... Assistant Professor  
Engineering Technology  
B.S., M.S., California State University, Long Beach; Ph.D. Candidate, University of Southern California.
- Gunatilake, Sarath (1987) ..... Professor  
Health Science  
B., Medicine & Surgery, University of Colombo, Sri Lanka; M.P.H., University of Hawaii, Manoa; D.P.H., University of Hawaii, Manoa.
- Gunns, Albert F. (1967) ..... Professor  
History  
B.A., University of Puget Sound; M.A., Ph.D., University of Washington.
- Guthrie, Sharon R. (1990) ..... Associate Professor  
Kinesiology and Physical Education  
B.A., University of California, Los Angeles; B.A., M.A., California State University, Northridge; M.A., California State University, Long Beach; Ph.D., The Ohio State University.
- Hadlock, David A. (1985) ..... Professor  
Art  
B.F.A., California State University, Long Beach; M.F.A., California Institute of the Arts.
- Haglund, Elaine J. (1972) ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., University of California, Los Angeles; M.A., Ph.D., Michigan State University.
- Halberg, Kathleen J. (1988) ..... Associate Professor  
Recreation and Leisure Studies  
B.A. (two), University of Iowa; M.S., Ph.D., University of Illinois.
- Hall, Darwin C. (1986) ..... Professor  
Economics  
B.A., University of California, Santa Barbara; M.S., M.A., Ph.D., University of California, Berkeley.
- Hall, Thomas E. (1981) ..... Professor  
Art  
B.F.A. Kansas City Art Institute; M.F.A. Drake University.
- Halliwell, Michael J. (1968) ..... Professor  
Sociology  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Hamano, Fumio (1989) ..... Professor  
Electrical Engineering  
B.E., M.S.E., Tokyo Institute of Technology; Ph.D., University of Florida.
- Hamburger, Charles D. (1965) ..... Professor  
Management/Human Resources Management  
B.A., M.A., University of California, Los Angeles; Ph.D., University of Southern California.  
Emeritus, 1996.
- Hanley, Gerard L. (1984) ..... Director  
Center for Faculty Development  
..... Director  
Center for Usability in Design and Software Assessment  
..... Professor  
Psychology  
B.A., M.A., Ph.D., State University of New York, Stony Brook.
- Hansen, Eric L. (1989) ..... Associate Professor  
Management/Human Resources Management  
B.A., Rutgers University; M.B.A., University of Chicago; Ph.D., University of Tennessee, Knoxville.
- Harbinger, Holly (1986) ..... Professor  
Theatre Arts  
B.A., University of California, Santa Cruz; M.F.A., New York University.
- Harding, Forrest E. (1971) ..... Professor  
Marketing  
B.S., Southern Illinois University; M.S., Northern Illinois University; Ph.D., Arizona State University.
- Harman, Marsha S. (1966) ..... Professor  
Sociology  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Harman, Robert C. (1969) ..... Professor  
Anthropology  
B.A., University of California, Santa Barbara; M.A., Ph.D., University of Arizona.
- Harris, Alice M. (1969) ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., Idaho State University; M.S., Ph.D., University of Oregon.
- Harris, Edwin R. (1959) ..... Professor  
Chemistry and Biochemistry  
B.S., M.S., University of Oklahoma; Ph.D., University of California, Berkeley.  
Emeritus, 1997.
- Hartley, Joellen T. (1981) ..... Professor  
Psychology  
B.S., M.S., University of California, Davis; Ph.D., University of California, Irvine.
- Hartung, Elisabeth S. (1988) ..... Professor  
Art  
B.S., Iowa Wesleyan College; M.A., University of Northern Iowa; Ph.D., Arizona State University.
- Harvey, Bernard N. (1967) ..... Professor  
Mathematics  
B.S., University of Ottawa; M.A., University of Minnesota; Ph.D., University of California, Irvine.
- Hassul, Michael (1981) ..... Professor  
Electrical Engineering  
B.A., Polytechnic Institute of Brooklyn, New York; M.S., Ph.D., University of California, Berkeley.
- Hawley, Wade (1973) ..... Director  
Career Development Center  
B.A., University of California, Riverside; M.S., California State University, Long Beach
- Hayes, Robert E. (1961) ..... Professor  
Political Science  
B.A., M.A., University of Minnesota; Ph.D., University of Colorado.
- Hefazi-Torghabeh, Hamid (1985) ..... Professor  
Aerospace Engineering  
B.S., University of Tehran, Iran; M.S., California State University, Long Beach; Ph.D., University of Southern California.
- Henderson, Alan C. (1987) ..... Professor  
Health Science  
B.A., University of California, Santa Barbara; M.S., Dr. P.H., University of California, Los Angeles.
- Herman, Martin (1989) ..... Professor  
Music  
B.A., Duke University; M.A., University of Pennsylvania; Ph.D., University of California, Berkeley.
- Herrmann, John F. (1980) ..... Professor  
Management/Human Resources Management  
B.A., M.B.A., University of Arizona, Tucson; M.S., D.B.A., University of Southern California.
- Hertz, Robert M. (1969) ..... Professor  
Linguistics/English  
B.A., Rutgers University; M.A., Syracuse University; Ph.D., University of Southern California.
- Hickman, Roger C. (1988) ..... Professor  
Music  
B.A., University of California, Irvine; M.A., Ph.D., University of California, Berkeley.
- Hickman, William J. (1989) ..... Associate Professor  
Theatre Arts  
B.A., Bucknell University; M.A., San Jose State University; M.F.A., University of New Orleans.
- Hile, Lloyd R. (1968) ..... Professor  
Chemical Engineering  
B.S., University of California, Berkeley; M.A., Ph.D., Princeton University.

- Hinds, John E. (1981)** ..... Professor  
Accountancy  
B.S., M.B.A., California State University, Long Beach; D.B.A., University of Southern California.
- Hintzen, Paul M. N. (1992)** ..... Professor  
Physics/Astronomy  
B.S., University of Minnesota, Minneapolis; Ph.D., University of Arizona.
- Hirshtal, Edith H. (1984)** ..... Professor  
Music  
B.M., M.M., Juilliard School of Music, New York and Temple University, Pennsylvania; Artist Diploma, Peabody Conservatory.
- Hlousek, Zvonimir (1990)** ..... Associate Professor  
Physics and Astronomy  
B.Sc., University of Zagreb, Yugoslavia; M.S., Ph.D., Brown University.
- Ho, Ju-Shey (1970)** ..... Professor  
Biological Sciences  
B.S., National Taiwan University; M.A., Ph.D., Boston University.
- Hobgood, E. Wade (1993)** ..... Dean  
College of the Arts  
..... Professor  
Art  
B.F.A., M.F.A., East Carolina University, North Carolina.
- Hoffman, Rose Marie (1997)** ..... Associate Professor  
Educational Psychology, Administration and Counseling  
B.A., State University of New York at Albany; M.S., Canisius College; Ph.D., University of North Carolina at Greensboro.
- Homer, Pamela M. (1991)** ..... Professor  
Marketing  
B.A., Michigan State University; M.A., M.B.A., University of Colorado, Boulder; Ph.D., University of Oregon, Eugene
- Hood, David C. (1966)** ..... Professor  
History  
B.A., University of California, Santa Barbara; Ph.D., University of Southern California.
- Horne, David A. (1988)** ..... Associate Professor  
Marketing  
B.S., M.B.A., Ph.D., University of Michigan, Ann Arbor.
- Hotchkiss, Wilhelmina L. (1990)** ..... Associate Professor  
English  
B.A., California State University, Fullerton; Ph.D., University of California, Los Angeles.
- Hou, Jack W. (1989)** ..... Associate Professor  
Economics  
B.A., National Taiwan University; M.A., Ph.D., Yale.
- Houck, Jean (1990)** ..... Dean  
College of Education  
..... Professor  
Educational Psychology and Administrator  
B.A., Kentucky Wesleyan College; M.A., Western Kentucky University, Bowling Green; Ed.D., Indiana University.
- Hovind, Tor A. (1995)** ..... Assistant Professor  
Art  
B.F.A., California State University, Long Beach; M.F.A., Syracuse University.
- Howell, Jayne (1994)** ..... Assistant Professor  
Anthropology  
B.A., State University of New York, Geneseo; M.A., Ph.D., State University of New York, Stony Brook.
- Hu, Chi-yu Yang (1963)** ..... Professor  
Physics and Astronomy  
B.S., National Taiwan University, Taipei, Taiwan; Ph.D., Massachusetts Institute of Technology.
- Hu, Helen Chau (1994)** ..... Assistant Professor  
English  
B.A., Berea College, KY; M.A., University of Wisconsin; Ph.D., University of London.
- Hubbard, Harold G. (1970)** ..... Professor  
Sociology  
B.A., University of California, Los Angeles; M.A., Southern Methodist University; Ph.D., University of Southern California.
- Huckabay, Loucine (1984)** ..... Professor  
Nursing  
B.S., M.S., Ph.D., University of California, Los Angeles.
- Huckaby, David G. (1973)** ..... Associate Professor  
Biological Sciences  
B.S., M.S., Louisiana State University; Ph.D., University of Michigan.
- Hughes, Edward J. (1990)** ..... Associate Professor  
Religious Studies  
B.A., Manhattan College, New York City; M.Div., Pittsburgh Theological Seminary; M.A., Ph.D., The Claremont Graduate School.
- Hunter, Harold R. (1987)** ..... Professor  
Health Care Administration  
A.B., Syracuse University; M.B.A., Cornell University; M.P.H., University of California, Los Angeles; Dr. P.H., University of California, Los Angeles.
- Hupka, Ralph B. (1969)** ..... Professor  
Psychology  
B.A., M.A., San Francisco State University; Ph.D., University of Massachusetts.
- Husak, William S. (1980)** ..... Associate Athletic Director  
..... Professor  
Kinesiology and Physical Education  
B.S., State University of New York, Cortland; M.S., Ph.D., Texas A & M University.
- Ishimine, Tomotaka (1967)** ..... Professor  
Economics  
B.A., Kobe University, Japan; M.A., M.S., Ph.D., University of Wisconsin.
- Itatani, Carol A. (1975)** ..... Professor  
Biological Sciences  
B.A., University of California, Los Angeles; M.S., California State University, Long Beach; Ph.D., University of Southern California.
- Jackson, Hazel O. (1994)** ..... Associate Professor  
Family and Consumer Sciences  
B.S., Tennessee State University; M.A., Michigan State University; Ph.D., University of Tennessee, Knoxville.
- Jacob, Mary (1980)** ..... Professor  
Family and Consumer Sciences  
B.S., M.S., Women's Christian College, India; M.S., University of London; Ph.D., University of Illinois, Urbana.
- Jahn, Min-Ten (1986)** ..... Professor  
Mechanical Engineering  
B.S., Taiwan Normal University; M.A., Ph.D., State University of New York, Stony Brook.
- James, Katherine (1993)** ..... Assistant Professor  
Recreation and Leisure Studies  
B.A., Carleton College, Minnesota; M.A., Ph.D., University of Minnesota.
- James, Kenneth (1982)** ..... Professor  
Electrical Engineering  
B.S., Case Institute of Technology; M.S., California State University, Fullerton; Ph.D., University of California, Irvine.
- Jang, Long-Kuan (1984)** ..... Professor  
Chemical Engineering  
B.S., M.S., National Taiwan University; Ph.D., University of Southern California.
- Janousek, Kelly S. (1988)** ..... Associate Librarian  
B.A., Western Michigan University; M.L.S., University of Pittsburgh.
- Jarasunas, Emanuel (1976)** ..... Professor  
Engineering Technology  
B.S., California State University, Long Beach; M.S., International Rail University, Germany; Ed.D., Nova University.
- Jensen, Marilyn A. (1965)** ..... Associate Vice President  
Academic Affairs  
..... Dean  
University Academic Programs  
..... Professor  
Recreation and Leisure Studies  
B.A., San Jose State University; M.A., Ph.D., University of Southern California.
- Jernigan, John C. (1970)** ..... Professor  
Comparative Literature and Classics  
B.A., Southwestern University; M.A., Purdue University; Ph.D., Indiana University.
- Jimenez, Mary Ann (1988)** ..... Professor  
Social Work  
B.A., Immaculate Heart College; M.A., University of California, Los Angeles; M.S.W., San Diego State University; Ph.D., Brandeis University.
- Johnson, Carrie Jo (1995)** ..... Psychologist  
Counseling and Psychological Services  
B.A., Oklahoma State University; M.Ed., University of Oregon; Ph.D., University of Tennessee.
- Johnson, Cynthia S. (1989)** ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., California State University, Los Angeles; Ph.D., Michigan State University.

- Johnson, Gretchen A. (1969) ..... Associate Dean  
 Librarian  
 Information Programs, Library  
 B.A., St. Olaf College; M.A., University of Denver.
- Johnson, Henry S. (1966) ..... Professor  
 Asian and Asian American Studies  
 B.A., University of Hawaii; M.Ed., Ph.D., University of Southern California.
- Johnson, Keith R. (1997) ..... Assistant Professor  
 Dance  
 B.S., Brigham Young University; M.F.A., University of Utah.
- Johnson, Leayn (1981) ..... Professor  
 Nursing  
 B.S., Wright State University; M.S., Ohio State University; Ph.D., United States International University.
- Johnson, Thomas G. (1989) ..... Associate Professor  
 Electrical Engineering  
 B.A., Oberlin College; M.S., Youngstown State University; Ph.D., University of California, Davis.
- Johnson, Troy R. (1994) ..... Associate Professor  
 History/American Indian Studies Program  
 B.A., San Diego State University; M.A., Ph.D., University of California, Los Angeles.
- Johnson, William M. (1965) ..... Associate Professor  
 Philosophy  
 B.A., University of California, Berkeley.
- Johnston, Michael W. (1987) ..... Psychologist  
 Counseling and Psychological Services  
 B.A., Missouri Southern State College; M.S., University of Kansas; Ed.D., Indiana University, Bloomington.
- Jones, Ira (1969) ..... Professor  
 Biological Sciences  
 B.S., Benedict College, Columbia, South Carolina; M.S., Atlanta University; Ph.D., Wayne State University.
- Jones, Irene (1990) ..... Professor  
 Romance, German, Russian Language and Literatures  
 Ph.D., University of Florence, Italy.
- Jones, Kristi S. (1968) ..... Director  
 Liberal Studies Program  
 ..... Professor  
 Art  
 B.A., Lindenwood College; M.A., Case Western Reserve University.
- Jones, Rita H. (1964) ..... Professor  
 Teacher Education  
 B.S., Northern Michigan University; M.A., University of Michigan; Ed.D., University of California, Berkeley.  
 Emeritus, 1996.
- Jones, F. Stanley (1988) ..... Professor  
 Religious Studies  
 B.A., Yale University; B.A., M.A., Oxford University; Dr.Theology, Universitaet Goettingen, Federal Republic of Germany.
- Jordanides, Thimios J. (1964) ..... Professor  
 Electrical Engineering  
 B.S., Wayne State University; M.S., San Jose State University; Ph.D., University of California, Irvine.
- Jorgenson, Dale O. (1972) ..... Professor  
 Psychology  
 B.A., Ph.D., University of Minnesota.
- Jung, John R. (1968) ..... Professor  
 Psychology  
 B.A., University of California, Berkeley; M.S., Ph.D., Northwestern University.
- Kaci, Judith A. (1972) ..... Professor  
 Criminal Justice  
 B.S., Loma Linda University; M.S., California State University, Long Beach; J.D., Southwestern University; LL.M., New York University.
- Kalbus, Gene E. (1957) ..... Professor  
 Chemistry and Biochemistry  
 B.S., Ph.D., University of Wisconsin. Emeritus, 1994.
- Kaminsky, Arnold P. (1986) ..... Professor  
 Asian and Asian American Studies/History  
 B.A., M.A., Ph.D., University of California, Los Angeles.
- Kammermeyer, Michael J. (1968) ..... Professor  
 Design  
 B.S., University of Southern California; M.A., California State University, Long Beach.
- Kampwirth, Thomas J. (1971) ..... Professor  
 Educational Psychology, Administration and Counseling  
 B.S., University of Illinois; M.A., DePaul University; Ph.D., University of Illinois.
- Kao, Hsin-Sheng C. (1989) ..... Associate Professor  
 Asian and Asian American Studies  
 B.A., National Taiwan University; M.A., University of Saskatchewan; Ph.D., University of Southern California.
- Kapche, Robert W. (1966) ..... Associate Professor  
 Psychology  
 B.S., Loyola University; M.S., Ph.D., Northwestern University.
- Karabenick, Edward (1959) ..... Professor  
 Geography  
 B.A., M.A., Wayne State University; Ph.D., University of Michigan.
- Karenga, Maulana N. (1989) ..... Professor  
 Black Studies  
 B.A., M.A., University of California, Los Angeles; Ph.D., United States International University; Ph.D., University of Southern California.
- Katz, Steven M. (1973) ..... Director  
 Judicial Affairs  
 B.A., University of California, Los Angeles; M.S., California State University, Long Beach; J.D., Western State University, College of Law, Fullerton.
- Kavianian, Hamid R. (1984) ..... Professor  
 Chemical Engineering  
 B.S., Shirza University, Iran; M.S., Ph.D., Colorado School of Mines.
- Kearney, Michael L. (1960) ..... Professor  
 Finance, Real Estate and Law  
 B.S., University of California, Los Angeles; J.D., Loyola School of Law. Emeritus, 1996.
- Kearney, Patricia (1987) ..... Professor  
 Communication Studies  
 B.S., Illinois State University; M.A., University of Oklahoma, Norman; Ed.D., West Virginia University.
- Keely, Beth R. (1995) ..... Associate Professor  
 Nursing  
 B.A., M.S., California State University, Los Angeles; M.A., Ph.D., Claremont Graduate School.
- Keller, Kathleen L. (1983) ..... Professor  
 Nursing  
 B.S., California State University, Long Beach; M.N., University of California, Los Angeles; Ph.D., University of Southern California.
- Kelley, Kevin M. (1995) ..... Assistant Professor  
 Biological Sciences  
 A.B., M.A., Ph.D., University of California, Berkeley.
- Kellett, Carol E. (1987) ..... Professor  
 Family and Consumer Sciences  
 B.S., Kansas State University; M.Ed., University of Missouri, Columbia; Ph.D., University of Missouri, Columbia.
- Kellogg, Bonnie E. (1989) ..... Associate Professor  
 Nursing  
 B.A., Mount St. Mary's College; M.S., California State University, Los Angeles; Ph.D., Loma Linda University.
- Kelly James J. (1980) ..... Professor  
 Social Work  
 B.S., Edinboro College; M.S.S.W., University of Tennessee; Ph.D., Brandeis University.
- Kelly, Wayne F. (1976) ..... Professor  
 Journalism  
 B.A., Butler University; M.S., University of California, Los Angeles.
- Kenealy, Patrick F. (1988) ..... Professor  
 Physics and Astronomy-Science Education  
 B.S., Loyola University, Chicago; Ph.D., University of Notre Dame.
- Khan, Mohammed B. (1984) ..... Associate Dean  
 College of Business Administration  
 ..... Professor  
 Information Systems  
 B.S., Bangladesh University of Engineering and Technology; M.E., Ph.D., Texas A & M University.
- Khatra, Balwant S. (1987) ..... Professor  
 Biological Sciences  
 B.V. Sc., Veterinary College, Hissar, India; B.S., Punjab University, India; M.S., Punjab University, India; Ph.D., University of Leeds, England.
- Khoiny, Farideh (1990) ..... Associate Professor  
 Nursing  
 B.S., Boston University; M.P.A., California State University, Long Beach; M.N., University of California, Los Angeles.

- Kim, Padulo (1997) ..... Director  
Student Life and Development/Greek Affairs and Leadership  
B.A., University of California, Riverside; Ms.Ed., University of Southern California.
- Kingsford, Laura (1980) ..... Professor  
Biological Sciences  
B.S., Boise State University; Ph.D., University of Utah.
- Kleinfelder, Karen L. (1993) ..... Associate Professor  
Art  
B.A., M.A., Ph.D., University of Michigan.
- Klig, Lisa S. (1990) ..... Professor  
Biological Sciences  
B.A., University of Massachusetts, Amherst; M.S., Oberlin College; Ph.D., Albert Einstein College of Medicine.
- Klink, Eileen S. (1990) ..... Professor  
English  
B.A., University of California, Los Angeles; M.A., California State University, Long Beach; Ph.D., University of Southern California.
- Knafel, Stephen R. (1962) ..... Professor  
English  
B.A., Union College Schenectady, New York; M.A., Columbia University; Ph.D., Brown University; M.A., California State University, Long Beach.
- Knudson, Ruth E. (1995) ..... Associate Professor  
Teacher Education  
A.B., Bryn Mawr College; M.S., University of Wisconsin; Ph.D., University of California, Riverside.
- Kochan, Roman V. (1969) ..... Dean  
Library Services  
..... Librarian  
B.A., M.A., University of Manitoba; M.L.S., University of British Columbia.
- Kokaska, Charles J. (1969) ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., Valparaiso University; M.A., Northwestern University; Ed.D., Boston University.
- Korogodsky, Danila Z. (1996) ..... Assistant Professor  
Theatre Arts  
M.F.A., Leningrad Institute of Theatre.
- Korostoff, Marilyn (1996) ..... Associate Professor  
Educational Psychology, Administration and Counseling  
B.A., University of California, Los Angeles; M.A., California State University, Long Beach; M.S., Pepperdine University, Irvine; Ed.D., University of California, Los Angeles.
- Koval, James E. (1985) ..... Professor  
Family and Consumer Sciences  
B.S., Creighton University, Nebraska; M.S., Texas Technological University; Ph.D., Oregon State University.
- Krause, Joseph H. (1955) ..... Professor  
Art  
B.A., M.S., Ed.D., University of Southern California.  
Emeritus, 1996.
- Krause, Marina C. (1968) ..... Professor  
Teacher Education  
B.A., University of Arizona; M.A., Ed.D., Arizona State University.
- Krumpak, Thomas J. (1986) ..... Professor  
Art  
B.F.A., San Francisco Art Institute; M.F.A., California State University, Long Beach.
- Kukalis, Salah M. (1986) ..... Professor  
Management/Human Resources Management  
B.S., M.B.A., The American University, Cairo; Ph.D., University of Arizona.
- Kumar, Rajendra (1983) ..... Professor  
Electrical Engineering  
B. Tech., M. Tech., Indian Institute of Technology; Ph.D., University of Newcastle, Australia.
- Kumpf, Lorraine E. (1987) ..... Associate Professor  
Linguistics  
B.A., Syracuse University; M.A., University of Colorado, Boulder; Ph.D., University of California, Los Angeles.
- Kunst, Robert J. (1969) ..... Professor  
Art  
B.S., Northern Illinois University; M.S., Kansas State College of Pittsburg; Ed.D., Arizona State University.
- Kural, Orhan (1996) ..... Professor  
Aerospace Engineering  
B.S., Robert College School of Engineering, Turkey; M.S., Purdue University; Ph.D., Purdue University.
- Kvapil, James A. (1988) ..... Director  
Center for Educational Applications of Brain Hemisphere Research  
..... Professor  
Art  
B.A., University of the Pacific; M.A., M.F.A., San Jose State University.
- Lacey, John M. (1989) ..... Professor  
Accountancy  
B.S., M.B.A., University of Southern California; Ph.D., University of California, Los Angeles.
- Lacourse, Michael G. (1990) ..... Associate Professor  
Kinesiology and Physical Education  
B.S., Springfield College, Massachusetts; M.S., Ph.D., Indiana University, Bloomington.
- Lam, Shui F. (1985) ..... Professor  
Computer Engineering and Computer Science  
B.S., Chinese University of Hong Kong; M.S., Ph.D., Pennsylvania State University.
- Lane, H. John (1963) ..... Professor  
Computer Engineering and Computer Science  
B.S., Gonzaga University; M.S., University of Washington; Ph.D., University of California, Los Angeles.
- Larson, Daniel O. (1988) ..... Associate Professor  
Anthropology  
B.A., M.A., University of Nevada, Las Vegas; Ph.D., University of California, Santa Barbara.
- Lathrop, Ann (1989) ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., Eastern New Mexico University; M.L.S., Rutgers; Ph.D., University of Oregon.
- Lau, Beth (1990) ..... Professor  
English  
B.A., M.A., Ph.D., University of Illinois, Urbana.
- Lauda, Donald P. (1983) ..... Dean  
College of Health and Human Services  
..... Professor  
Occupational Studies  
B.A., M.S., Wayne State College; Ph.D., Iowa State University.
- Lavay, Barry (1989) ..... Associate Professor  
Kinesiology and Physical Education  
B.S., Plymouth State College; M.S., Eastern Illinois University; Ph.D., University of New Mexico.
- Lax, Melvin (1977) ..... Professor  
Mathematics  
B.S., M.S., Ph.D., Rensselaer Polytechnic Institute.
- Le, Son V. (1986) ..... Professor  
Finance, Real Estate and Law  
B.S., M.S., Ph.D., Iowa State University.
- Leach, Mary Ellen (1968) ..... Associate Professor  
Kinesiology and Physical Education  
B.S., Florida State University; M.A., University of California, Santa Barbara.
- Lee, Helen C. (1987) ..... Assistant Professor  
Family and Consumer Sciences  
B.S., Ewha Woman's University, Korea; M.S., Washington State University, Pullman; Ph.D., University of Illinois, Urbana.
- Lee, Isaiah C. (1972) ..... Professor  
Social Work  
B.A., Taiwan Chung-Hsing University; M.S.W., University of Nebraska; M.P.H., Dr. P.H., University of California, Los Angeles. Emeritus, 1997.
- Lee, Jacqueline D. (1989) ..... Associate Professor  
Family and Consumer Sciences  
B.A., San Diego State University; M.S., California State University Los Angeles; Ph.D., University of California, Los Angeles.
- Lee, Ronald A. (1970) ..... Associate Vice President  
Information Management and Analysis  
B.A., University of Houston; M.S., Ph.D., University of Oklahoma.
- Lehman, Niles E. (1995) ..... Assistant Professor  
Biological Sciences  
B.S., M.A., University of California, Berkeley; Ph.D., University of California, Los Angeles.
- Leinbach, Oliver C. (1996) ..... Professor  
Design  
B.F.A., Ohio University, Athens; M.A., The Ohio State University, Columbus; M.B.A., Capital University, Columbus; J.D., University of Toledo.
- Leiter, William M. (1966) ..... Professor  
Political Science  
B.A., University of Massachusetts; M.A., Ph.D., University of Chicago.

- LeMaster, Barbara C. (1997) ..... Assistant Professor  
Anthropology/Linguistics  
B.A., University of California, Berkeley; M.A., Ph.D., University of California, Los Angeles.
- Lerner, Lawrence S. (1969) ..... Professor  
Physics and Astronomy  
B.A., M.S., Ph.D., University of Chicago.
- Leung, Alfred F. (1989) ..... Professor  
Physics and Astronomy  
B.A., M.S., and Ph.D., University of California, Los Angeles.
- Levine, Arthur M. (1974) ..... Professor  
Finance, Real Estate and Law  
B.A., Princeton University; L.L.B., Yale University.
- Lewis, Ralph J. (1972) ..... Professor  
Management/Human Resources Management  
B.S., Northwestern University; M.S., University of California, Irvine; Ph.D., University of California, Los Angeles.
- Li, San Pao (1976) ..... Professor  
Asian and Asian American Studies  
B.A., Tunghai University, Taiwan; M.A., Harvard University; Ph.D., University of California, Davis.
- Lieberman, Neil (1975) ..... Professor  
Art  
M.A., Pennsylvania State University.
- Lieu, Van T. (1967) ..... Professor  
Chemistry and Biochemistry  
B.S., University of California, Berkeley; M.S., Ph.D., University of Hawaii. Emeritus, 1996.
- Lim, Paulino M., Jr. (1967) ..... Professor  
English  
B.S., M.A., University of Santo Tomas, Philippines; Ph.D., University of California, Los Angeles.
- Lincoln, John R. (1968) ..... Professor  
Art  
B.A., M.A., California State University, Long Beach. Emeritus, 1994.
- Lindblom, Ronald A. (1997) ..... Assistant Professor  
Theatre Arts  
B.F.A., Wayne State University; M.F.A., California State University, Long Beach.
- Linden, James I. (1968) ..... Professor  
Psychology  
B.A., University of Michigan; M.A., Ph.D., Michigan State University.
- Lindgren, Kenneth (1985) ..... Head Coach  
Water Polo  
B.S., M.A., California State University, Long Beach.
- Lindner, Rhoda (1969) ..... Professor  
Psychology  
B.A., Brooklyn College; Ph.D., Indiana University.
- Little, Gary (1966) ..... Director  
Housing and Residential Life  
B.A., M.A., California State University, Long Beach.
- Littlejohn, Alice C. (1986) ..... Librarian  
B.A., American International College; M.B.A., Syracuse University; M.S., Drexel University.
- Liu, Dar-Biau (1986) ..... Professor  
Computer Engineering and Computer Science  
B.S., Taiwan Normal University; M.A., Wayne State University; Ph.D., University of Wisconsin, Madison.
- Liu, Jing (1992) ..... Associate Professor  
Physic/Astronomy  
B.S., Zhongshan University, China; M.S. and Ph.D., University of Michigan.
- Lobodzinski, Slawomir M. (1983) ..... Professor  
Electrical Engineering  
B.S., M.S., Technical University of Warsaw, Poland; Ph.D., Technical University of Vienna, Austria.
- Locklin, Gerald I. (1965) ..... Professor  
English  
B.A., St. John Fisher College, Rochester, New York; M.A., Ph.D., University of Arizona.
- Loeschen, Robert L. (1969) ..... Acting Associate Dean  
College of Natural Sciences and Mathematics  
..... Professor  
Chemistry and Biochemistry  
B.S., University of Illinois; Ph.D., University of Chicago.
- Loganbill, G. Bruce (1968) ..... Professor  
Communication Studies  
B.A., Bethel College; M.A., University of Kansas; Ph.D., Michigan State University.
- Lopez, Jose (1970) ..... Professor  
Chicano Latino Studies  
B.A., M.A., California State University, Fullerton; Ph.D., Claremont Graduate School.
- Lopez, Marco A. (1987) ..... Associate Professor  
Chemistry and Biochemistry  
B.S., California State University, Los Angeles; M.S., Ph.D., University of California, San Diego.
- Lopez, Rebecca A. (1990) ..... Assistant Professor  
Social Work  
B.A., University of California, Santa Cruz; M.S.W. and Ph.D., Brandeis University.
- Lowenthal, Alan S. (1969) ..... Associate Professor  
Psychology  
B.A., Hobart College, Geneva, New York; M.A., Ph.D., Ohio State University.
- Lowentrou, Peter M. (1984) ..... Professor  
Religious Studies  
A.B., University of California, Riverside; Ph.D., University of Southern California.
- Lu, Kau Un (1968) ..... Professor  
Mathematics  
B.S., National Taiwan University; Ph.D., California Institute of Technology.
- Luévano, Susan C. (1995) ..... Associate Librarian  
University Library and Learning Resources  
B.A., California State College, Stanislaus; M.L.S., University of Oregon.
- Luke, Keung P. (1966) ..... Professor  
Physics and Astronomy  
B.S., M.S., Ph.D., Massachusetts Institute of Technology.
- Lynch, Patricia A. (1996) ..... Assistant Professor  
Management/Human Resources Management  
B.A., Smith College; M.B.A., Memphis State University; Ph.D., Georgia State University.
- Ma, Yulong (1997) ..... Assistant Professor  
Finance, Real Estate, and Law  
B.S., Xi'an University of Electronic Science & Technology, China; M.B.A., University of Hawaii; Ph.D., University of Houston.
- MacDonald, Kevin B. (1985) ..... Professor  
Psychology  
B.A., University of Wisconsin, Madison; M.S., Ph.D., University of Connecticut.
- Macdonald, Pam (1979) ..... Director  
Child Development Center  
B.A., California State University, Long Beach.
- Macias, Elena (1997) ..... Assistant Vice President Sponsored Programs  
Administration and Finance  
..... Professor  
Social Work  
B.A., Sacramento State College; M.S.W., Ohio State University; Ph.D., Brandeis University.
- Madding, Caroly Conway (1989) ..... Associate Professor  
Communication Disorders  
B.S., Ohio State University; M.A., CSU Fullerton; Ph.D., Claremont Graduate University.
- Madison, Dan L. (1983) ..... Associate Professor  
Management/Human Resources Management  
B.A., M.B.A., California State University, Long Beach; Ph.D., University of California, Irvine.
- Magaddino, Joseph P. (1973) ..... Professor  
Economics  
B.A., Canisius College, New York; M.A., University of Connecticut; Ph.D., Virginia Polytechnic Institute and State University.
- Mahapatra, Sitikantha (1983) ..... Professor  
Accountancy  
B.S., Regional Engineering College, India; M.B.A., Indian Institute of Management, India; Ph.D., Case Western Reserve University.
- Maher, Karen J. (1996) ..... Assistant Professor  
Psychology  
B.S., Illinois State University; M.A., Ph.D., The University of Akron.
- Mahoney, Michael K. (1980) ..... Associate Vice President  
Academic Affairs, Information Technology  
..... Professor  
Computer Engineering and Computer Science  
B.A., M.A., Ph.D., University of California, Santa Barbara.

- Maltz, Carl (1986)** ..... Associate Professor  
Computer Engineering and Computer Science  
B.S., California Institute of Technology; M.S., Ph.D., University of California, Los Angeles.
- Mandel, Whitney S. (1989)** ..... Professor  
Journalism  
B.A., M.A., and Ph.D., University of Tennessee, Knoxville.
- Mangini, Shirley (1987)** ..... Director  
Center for Humanities  
..... Professor  
Romance, German, Russian Languages and Literatures  
B.A., University of New Mexico, Albuquerque; M.A., University of Texas, Austin; Ph.D., University of New Mexico, Albuquerque.
- Mangir, Tulin E. (1994)** ..... Professor  
Engineering Technology  
M.S., University of Southern California; B.S., Ph.D., University of California, Los Angeles.
- Manley, Steven L. (1988)** ..... Professor  
Biological Sciences  
B.A., California State University, Northridge; Ph.D., University of California, Los Angeles.
- Maples, Tracy B. (1992)** ..... Professor  
Computer Engineering and Computer Science  
B.S. and M.S., University of California, Riverside; Ph.D., University of California, Irvine.
- Margulies, William G. (1969)** ..... Professor  
Mathematics  
B.S., State University College, Long Island; M.A., Ph.D., Brandeis University.
- Maricich, Tom J. (1975)** ..... Professor  
Chemistry and Biochemistry  
B.S., University of Washington; M.S., Ph.D., Yale University.
- Markman, Roberta H. (1968)** ..... Professor  
Comparative Literature and Classics  
B.A., Hunter College; M.A., Columbia University; Ph.D., Occidental College. Emeritus, 1997.
- Marrs, Richard F. (1968)** ..... Associate Professor  
Teacher Education  
B.A., M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles.
- Marsh, Anthony (1989)** ..... Associate Professor  
Art  
B.F.A., California State University, Long Beach; M.F.A., Alfred University.
- Marsi, Kenneth L. (1961)** ..... Professor  
Chemistry and Biochemistry  
B.A., San Jose State University; Ph.D., University of Kansas. Emeritus, 1996.
- Marsot, Alain-Gerard (1968)** ..... Professor  
Political Science  
Licence en Droit, Certificat d'Aptitude a la Profession d'Avocat; Diplome d'Etudes Superieures de Science Politique; Doctorat d'Etat en Science Politique, Faculty of Law and Economics, Paris, France; B Litt., St. Anthony's College, Oxford, England.
- Martel, Diane L. (1968)** ..... Professor  
Art  
B.A., College of New Rochelle; M.A., Boston University.
- Martin, Claire E. (1988)** ..... Professor  
Romance, German, Russian Languages and Literatures  
B.A., M.A., University of Massachusetts, Amherst; Ph.D., Yale University.
- Martin, Rose Marie (1995)** ..... Associate Professor  
Accountancy  
B.S., St. Andrews Presbyterian College; M.B.A., Grand Valley State University, MI; Ph.D., University of Southern California.
- Martinez, Daniel G. (1964)** ..... Professor  
Mathematics  
B.A., M.A., University of California, Riverside; Ph.D., University of California, Los Angeles.
- Martinez, Larry F. (1989)** ..... Associate Professor  
Political Science  
B.A., M.A., Ph.D., University of California, Santa Barbara.
- Mason, Andrew Z. (1989)** ..... Professor  
Biological Sciences  
B.S., Ph.D., University of Wales.
- Matkin, Ralph E. (1987)** ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., Kansas Wesleyan University; M.Ed., University of Missouri, Columbia; Ph.D., Southern Illinois University, Carbondale.
- Mathews, Justus F. (1971)** ..... Professor  
Music  
B.A., M.A., California State University, Northridge; Ph.D., State University of New York, Buffalo.
- Maurer, Donald L. (1981)** ..... Professor  
Biological Sciences  
B.S., University of Illinois, Champaign; M.S., University of Washington, Seattle; Ph.D., University of Chicago.
- Maxfield, Lisa M. (1995)** ..... Assistant Professor  
Psychology  
B.S., M.S., Ph.D., Syracuse University.
- Maxson, Robert C. (1994)** ..... President  
..... Professor  
Educational Psychology, Administration and Counseling  
B.A., University of Arkansas at Monticello; M.A., Florida Atlantic University; Ed.D., Mississippi State University.
- Maxson, Sylvia P. (1995)** ..... Assistant Professor  
Teacher Education  
B.S., University of Houston; M.A., Ed.D., University of Nevada, Las Vegas.
- May, Charles E. (1967)** ..... Professor  
English  
A.B., Morehead State College; M.A., Ph.D., Ohio University.
- Mayberry, M. Adrienne (1975)** ..... Professor  
Nursing  
B.S., Tuskegee Institute; M.A., New York University; Dr. P.A., University of Southern California.
- McAbee, Douglas (1997)** ..... Assistant Professor  
Chemistry and Biochemistry  
B.A., Point Loma College; Ph.D., University of Texas Southwestern Medical School.
- McCauley, Joan E. (1969)** ..... Librarian  
B.A., University of California, Los Angeles; M.S., in L.S., University of Southern California.
- McClanahan, Jr., Lon (1993)** ..... Director  
Ocean Studies Institute  
B.S., University of Redlands; Ph.D., University of California, Riverside.
- McCulloch, Wendell H., Jr. (1974)** ..... Professor  
Finance, Real Estate and Law  
B.A., George Washington University; J.D., Yale University. Emeritus, 1997.
- McCullough, Thomas A. (1969)** ..... Professor  
Mathematics  
B.A., M.A., Ph.D., University of California, Los Angeles.
- McDonough, Patrick (1997)** ..... Professor  
Theatre Arts  
B.A., Moorhead State University; M.A., University of Kansas; Ph.D., University of Minnesota.
- McFarland, William (1995)** ..... Associate Professor  
Communicative Disorders  
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- McKay, Valerie C. (1988)** ..... Professor  
Communication Studies  
B.A., Humboldt State University; M.A., West Virginia University; Ph.D., University of Oklahoma.
- McLain, Susan (1993)** ..... Associate Professor  
Dance  
B.A., Herbert H. Lehman College, New York; M.F.A., University of Utah.
- McMillan, Sandra (1972)** ..... Professor  
Film and Electronic Arts  
B.A., University of Missouri; M.A., California State University, Los Angeles; Ph.D., University of Southern California.
- Medoff, Marshall H. (1979)** ..... Professor  
Economics  
B.S., Illinois Institute of Technology; M.S., University of Illinois, Champaign; Ph.D., University of California, Berkeley.
- Medora, Nilufer P. (1989)** ..... Professor  
Family and Consumer Sciences  
B.A., St. Xavier's College, India; M.S., Maharaja Sayajirao University, India; M.S., University of Arkansas; Ph.D., University of Nebraska.
- Mena, Roberto A. (1988)** ..... Professor  
Mathematics  
B.S., M.S., Ph.D., University of Houston.

- Mendez, Peter J. (1976) ..... Associate Professor  
Art  
B.A., M.A., California State University, Long Beach; M.F.A., University of California, Los Angeles.
- Merryfield, Kent G. (1988) ..... Associate Professor  
Mathematics  
B.A., Rice University; M.S., Ph.D., University of Chicago.
- Merryfield, Margaret L. (1984) ..... Associate Professor  
Chemistry and Biochemistry  
B.A., Rice University, Texas; Ph.D., University of Wisconsin, Madison.
- Mijares, Ernest R. (1965) ..... Professor  
Mechanical Engineering  
B.S., New York University; M.S.M.E., M.S.A.E., University of Southern California.
- Miller, Alan C. (1974) ..... Professor  
Biological Sciences  
B.A., Stanford University; M.A., Ph.D., University of Oregon.
- Miller, Edward (1968) ..... Professor  
Mechanical Engineering  
B.Ch.E., City College of New York; M.S., D. Engr. Sci., New York University.
- Miller, Julia I. (1988) ..... Professor  
Art  
B.A., Barnard College; M.A., University of Virginia; Ph.D., Columbia University.
- Minter, Eugene (1979) ..... Director  
University Student Union  
B.A., California State University, Long Beach; M.A., National University, San Diego.
- Mitchell, Deborah, H. (1994) ..... Associate Professor  
Music  
B.M. Ed., M.M. Ed., Hartt College of Music; D.M.A., University of Southern California.
- Mittleman, Leslie B. (1957) ..... Professor  
English  
B.A., M.A., University of California, Los Angeles; Ph.D., University of Chicago.
- Miyazaki, Akira (1969) ..... Associate Professor  
Asian and Asian American Studies  
B.A., Knox College; M.A., University of Hawaii.
- Mohamed-Nour, Hassan I. (1988) ..... Professor  
Electrical Engineering  
B.S., M.S., Assiut University, Egypt; Ph.D., University of Southern California.
- Moloi, Alosi J.M. (1994) ..... Associate Professor  
Black Studies/English  
B.A., M.A., University of South Africa; Ph.D., University of North, Republic of South Africa.
- Monat, Jonathan S. (1978) ..... Professor  
Management/Human Resources Management  
B.S., University of California, Los Angeles; M.S., San Diego State University; Ph.D., University of Minnesota, Minneapolis.
- Moore, Walter H., Jr. (1979) ..... Professor  
Communicative Disorders  
A.S., Mitchell College; B.A., M.S., University of South Florida; Ph.D., Kent State University.
- Moore-Steward, Thelma R. (1996) ..... Associate Professor  
Educational Psychology, Administration and Counseling  
B.A., California State University, Dominguez Hills; M.S., Ed.D., University of Southern California.
- Morgan, Tom D. (1967) ..... Professor  
Kinesiology and Physical Education  
B.A., M.A., California State University, Los Angeles; Ed.D., University of Southern California. Emeritus, 1995.
- Morley, Harvey N. (1989) ..... Professor  
Criminal Justice  
B.S., California State University, Northridge; M.S., Austin Peay State University; M.P.H., California State University, Northridge; Ed.D., University of Alabama.
- Morris, Raymond J. (1969) ..... Director  
Physical Therapy Assessment Center  
..... Professor  
Physical Therapy  
B.A., M.A., California State University, Long Beach; Certificate in Physical Therapy, University of Southern California; Registered Physical Therapist, California.
- Moshirvaziri, Khosrow (1990) ..... Associate Professor  
Information Systems  
B.S., Arya Mehr Technical University, Iran; M.S., Stanford University; Ph.D., University of California, Los Angeles.
- Moustafa, Mohamed E. (1969) ..... Professor  
Accountancy  
B. Comm., University of Cairo, Egypt; M.S., Ph.D., University of Illinois.
- Muller-Stach, Dieter K. (1968) ..... Professor  
Art  
Diploma, Academy of Fine Arts, Munich, Germany.
- Mulligan, William A. (1986) ..... Professor  
Journalism  
B.S., Brescia College; M.S., T.S.C.T., Murray State University; Ph.D., University of Missouri, Columbia.
- Mullins, Ruth G. (1973) ..... Professor  
Nursing  
B.S.N., California State University, Long Beach; M.S.N., University of California, Los Angeles.
- Mulvaney, Susan (1997) ..... Director  
Testing and Evaluation Services  
B.S., Radford College; M.S., University of Southern California; Ph.D., University of California, Los Angeles.
- Munsee, Jack H. (1968) ..... Professor  
Physics and Astronomy  
B.A., College of Wooster; M.S., Case Institute of Technology; Ph.D., Case Western Reserve University.
- Muraoka, Dennis D. (1982) ..... Professor  
Economics  
B.A., M.A., Ph.D., University of California, Santa Barbara.
- Murdock, Everett E. (1988) ..... Professor  
Educational Psychology, Administration and Counseling  
B.S., Arizona State University; M.S., M.A., Ph.D., University of Utah.
- Nagel, Glenn M. (1996) ..... Dean  
College of Natural Sciences and Mathematics  
..... Professor  
Chemistry and Biochemistry  
B.A., Knox College; Ph.D., University of Illinois Medical Center.
- Naimpally, Ashok V. (1978) ..... Professor  
Chemical Engineering  
B.S., Indiana Institute of Technology; M.S., Ph.D., Syracuse University.
- Nakayama, Kensaku (1987) ..... Associate Professor  
Chemistry and Biochemistry  
B.S., University of California, Los Angeles; Ph.D., University of California, Los Angeles.
- Naples, Caesar J. (1992) ..... Trustee Professor  
Finance, Real Estate and Law  
A.B., Yale University; J.D., State University of New York, at Buffalo.
- Nelms, Barbara J. (1974) ..... Professor  
Nursing  
B.S.N., University of Iowa; M.N., Ph.D., University of California, Los Angeles.  
B.A., Rutgers University; M.S., Ph.D., University of Miami.
- Newcastle, Helen P. (1969) ..... Professor  
Teacher Education  
B.S., M.A., University of Detroit; Ph.D., University of Arizona.
- Newman, J. Robert (1967) ..... Professor  
Psychology  
B.A., M.S., University of Massachusetts; Ph.D., University of Illinois.
- Nguyen, Loc T. (1989) ..... Associate Professor  
Accountancy  
B.A., Saigon University; B.A., National Institute of Public Administration; LL.M., M.B.A., San Diego State University; M.B.A., Fairleigh Dickinson.
- Nguyen, Richard P. (1984) ..... Professor  
Civil Engineering  
B.S., National Institute of Technology, Taiwan; M.S., Ph.D., University of Missouri-Rolla.
- Nguyen, Thinh V. (1986) ..... Professor  
Computer Engineering and Computer Science  
B.S., Ph.D., University of California, Irvine; M.S., University of Southern California.
- Nguyen, Van T. (1994) ..... Assistant Professor  
Civil Engineering  
B.S., M.S., Ph.D., University of Pennsylvania.
- Nieto, Consuelo (1975) ..... Professor  
Teacher Education  
B.A., Immaculate Heart College; M.A., Ph.D., Claremont Graduate School.
- Nishio, Alan T. (1972) ..... Associate Vice President  
Student Services  
B.A., University of California, Berkeley; M.P.A., University of Southern California.
- Noble, Charles (1987) ..... Professor  
Political Science  
B.A., Cornell University; M.A., University of California, Los Angeles; Ph.D., University of California, Berkeley.



- Noble, Vicente N. (1974)** ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., M.A., California State University, Los Angeles; Ph.D., Claremont Graduate School.
- Nolan, Lawrence P. (1997)** ..... Assistant Professor  
Philosophy  
B.A., M.A., Ph.D., University of California, Irvine.
- Nummedal, Susan G. (1972)** ..... Professor  
Psychology  
B.A., University of California, Berkeley; Ph.D., University of Minnesota.
- O'Donnell, Julie A. (1994)** ..... Associate Professor  
Social Work  
B.A., University of Wyoming; M.A., Eastern Washington College; Ph.D., University of Washington.
- Ohtmer, Ortwin A. (1986)** ..... Professor  
Mechanical Engineering  
Dr.-Ing., Technical University of Braunschweig, West Germany.
- Oishi, Eve B. (1997)** ..... Assistant Professor  
Women's Studies  
B.A., Swarthmore College; M.A., Ph.D., Rutgers University
- Oliver, John (1988)** ..... Professor  
Social Work  
B.A., California State University, Los Angeles; M.S.W., University of California, Los Angeles; Ph.D., Brandeis University.
- Oliver, Nancy Rainville (1988)** ..... Associate Professor  
Nursing  
B.S.N., Alverno College; M.S., University of Wisconsin, Milwaukee; Ph.D., New York University.
- Ortiz, Elizabeth T. (1983)** ..... Professor  
Social Work  
B.A., Barnard College; M.S., D.S.W., Columbia University.
- Osborne, Cynthia A. (1975)** ..... Professor  
Art  
B.A., Connecticut College; M.F.A., University of Wisconsin.
- Ostrowski, John W. (1988)** ..... Associate Professor  
Public Policy and Administration  
B.A., Youngstown State University; M.A., Ph.D., Kent State University.
- Outwater, Richard A. (1969)** ..... Professor  
Geography  
B.A., California State University, Chico; M.A., University of Oklahoma; Ph.D., University of Minnesota.
- Panagiotacopoulos, Nick D. (1980)** ..... Professor  
Electrical Engineering  
B.S., University of Athens, Greece; M.S., California Institute of Technology; Ph.D., Free University of Brussels, Belgium.
- Para, Donald J. (1988)** ..... Professor  
Music  
B.M., M.M., Western Michigan University; Ph.D., Michigan State University.
- Parentela, Emelinda M. (1996)** ..... Assistant Professor  
Civil Engineering  
B.S., Luzonian University Foundation, Philippines; M.S., Ph.D., University of Nevada, Las Vegas.
- Parker, Douglas A. (1968)** ..... Professor  
Sociology  
B.A., San Francisco State University; M.A., Ph.D., University of California, Berkeley.
- Pasion-Gonzales, Lori (1992)** ..... Psychologist  
Counseling and Psychological Services  
B.A., UC Santa Barbara; M.S., San Francisco State University; Ph.D., Pacific Graduate School of Psychology, Palo Alto.
- Pastrana, David E. (1973)** ..... Professor  
Finance, Real Estate and Law  
B.A., California State University, Los Angeles; J.D., University of California Berkeley.
- Peck, David R. (1967)** ..... Professor  
English  
B.A., Colgate University; Ph.D., Temple University.
- Pelters, Wilm (1970)** ..... Professor  
Romance, German, Russian Languages and Literatures  
M.A., Ph.D., Syracuse University.
- Perez y Perez, Leonardo (1980)** ..... Professor  
Mechanical Engineering  
B.S., M.S., Ph.D., University of California, Berkeley.
- Person, Dawn R. (1997)** ..... Associate Professor  
Educational Psychology, Administration and Counseling  
B.S., M.Ed., Slippery Rock University; Ed.D., Teachers College, Columbia University.
- Peters, Gary L. (1971)** ..... Professor  
Geography  
B.A., California State University, Chico; M.S., Ph.D., Pennsylvania State University.
- Petray, Clayre K. (1987)** ..... Professor  
Kinesiology and Physical Education  
B.A., Arizona State University, Tempe; M.A., Arizona State University, Tempe; Ph.D., Arizona State University, Tempe.
- Piar, Carlos (1990)** ..... Associate Professor  
Religious Studies  
B.S., Biola College; M.Div., Th.M., Talbot Theological Seminary; Ph.D., University of Southern California
- Pickard, Kenneth L. (1971)** ..... Associate Professor  
Information Systems  
B.S., Indiana State University; M.A., Ball State University; Ed.D., Northern Illinois University.
- Plax, Timothy G. (1987)** ..... Professor  
Communication Studies  
B.A., California State University, Long Beach; M.A., California State University, Long Beach; Ph.D., University of Southern California.
- Plecnik, Joseph M. (1985)** ..... Professor  
Civil Engineering  
B.E., Youngstown State University; M.S., Ph.D., Ohio State University.
- Po, Henry N. (1968)** ..... Professor  
Chemistry and Biochemistry  
B.S., Mapua Institute of Technology, Manila, Philippines; M.S., University of Wisconsin; Ph.D., University of California, Davis.
- Polakoff, Keith I. (1969)** ..... Associate Vice President  
Academic Affairs, Instructional Programs and Research  
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History  
B.A., Clark University; M.A., Ph.D., Northwestern University.
- Pomeroy, Charles W. (1970)** ..... Associate Professor  
English  
B.A., Occidental College; A.M., Ph.D., University of Southern California.
- Porter, Richard E. (1970)** ..... Professor  
Communication Studies  
B.A., California State University, Long Beach; M.A., San Diego State University; Ph.D., University of Southern California.  
Emeritus, 1996.
- Potts, Joseph P. (1996)** ..... Assistant Professor  
English  
B.A., Loras College; M.A., Ph.D., The University of Iowa.
- Potts, Marilyn K. (1989)** ..... Professor  
Social Work  
B.S., Purdue University; M.S.W., Indiana University, Indianapolis; Ph.D., Purdue University.
- Pounds, Micheal C. (1989)** ..... Professor  
Film and Electronic Arts  
B.A., University of Maryland, Baltimore; M.A., Ph.D., New York University.
- Preston, Louis A. (1970)** ..... Counselor  
Counseling and Psychological Services  
B. Mus. Ed., M. Ed., Texas Southern University.
- Prince, John H. (1974)** ..... Professor  
Music  
B.M., University of Redlands; M.A., California State University, Los Angeles.
- Pusavat, Yoko S. (1972)** ..... Professor  
Asian and Asian American Studies  
B.A., Osaka Women's University, Japan; M.A., California State University, Fresno.
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History  
B.A., San Francisco State University; M.A., Ph.D., University of California, Berkeley.
- Quest, Charles E. (1966)** ..... Professor  
Philosophy  
B.A., Duke University; Ph.D., Claremont Graduate School.
- Quezada, Maria S. (1996)** ..... Associate Professor  
Educational Psychology, Administration and Counseling  
B.A., California State University, Fullerton; B.A., M.Ed., University of La Verne; Ph.D., University of Southern California.
- Rahai, Hamid R. (1989)** ..... Professor  
Mechanical Engineering  
B.S., M.S., California State University, Long Beach; Ph.D., University of California, Irvine.
- Rahh, Amen (1970)** ..... Associate Professor  
Black Studies  
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Physics and Astronomy  
B.Sc., Ph.D., Imperial College, London.
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Learning Assistance Center  
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Chicano and Latino Studies  
B.A., M.A., Rosary College, Illinois; Ph.D., University of California, Los Angeles.
- Ramirez, J. David (1993)** ..... Director  
Center for Language – Minority Education and Research  
..... Professor  
Educational Psychology, Administration and Counseling/Teacher Education  
B.A., St. Mary's College, California; M.S., California State University, Hayward;  
Ph.D., Stanford University.
- Rasmussen, Karen (1989)** ..... Professor  
Communication Studies  
B.A., Dakota Wesleyan; M.A., University of Wyoming; Ph.D., University of Colorado,  
Boulder.
- Reddy, Harnatha C. (1987)** ..... Professor  
Electrical Engineering  
B.E., Sri Venkateswara University, India; M.S., University of Baroda, India; Ph.D.,  
Osmania University, India.
- Redmon, Jo A. (1964)** ..... Professor  
Kinesiology and Physical Education  
B.S., M.S., University of California, Los Angeles. Emeritus, 1997.
- Reiboldt, Wendy L. (1992)** ..... Assistant Professor  
Family and Consumer Sciences  
B.S., Miami University, Ohio; M.S. and Ph.D., Ohio State University.
- Reichard, Gary W. (1994)** ..... Associate Vice President  
Academic Affairs, Academic Personnel  
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History  
B.A., College of Wooster; M.A., Vanderbilt University; Ph.D., Cornell University.
- Resch, William M. (1964)** ..... Professor  
Psychology  
B.A., San Jose State University; Ph.D., University of Oregon. Emeritus, 1995
- Resurreccion, Richard L. (1978)** ..... Professor  
Occupational Studies  
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Finance, Real Estate and Law  
B.A., Hankuk University of Foreign Seoul, Korea; M.A., Kent State University; M.A.,  
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Finance, Real Estate and Law  
B.S., M.B.A., University of Southern California; J.D., Western State University.
- Rhodes, Fen (1967)** ..... Director  
Center for Behavioral Research and Services  
..... Professor  
Psychology  
B.S., Georgia Institute of Technology; M.S., George Washington University; Ph.D.,  
Ohio State University.
- Rice-Quint, Susan (1987)** ..... Professor  
Social Work  
B.A., State University of New York, Albany; M.S.W., Hunter College; D.S.W.,  
University of California, Los Angeles.
- Riosellis, Britt K. (1994)** ..... Assistant Professor  
Health Science  
B.A., M.S., Ph.D., University of Oregon.
- Riposa, Gerry (1989)** ..... Associate Professor  
Political Science  
B.A., Old dominion University; Ph.D., University of California, Riverside.
- Ritz, William C. (1977)** ..... Professor  
Science Education  
B.A., Ed.M., University of Buffalo; Ed.D., State University of New York at Buffalo.
- Roberts, Edwin A. (1991)** ..... Associate Professor  
Political Science  
B.A., University of Redlands; M.A., Ph.D., University of California, Riverside.
- Roberts, Pamela K. (1989)** ..... Associate Professor  
Human Development  
B.A., University of California, San Diego; M.A., Notre Dame; M.A., Western  
Michigan; Ph.D., University of Wisconsin.
- Roberts, Sharon L. (1974)** ..... Professor  
Nursing  
B.S., M.S., University of California, San Francisco; Ph.D., University of Southern  
California.
- Roberts, Thomas W. (1995)** ..... Associate Professor  
Family and Consumer Science  
B.A., Birmingham-Southern College; M.Div., Emory University; Ed.S., Georgia State  
University; Ph.D., University of Georgia.
- Robinson, Beryl L. (1993)** ..... Associate Professor  
Physical Therapy  
Physical Therapy Diploma, University of Alberta, Canada; M.S., University of  
California, Los Angeles.
- Robinson, Douglas W. (1989)** ..... Vice President  
Student Services  
B.S., M.S., Iowa State University, Ames.
- Robinson, James C. (1972)** ..... Associate Professor  
Black Studies  
B.A., M.A., California State University, Long Beach; M.A., Ph.D., Stanford University.
- Robinson, Thomas L. (1989)** ..... Associate Professor  
Engineering Technology  
B.S., San Jose State University; M.B.A., Pepperdine; Ph.D., Nova Southeastern  
University.
- Rodriguez, Jose I. (1995)** ..... Assistant Professor  
Communication Studies  
B.A., M.A., California State University, Long Beach; Ph.D., Michigan State University.
- Rooney, Robert F. (1970)** ..... Professor  
Economics  
B.A., M.A., University of California, Los Angeles; Ph.D., Stanford University.
- Rose, Madeleine P. (1989)** ..... Associate Professor  
Social Work  
B.A., M.A., D.S.W., University of California, Los Angeles.
- Ross, Ruth A. (1980)** ..... Associate Professor  
Public Policy and Administration  
B.A., M.A., Ph.D., University of Southern California.
- Ross, Stephen B. (1968)** ..... Professor  
Linguistics  
B.A., George Fox College, Newberg, Oregon; M.A., Ph.D., University of Southern  
California.  
B.A., Hiram College; M.Ed., Pennsylvania State University; Ph.D., Kent State  
University.
- Roze, Patricia D.** ..... Professor  
Psychology/Women's Studies  
B.A., California State University, Long Beach; M.A., Ph.D., University of California,  
Davis.
- Rozenek, Ralph (1988)** ..... Associate Professor  
Kinesiology and Physical Education  
B.S., M.S., University of California, Los Angeles, Ph.D., Auburn University.
- Rubio, Olga G. (1997)** ..... Associate Professor  
Teacher Education  
B.S., Texas A & I University; M.S., University of Texas at San Antonio; Ph.D.,  
University of Pennsylvania.
- Rueda, Alfonso (1989)** ..... Professor  
Electrical Engineering  
B.S., M.S., Massachusetts Institute of Technology; M.A., Ph.D., Cornell University.
- Runyon, Lowell R. (1968)** ..... Professor  
Finance, Real Estate and Law  
B.S., University of Colorado; M.B.A., D.B.A., University of Southern California.
- Rush, George E. (1973)** ..... Professor  
Criminal Justice  
B.S., M.S., California State University, Long Beach; Ph.D., Claremont Graduate  
School.
- Russo, Albert C. (1988)** ..... Professor  
Physical Therapy  
B.S., M.S., Ph.D., Louisiana State University, Baton Rouge.
- Ruyle, Eugene E. (1976)** ..... Professor  
Anthropology  
B.A., University of California, Berkeley; M.A., Yale University; Ph.D., Columbia  
University.
- Sachdeva, Darshan (1973)** ..... Professor  
Finance, Real Estate and Law  
B.A., Panjab University; M.S., Florida State University; Ph.D., University of  
California.

- Saint-Germain, Michelle A. (1995) ..... Director  
Bureau of Governmental Research and Services  
..... Associate Professor  
Public Policy and Administration  
B.A., University of California Berkeley; M.S., M.P.A., California State University,  
Hayward; Ph.D., University of Southern California.
- Salem, Sema'an I. (1961) ..... Professor  
Physics and Astronomy  
B.Sc., American University, Cairo, Egypt; Ph.D., University of Texas.
- Sample, James C. (1990) ..... Associate Professor  
Geological Sciences  
A.B., Cornell University; Ph.D., University of California, Santa Cruz.
- Samuelson, David N. (1966) ..... Professor  
English  
B.A., Drew University; Ph.D., University of Southern California.
- Sanchez, Federico A. (1969) ..... Professor  
Chicano Latino Studies  
B.A., California State University, Los Angeles; M.A., Ph.D., University of Southern  
California.
- Sanchez-H., Jose (1988) ..... Professor  
Film and Electronic Arts  
B.A., Universidad Autonoma de Guadalajara, Mexico; M.A., Ph.D., University of  
Michigan.
- Sandefur, Charles R. (1964) ..... Professor  
Kinesiology and Physical Education  
B.A., M.A., California State University, Long Beach.
- Sanders, Brenda M. (1986) ..... Professor  
Biological Sciences  
B.A., Wesleyan University; Ph.D., University of Delaware.
- Sanfilippo, David (1978) ..... Director  
Disabled Student Services  
B.A., San Jose State University.
- Sauceda, James S. (1988) ..... Director  
Multicultural Center  
..... Professor  
Communication Studies  
B.A., M.A., California State University, Long Beach; Ph.D., University of Southern  
California.
- Schefski, Harold K. (1986) ..... Professor  
Romance, German, Russian Languages and Literatures  
B.A., University of California, Davis; M.A., Ph.D., Stanford University.
- Schmidt, Paul C. (1968) ..... Associate Professor  
Political Science  
B.A., Hamline University, St. Paul, Minnesota; M.A., University of California,  
Berkeley; Ph.D., University of Washington.
- Schmidt, Ronald J. (1972) ..... Professor  
Political Science  
B.A., M.A., University of California, Berkeley; Ph.D., University of California,  
Riverside.
- Schmidt, Rosemary Taylor (1965) ..... Assistant Vice President  
Student Services  
B.A., California State University, Long Beach.
- Schugart, Kimberly A. (1989) ..... Associate Professor  
Chemistry and Biochemistry  
B.A., Northwestern; Ph.D., University of Wisconsin.
- Schwartz, Donald (1987) ..... Coordinator  
Secondary Education Single Subject Credential Program College of Liberal Arts  
..... Professor  
History  
B.A., City College of New York; M.A., Indiana University; Ph.D., New York University.
- Schwartz, Howard J. (1969) ..... Professor  
Mathematics  
B.S., M.S., Ph.D., University of Toledo.
- Schwartz, Morton D. (1970) ..... Professor  
Computer Engineering and Computer Science  
B.S., M.S., Ph.D., University of California, Los Angeles.
- Scott, Bruce L. (1965) ..... Professor  
Physics and Astronomy  
B.S., California Institute of Technology; M.A., University of Illinois; Ph.D., University  
of California, Los Angeles. Emeritus, 1996.
- Scott, George M. (1990) ..... Associate Professor  
Anthropology  
B.A., University of Texas, Austin; M.A., Ph.D., University of California, San Diego.
- Senzoan, Nail M. (1968) ..... Professor  
Chemistry and Biochemistry  
B.S., Brown University; Ph.D., University of California, Berkeley.
- Sexauer, Roxanne D. (1990) ..... Associate Professor  
Art  
B.F.A., University of Iowa; M.F.A., State University of New York, Purchase.
- Shaak, John J. (1962) ..... Professor  
Art  
B.S., Pennsylvania State University; M.A., Columbia University.
- Shahian, Bahram (1983) ..... Professor  
Electrical Engineering  
B.S., University of Texas, Austin; M.S., Stanford University; Ph.D., University of  
California, Los Angeles.
- Shapli, Tryntje (1983) ..... Professor  
Dance  
B.A., Bennington College.
- Shaw-Sutton, Carol (1989) ..... Associate Professor  
Art  
B.A., M.A., San Diego State University.
- Shen, Kwang Y. (1961) ..... Professor  
Physics and Astronomy  
B.S., Ph.D., University of Maryland.
- Shim, Jae K. (1981) ..... Professor  
Accountancy  
B.S., Seoul National University, Korea; M.B.A., Ph.D., University of California,  
Berkeley.
- Shumard, Bill (1994) ..... Director  
Athletics  
B.A., California State University, Long Beach.
- Shuster, Terrence A. (1989) ..... Professor  
Biological Sciences  
B.A., California State University, Northridge; Ph.D., University of Minnesota, Twin  
Cities.
- Sievers, Sharon L. (1968) ..... Professor  
History  
B.A., Augustana College; M.A., University of Nebraska; Ph.D., Stanford University.
- Silveira, Carlos A. (1997) ..... Assistant Professor  
Art  
B.S., Universidade Federal do Rio Grande do Sul; M.F.A., Northern Illinois  
University; Ph.D., Texas Tech University.
- Sinclair, William A. (1970) ..... Associate Dean  
College of Health and Human Services  
..... Professor  
Kinesiology and Physical Education  
B.S., M.A., Ph.D., University of New Mexico.
- Singh, Davinder (1983) ..... Professor  
Economics  
B.S., Benedict College; M.A., Duke University; Ph.D., University of South Carolina.
- Singhal, Bhupendra K. (1980) ..... Professor  
Design  
B.A., School of Planning and Architecture, New Delhi, India; M.A., University of  
Oregon, Eugene.
- Skalka, Bernard J. (1967) ..... Professor  
Theatre Arts  
B.S., M.A., University of Nebraska.
- Skov, Iva L. (1972) ..... Professor  
Economics  
B.S., M.A., South Dakota State College; Ph.D., University of Southern California.
- Slawski, Carl J. (1970) ..... Professor  
Sociology  
B.A., University of Southern California; M.A., University of California, Santa Barbara;  
Ph.D., University of Illinois.
- Slayton, Jeffrey C. (1986) ..... Associate Professor  
Dance  
Merce Cunningham Dance Studio, New York; Viola Farber Dance Studio, New York.
- Sluss, Sara B. (1995) ..... Associate Librarian  
University Library and Learning Resources  
B. of General Studies, Wichita State University; M.L.S., Emporia State University;  
M.S., Pace University.

- Smith, Craig R. (1988) ..... Director  
Center for First Amendment Studies  
..... Professor  
Communication Studies  
B.A., University of California, Santa Barbara; M.A., City University of New York,  
Queens; Ph.D., Pennsylvania State University.
- Smith, Judy E. (1980) ..... Professor  
Nursing  
B.A., M.A., University of California, Los Angeles; Ph.D., Claremont Graduate School.
- Smith, Nancy Jo (1987) ..... Professor  
Theatre Arts  
B.A., Midwestern State University; M.A., M.F.A., University of Michigan.
- Smith, Sara W. (1969) ..... Professor  
Psychology/Linguistics  
B.A., Wheaton College; Ph.D., University of Illinois.
- Snidecor, John C. (1969) ..... Professor  
Art  
B.A., M.A., California State University, Long Beach.
- Snider, Larry (1970) ..... Librarian  
B.A., M.S.L.S., University of Southern California.
- Snow, David A. (1988) ..... Head Coach  
Baseball  
B.A., California Polytechnic State University, San Luis Obispo; M.A., California State  
University, Fullerton.
- Snyder, Lynn S. (1988) ..... Professor  
Communicative Disorders  
B.A., College of New Rochelle; M.A., Seton Hall University; Ph.D., University of  
Colorado.
- Soe, Christian (1967) ..... Professor  
Political Science  
B.A., University of British Columbia; Doktor der Philosophie, Free University of  
Berlin.
- Sondhi, Lydia E. (1985) ..... Associate Professor  
Design  
B.S., University of Missouri, Columbia; M.S., Oklahoma State University; Ph.D.,  
University of Missouri, Columbia.
- Soni, Praveen K. (1991) ..... Professor  
Marketing  
B.T., Indian Institute of Technology; M.B.A., Indian Institute of Management; Ph.D.,  
Pennsylvania State University.
- Spangler, George A. (1971) ..... Professor  
Philosophy  
B.A., Pennsylvania State University; M.A., University of Nebraska; Ph.D., University  
of Alberta.
- Spiese, Richard D. (1967) ..... Associate Professor  
English  
B.A., M.A., Pennsylvania State University; Ph.D., University of New Mexico.  
emeritus, 1997.
- Spiller, Richard (1969) ..... Professor  
Marketing  
B.S., Syracuse University; M.B.A., Ph.D., University of California, Los Angeles.  
Emeritus, 1997.
- Splansky, Joel B. (1969) ..... Professor  
Geography  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Springer, Arnold R. (1968) ..... Professor  
History  
B.A., Ph.D., University of California, Los Angeles.
- Ssensalo, Bede (1977) ..... Professor  
Black Studies  
B.A., Makerere University, Uganda; M.A., Ph.D., University of California, Los  
Angeles.
- Stanley, M. Sue (1986) ..... Associate Professor  
Family and Consumer Sciences  
B.A., California State University, Chico; M.S., University of Arizona; Ph.D., Oklahoma  
State University.
- Stanton, Roger R. (1966) ..... Professor  
Management/Human Resources Management  
B.S., San Jose State University; M.B.A., California State University, Long Beach;  
D.B.A., University of Southern California.
- Stanton, Toni L. (1987) ..... Professor  
Biological Sciences/Women's Studies  
B.S., M.S., University of Maryland; Ph.D., Thomas Jefferson University,  
Pennsylvania.
- Stefani, Raymond T. (1971) ..... Professor  
Electrical Engineering  
B.S., Notre Dame University; M.S., Ph.D., University of Arizona.
- Stein, James D. (1989) ..... Professor  
Mathematics  
B.A., Yale; M.A., Ph.D., University of California, Berkeley.
- Steiner, Barry H. (1968) ..... Professor  
Political Science  
B.A., University of Southern California; Ph.D., Columbia University.
- Stern, Andrew (1967) ..... Professor  
Economics  
B.A., M.A., New York University; Ph.D., Columbia University.
- Stevens, A. Jay (1968) ..... Professor  
Political Science  
B.S., Brigham Young University; M.A., Ph.D., University of Maryland.
- Stevens, Thomas G. (1973) ..... Psychologist  
Counseling and Psychological Services  
B.A., University of Oklahoma; M.Th., Claremont School of Theg; M.A., California  
State University, Fullerton; Ph.D., University of Hawaii.
- Stone, Craig (1994) ..... Associate Professor  
American Indian Studies/Art  
B.A., M.A., M.F.A., California State University, Long Beach.
- Strahl, Ronald J. (1986) ..... Professor  
English  
B.A., DePauw University; M.A., Ph.D., Indiana University, Bloomington.
- Strybel, Thomas Z. (1987) ..... Director  
Center for Usability in Design and Software Assessment  
..... Professor  
Psychology  
B.A., Wayne State University; M.A., California State University, Los Angeles; Ph.D.,  
University of Arizona, Tucson.
- Stuart, Jack M. (1967) ..... Professor  
History  
B.A., Brooklyn College; Ph.D., Columbia University.
- Sullivan, Gerald L. (1968) ..... Professor  
English  
B.S., General Beadle State College, Madison, South Dakota; M.A., South Dakota  
University; Ed.D., Colorado State College.
- Sun, Dee Bruce (1990) ..... Professor  
Information Systems  
M.A., The Ohio State University; Ph.D., The University of Texas, Austin.
- Swigart, Leslie K. (1971) ..... Librarian  
B.A., University of Southern California; M.L.S., University of California, Los Angeles.  
M.A., California State University, Long Beach.
- Talmadge, Mary Christine (1993) ..... Professor  
Nursing  
B.S.N., University of Dayton, Ohio; M.P.H., Ph.D., University of Hawaii.
- Tang, Paul C. L. (1986) ..... Professor  
Philosophy  
B.S., University of British Columbia; M.A., Simon Fraser University, Canada; M.A.,  
Ph.D., Washington University, Missouri.
- Tarrow, Norma Bernstein (1968) ..... Professor  
Teacher Education  
B.A., Brooklyn College; M.S., Queens College; Ph.D., New York University.
- Tartre, Lindsay A. (1985) ..... Professor  
Mathematics  
B.A., M.A., San Diego State University; Ph.D., University of Wisconsin, Madison.
- Taylor, Linda Tiggs Thomas (1989) ..... Assistant Vice President  
Academic Affairs  
..... Acting Associate Dean  
College of Engineering  
B.A., M.B.A., J.D., University of California, Los Angeles.
- Teng, Robert K. F. (1989) ..... Professor  
Electrical Engineering  
B.S., Mississippi State University; M.S., Ph.D., Purdue.
- Thayer, Robert E. (1963) ..... Professor  
Psychology  
B.A., University of Redlands; Ph.D., University of Rochester.
- Thibeault, Marie C. (1989) ..... Associate Professor  
Art  
B.F.A., Rhode Island School of Design; M.A., San Francisco State University; M.F.A.,  
University of California, Berkeley.

- Thomas, Joy E. (1981) ..... Librarian  
B.A., California State University, Fullerton; M.S., University of Southern California; M.A., California State University, Long Beach.
- Timboe, Richard ..... Assistant Vice President  
Information Technology Services  
B.S., United States Military Academy; M. Eng., Boston University; J.D. Western State University, College of Law.
- Tjioe, Djoie T. (1970) ..... Associate Professor  
Biological Sciences  
B.S., Sioux Falls College; M.S., Ph.D., University of Wisconsin.
- Toma, Ramses B. (1984) ..... Professor  
Family and Consumer Sciences  
B.S., M.S., Ain Shams University, Egypt; M.P.H., University of Minnesota, Minneapolis; Ph.D., Louisiana State University, Baton Rouge.
- Toohy, Dale P. (1972) ..... Professor  
Kinesiology and Physical Education  
B.S., Washington State University; M.Ed., Ed.D., University of Massachusetts.
- Toossi, Reza (1991) ..... Professor  
Mechanical Engineering  
B.S., University of Technology, Iran; M.S., Ph.D., University of California, Berkeley.
- Torabzadeh, Jalal (1986) ..... Professor  
Mechanical Engineering  
B.S., Abadan Institute of Technology, Iran; M.S., Ph.D., University of Southern California.
- Torby, Bruce J. (1961) ..... Professor  
Mechanical Engineering  
B.M.E., City College of New York; M.S., University of California, Los Angeles; Ph.D., University of Southern California.
- Torres, Rodolfo D. (1989) ..... Professor  
Chicano Latino Studies and Public Policy and Administration  
B.A., University of California, Irvine; M.A.P.P. and Ph.D., The Claremont Graduate School.
- Torres, Sam M. (1995) ..... Associate Professor  
Criminal Justice  
B.A., California State University, Fullerton; M.A., Fordham University; Ph.D., Claremont Graduate School.
- Towner, Leonard W., Jr. (1955) ..... Professor  
Psychology  
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1986.
- Tsai, Chan-Feng (1982) ..... Professor  
Civil Engineering  
B.S., Cheng Kung University, Taiwan; M.S., University of Rhode Island, Kingston; Ph.D., University of California, Berkeley.
- Tsai, Shirley C. (1983) ..... Professor  
Chemical Engineering  
B.S., National Taiwan University; Ph.D., California Institute of Technology.
- Tsang, Chit-Sang (1988) ..... Professor  
Electrical Engineering  
B.S., Louisiana State University; M.S., Ohio State University; Ph.D., University of Southern California.
- Tsuchida, John N. (1995) ..... Director  
Center for Asian Pacific American Studies
- ..... Professor  
Asian and Asian American Studies  
B.A., International Christian University; M.A., Ph.D., University of California, Los Angeles; J.D., William Mitchell College of Law.
- Tucker, Robert E. (1997) ..... Assistant Professor  
Speech Communication  
B.A., M.A., San Diego State University.
- Turban, Efraim (1991) ..... Professor  
Information Systems  
B.S., Technion, Haifa, Israel; M.B.A., Ph.D., University of California, Berkeley.
- Turk, Theresa G. (1970) ..... Professor  
Sociology  
B.S., D'Youville College; M.S., University of North Carolina; M.A., Ph.D., University of California, Los Angeles. Emeritus, 1995.
- Turley, Harold S. (1995) ..... Assistant Professor  
Teacher Education  
B.A., Dartmouth College; M.A., California State University, Fullerton; Ed.D., Columbia University.
- Turner, M. Barbara (1966) ..... Professor  
Mathematics  
B.A., Cornell University; M.A., Columbia University.
- Tuveson, Richard V. (1983) ..... Associate Professor  
Family and Consumer Sciences  
B.A., St. Cloud State University; M.S., Ph.D., Iowa State University, Ames.
- Twigg, Renee A. (1997) ..... Director  
Student Health Services  
B.S., Mount St. Mary's College, Los Angeles; M.S., California State University, Los Angeles.
- Tyner, Judith A. (1970) ..... Professor  
Geography  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Uku-Wertimer, Skyne R. (1970) ..... Professor  
Black Studies  
B.A., Livingstone College; M.A., Ph.D., Howard University.
- Unt, Hillar, (1960) ..... Professor  
Mechanical Engineering  
B.S., M.S., Ph.D., University of Southern California.
- Vail, Leland S. (1995) ..... Assistant Professor  
Music  
B.M., M.A., California State University, Long Beach; D.M.A., Claremont Graduate School.
- Valentini, Robert C. (1989) ..... Professor  
Mathematics  
B.A., Carnegie-Mellon; M.S., Ph.D., Ohio State University.
- Van Camp, Julie (1990) ..... Associate Professor  
Philosophy  
A.B., Mount Holyoke College; J.D., Georgetown University; Ph.D., Temple University.
- Van Eimeren, James J. (1961) ..... Professor  
Art  
B.S., University of Wisconsin; M.S., Florida State University. Emeritus, 1994.
- Van Giffen, Katherine (1987) ..... Associate Professor  
Human Development/Educational Psychology, Administration and Counseling  
B.A., University of Puget Sound, Washington; M.A., Ph.D., University of Denver.
- Vessey-Schneider, Sandra (1997) .... Head Women's Water Polo Coach  
Sports, Athletics and Recreation  
B.A., California State University, Long Beach; M.A., Azusa Pacific University.
- Viera, John David (1983) ..... Professor  
Film and Electronic Arts  
B.A., University of Illinois, Urbana; M.A., San Francisco State University; Ph.D., J.D., University of Southern California.
- Viera, Maria L. (1989) ..... Associate Professor  
Film and Electronic Arts  
B.A., University of Illinois, Chicago; M.A., Sangamon State University; Ph.D., University of Southern California.
- Viet, Ngo N. P. (1989) ..... Associate Professor  
Mathematics  
B.S., University of Minnesota; Ph.D., University of California, Berkeley.
- Vipond, Dianne L. (1988) ..... Professor  
English  
B.S., McGill University, Montreal; M.A., Concordia University, Montreal; Ph.D., York University, Toronto.
- Vogel, Ronald E. (1991) ..... Professor  
Criminal Justice  
B.A., Western New England College; M.Ed., Springfield College; Ed.D., University of Massachusetts, Amherst.
- Vogt, Mary Ellen (1989) ..... Associate Professor  
Teacher Education  
B.A., Colorado State University; M.A., California State University, Stanislaus; Ed.D., University of California, Berkeley.
- Volper, Dennis J. (1988) ..... Professor  
Computer Engineering and Computer Science  
B.A., University of California, San Diego; M.S., San Diego State University; Ph.D., University of California, San Diego.
- Vu, Hung Viet (1988) ..... Professor  
Mechanical Engineering  
B.S., University of Washington, Seattle; M.S., Massachusetts Institute of Technology; Ph.D. University of Michigan.
- Wagdy, Mahmoud F. (1989) ..... Professor  
Electrical Engineering  
B.S., M.S., Cairo University; Ph.D., Kansas State University.
- Wakiji, Eileen (1991) ..... Associate Librarian  
B.A., University of California, Los Angeles; M.S.L.S., University of Southern California.

- Walter, C.J. (1993) ..... Dean  
College of Business Administration  
..... Professor  
Information Systems  
B.A., M.S., Ph.D., University of Iowa.
- Wang, Derming (1983) ..... Professor  
Mathematics  
B.A., National Chung Hsing University, Taiwan; M.A., Ph.D., University of Georgia, Athens.
- Wang, Rei-Tung (1985) ..... Professor  
Engineering Technology  
B.Ed., National Taiwan Normal University; M.Ed., University of Wisconsin-Stout/  
National Taiwan Normal University; Ed.S., University of Wisconsin-Stout; Ph.D.,  
University of Tennessee, Knoxville.
- Wardrip, Carolyn A. (1981) ..... Professor  
Communicative Disorders/Linguistics  
A.B., University of Redlands; M.A., Ph.D., Stanford University.
- Warner, Kenneth K. (1968) ..... Professor  
Mathematics  
B.A., Ph.D., University of California, Los Angeles.
- Warter, Stuart L. (1965) ..... Professor  
Biological Sciences  
B.A., M.A., University of Miami; Ph.D., Louisiana State University, Emeritus, 1997.
- Watson, Saleem H. (1986) ..... Professor  
Mathematics  
B.S., Andrews University; M.S., Ph.D., McMaster University, Canada.
- Wayman, Arthur K. (1976) ..... Associate Professor  
Mathematics  
B.A., California State University, Long Beach; Ph.D., University of California, Los  
Angeles.
- Webb, Charles H. (1987) ..... Professor  
English  
B.A., Rice University; M.A., University of Washington, Seattle; M.F.A., Ph.D.,  
University of Southern California.
- Weber, William A. (1968) ..... Professor  
History  
B.A., Harvard College; M.A., Ph.D., University of Chicago.
- Wegner, Daniel E. (1996) ..... Assistant Professor  
Recreation and Leisure Studies  
B.A., Wheaton College; M.A., North American Baptist Seminary; M.R.P.A., Clemson  
University; Ph.D., Texas A & M University.
- Weinstock, Donald J. (1969) ..... Professor  
English  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Werlick, Stephen G. (1964) ..... Professor  
Art  
M.F.A., Tulane University, Emeritus, 1995.
- Wheeler, Jean D. (1966) ..... Professor  
Geography  
B.S., M.S., Illinois State University; Ph.D., University of California, Los Angeles.
- Whisenand, Paul M. (1965) ..... Professor  
Criminal Justice  
B.S., M.S., Ph.D., University of Southern California.
- White, Barbara (1990) ..... Associate Professor  
Nursing  
B.S.N., Loyola University, Chicago; M.S., California State University, Long Beach.
- White, Elaine E. (1974) ..... Professor  
Nursing  
B.S.N., California State University, Long Beach; M.N., University of California, Los  
Angeles; Ed.D., University of Southern California.
- Whitney David J. (1995) ..... Assistant Professor  
Psychology  
B.S., Union College; M.A., Ph.D., Michigan State University.
- Wijte, Antonia (1996) ..... Assistant Professor  
Biological Sciences  
B.S., M.S., Free University Amsterdam, The Netherlands; Ph.D., University of  
Delaware.
- Wilcox, Richard P. (1967) ..... Senior Assistant Librarian  
B.A., B.S.Ed., University of Kansas; M.S.L.S., Kansas State Teachers College.
- Wiley, Mark L. (1994) ..... Associate Professor  
English  
B.A., M.A., California State University, Long Beach; Ph.D., University of Southern  
California.
- Wiley, Terrence G. (1989) ..... Professor  
Educational Psychology, Administration and Counseling/Linguistics  
B.A., M.A., California State University, Long Beach; Ph.D., University of Southern  
California.
- Williams, Betty (1989) ..... Professor  
Nursing  
B.S., Howard University; M.N., Case Western Reserve University; M.S., D.P.H.,  
University of California, Los Angeles.  
Emeritus, 1996.
- Williams, Emry W. (1996) ..... Assistant Professor  
Kinesiology and Physical Education  
B.A., Cardiff Institute of Higher Education, Wales, UK; M.A., California State  
University, Long Beach; Ph.D., The Ohio State University.
- Williams, J. Richard (1983) ..... Dean  
College of Engineering  
..... Director  
Center for Commercial Deployment of Transportation Technologies  
..... Professor  
Aerospace Engineering/Mechanical Engineering  
B.S., M.S., Ph.D., Georgia Institute of Technology.
- Wilson, Robert R. (1966) ..... Professor  
Computer Engineering and Computer Science/Mathematics  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Winchell, Robert E. (1966) ..... Professor  
Geological Sciences  
B.S., Stanford University; M.S., Michigan Technological University; Ph.D., Ohio State  
University, Emeritus, 1995.
- Wisner, Benjamin G. (1995) ..... Director  
Geography and International Studies Program  
..... Professor  
Geography  
B.A., University of California, Davis; M.A., University of Chicago; Ph.D., Clark  
University.
- Witkowski, Terrence H. (1982) ..... Professor  
Marketing  
B.A., Northwestern University, Illinois; M.S., University of California, Los Angeles;  
Ph.D., University of California, Berkeley.
- Wittich, William V. (1967) ..... Professor  
Occupational Studies  
B.A., California State University, Los Angeles; M.A., California State University, Long  
Beach; Ed.D., University of Southern California.
- Wolfinger, Mary F. (1990) ..... Associate Professor  
Marketing  
B.S., Vanderbilt University; M.B.P.A., Ph.D., University of California, Irvine.
- Wollmer, Richard D. (1970) ..... Professor  
Information Systems  
B.A., Pomona College; M.A., Columbia University; Ph.D., University of California,  
Berkeley.
- Woollett, Edwin L. (1966) ..... Professor  
Physics and Astronomy  
B.S., University of Missouri; Ph.D., Kansas State University.
- Wright, Claudia R. (1988) ..... Professor  
Educational Psychology, Administration and Counseling  
B.A., M.A., California State University, Los Angeles; Ph.D., University of Southern  
California.
- Wright, Teresa A. (1996) ..... Assistant Professor  
Political Science  
B.A., Santa Clara University; M.A., Ph.D., University of California, Berkeley.
- Wurzer, David J. (1972) ..... Professor  
Kinesiology and Physical Education  
B.S., M.A., Northern Michigan University; Ph.D., University of Utah.
- Wynston, Leslie K. (1965) ..... Professor  
Chemistry and Biochemistry  
B.S., San Diego State University; M.S., Ph.D., University of California, Los Angeles.
- Yamada, Teri A. (1995) ..... Director  
Center for Southeast Asian Studies  
..... Assistant Professor  
Comparative Literature and Classics  
B.A., University of California, Santa Barbara; M.A., Ph.D., University of California,  
Berkeley.
- Yates, Jerry W. (1974) ..... Professor  
Design  
B.A., California Polytechnic State University, San Luis Obispo; M.A., Indiana State  
University.

**Yavari, Parviz (1994)** ..... Associate Professor  
 Engineering Technology  
 B.S., Shiraz University; M.S., Ph.D., University of Southern California.

**Yeh, Hen-Geul (1983)** ..... Professor  
 Electrical Engineering  
 B.S., Cheng Kung University, Taiwan; M.S., Ph.D., University of California, Irvine.

**Yeh, Hsien-Yang (1988)** ..... Professor  
 Mechanical Engineering  
 B.S., Cheng-Kung University, Taiwan; M.S., Brown University; M.S., Columbia University; Ph.D., University of Southern California.

**Ying, William H. (1964)** ..... Professor  
 Civil Engineering  
 B.S., Taiwan Provincial Chenkung University; M.S., University of Missouri School of Mines and Metallurgy; Ph.D., Oklahoma State University.

**Young, Douglas E. (1988)** ..... Associate Professor  
 Kinesiology and Physical Education  
 B.A., M.S., Ph.D., University of California, Los Angeles.

**Young, Elizabeth V. (1989)** ..... Associate Professor  
 English  
 B.A., Cornell; M.A., Ph.D., University of Michigan.

**Young Owl, Marcus (1989)** ..... Associate Professor  
 Anthropology  
 B.A., California State University, Long Beach; M.A., Ph.D., University of California, Los Angeles.

**Yousef, Fathi S. (1972)** ..... Professor  
 Communication Studies  
 B.A., Ain Shams University, Egypt; M.A., Ph.D., University of Minnesota.  
 Emeritus, 1997.

**Yur-Austin, Jasmine T. (1995)** ..... Assistant Professor  
 Finance, Real Estate and Law  
 B.A., National Taiwan University; M.B.A., University of Missouri; Ph.D., University of California, Irvine.

**Zagustin, Elena (1967)** ..... Professor  
 Civil Engineering  
 Civil Engineer, Central University, Venezuela; M.S., Ph.D., Stanford University.

**Zarn, Randy (1984)** ..... Director  
 Student Transition and Retention Services (STARS/SOAR)  
 B.A., M.S., Western Illinois University.

**Zepeda, Rafael J. (1987)** ..... Professor  
 English  
 B.A., California State University, Long Beach; M.F.A., University of Oregon, Eugene.

**Ziener, William K. (1989)** ..... Associate Professor  
 Mathematics  
 B.S., Purdue; M.S., Carnegie Mellon; Ph.D., Carnegie Mellon.

**Zimmerman, Donald E. (1987)** ..... Professor  
 Electrical Engineering  
 B.S., M.S., Massachusetts Institute of Technology; M.D., Washington University, St. Louis.

# FAMILY AND CONSUMER SCIENCES

*College of Health and Human Services*

Department Chair  
Thomas W. Roberts

Department Office  
Family and Consumer Sciences Bldg., Room 001

Telephone  
(562) 985-4484

## Faculty

### Professors

Gail C. Frank  
Mary Jacob  
Carol E. Kellett  
James E. Koval  
Nilufer Medora  
Ramses B. Toma

### Associate Professors

Jeanne Bader  
Avery E. Goldstein  
Hazel O. Jackson  
Helen Lee  
Jacqueline Lee  
Lydia Sondhi  
Sue Stanley  
Richard V. Tuveson

### Assistant Professors

Wendy Reiboldt

### Graduate Advisor

Mary Jacob

### Department Secretary

Audrey F. Green

The faculty of the Department of Family and Consumer Sciences seeks to prepare men and women to enter professions concerned with enhancing the quality of individual following objectives have been articulated:

To prepare men and women to the highest standards for professions in family and consumer sciences and related fields requiring a bachelor's or master's degree.

To prepare students for successful careers within the diversity of human relations while enhancing their own physical, psychological and emotional development through the lifespan.

To provide continuing education and post-master's study in professional fields of Family and Consumer Sciences.

To provide information to a diverse student population and the community about current services and career opportunities as well as the potential for emerging professional careers in a changing society.

To employ the most effective methodology and useful resources on the university campus and in the surrounding communities. Provide the best quality program within the structure of the CSU system.

To continue creative and scholarly research for the future growth of the profession.

To apply knowledge gained from research and study to serve the needs identified in the university and surrounding community.

## *Accreditation*

The Department of Family and Consumer Sciences is accredited by the American Association of Family and Consumer Sciences (AAFCS) (American Association of Family and Consumer Sciences, Council for Accreditation, 1555 King Street, Alexandria, VA 22314, phone: 703-706-4600). The Didactic Program in Dietetics is approved and the Dietetic Internship is developmentally accredited by the American Dietetic Association (ADA) (Commission on Accreditation/Approval for Dietetics Education, American Dietetic Association, 216 West Jackson Boulevard, Suite 800, Chicago, IL 60606-6995, phone: 312-899-4872). The Preschool and Toddler Study Laboratories are accredited by the National Association for the Education of Young Children.

The Department of Family and Consumer Sciences offers programs of study leading to the Bachelor of Arts, Bachelor of Science, Master of Arts, and Master of Science degree.

Curricula are designed to provide a liberal education through study in the social and natural sciences, the humanities and the arts and to offer specialized instruction based on these disciplines which will lead to professional careers in family and consumer sciences and related fields.

Programs of study cover various aspects of the field: Child Development and Family Studies; Consumer Affairs; Nutrition, Foodservice Administration and Food Science; Gerontology; Apparel Design and Merchandising; and Communication.



Requirements for the Home Economics Single Subject Teaching Credential, eligibility for membership in the American Dietetic Association, preparation for careers in family and consumer sciences cooperative extension service, business and family and consumer sciences in community service may be met.

The department serves the needs of students completing majors in other fields who find that certain aspects of family and consumer sciences are important to their professional objectives or personal interest.

Degrees and Certificates Available in the Family and Consumer Sciences Department includes:

- Bachelor of Arts in Family and Consumer Sciences in five option areas (see below)
- Bachelor of Science in Dietetics and Food Administration in three option areas (see below)
- Master of Arts in Family and Consumer Sciences
- Master of Science in Nutritional Science
- Master of Science in Gerontology (specific requirements are listed under Gerontology)
- Dietetic Internship
- Child Development Certificate
- Foodservice Systems Administration Certificate
- Gerontology Certificate (Specific requirements are listed under Gerontology)

Information about Family and Consumer Sciences sponsored degrees and certificates are organized by degrees and options.

## Bachelor of Arts in Family and Consumer Sciences

The Department of Family and Consumer Sciences offers students a Bachelor of Arts degree in five option areas of study:

- Child Development and Family Studies
- Communication
- Consumer Affairs
- Fashion Merchandising
- Textiles and Clothing

Specific degree and certificate information as well as option requirements are as follows:

Requirements for all majors include a minimum of 124 units for the bachelor of arts degree. In addition to general education requirements (51 units), a minimum of 40 units in family and consumer sciences must be completed, 24 of which must be upper division. Students transferring from another college or university will receive transfer credit in required courses if the course is equivalent to the course at this University and it is first accepted by the University.

## Child Development and Family Studies (code 2-1012) (124 units)

The field of Child Development and Family Studies (CDFS) strives to improve the lives of children and families. As an integrative and interdisciplinary specialization, Child Development and Family Studies incorporates information from a variety of disciplines. Our primary focus is on utilizing the preventive approach to assist individuals and families. Career options for professionals in the field of CDFS are wide-ranging. Many of our graduates pursue the following opportunities: family life educator; child life specialist; teen pregnancy counselor; domes-

tic violence counselor; toy research and development professional; child care educator/administrator – infant and toddler care, preschool teaching, and school age programs; child development consultant; community resource and referral professional; parent educator; and a corporate human services consultant.

### Requirements

A/P 107 or 207; PSY 100; SOC 100 or ANTH 120; FCS 111, 211, 214, 232, 299, 311 or 314, 312, 321, 411, 412 or 413, 414 or 415, 492 or 497 or approved alternative, 499 plus 9 units of advisor approved electives. The student must select with an advisor's approval 15 units from FCS 233, 251, 319, 322, 323, 387, 410, 416A, 416B, 417, 418, 419, 433 or FCS courses not taken above. Each prerequisite course must be completed with a grade of "C" or better. A course in which a grade lower than "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than a "C" may proceed with other courses with approval of the Area Coordinator.

## Child Development Certificate (code 1-1040)

Child Development and Family Studies in the Family and Consumer Sciences Department provides an academic and professional background for working with children and families. It offers an interdisciplinary foundation in several areas that influence the life and education of children and families. Fieldwork opportunities where students have direct experiences with children and families in the community are provided.

The Certificate in Child Development may be earned in conjunction with the baccalaureate degree or teaching credential in Family and Consumer Sciences or related fields. Courses offered for the certificate may be the same ones used to satisfy, where applicable, major, minor, credential, general education or interdisciplinary requirements.

### Requirements

1. Bachelor's Degree in Family and Consumer Sciences or related field;

2. 36 units distributed as follows:

Lower division (12 units): FCS 111, 211, 214, 232.

Upper Division (24 units): FCS 311 or 314, 312I, 411, 413, 414 or 415, 416A, 418.

Successful completion of the Certificate in Child Development will be recommended by the Certificate Program Director.

Interested students should apply to Child Development Certificate Program Director, Dr. Richard Tuveson, Family and Consumer Sciences (562) 985-4487.

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## Child Development and Family Studies Courses

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111. The Preschool Child

211. Guiding Young Children

214. Environments for Young Children

311. Prenatal Development and Infancy

312I. Family and Personal Development

314. The Older Child

319. Family Stress and Coping

358. Fathers and Fathering

410. International Families: Families in Cross-Cultural Perspectives

\*411. Individual Child Study and Guidance

- \*412. Family Interaction
- \*413. Child and Family in the Community
- 414. Fieldwork with Preschool Children
- 415. Fieldwork with Infants/ Toddlers
- 416A. Introduction to Administration and Supervision of Child Development Programs
- 416B. Applications of Administration and Supervision of Child Development Programs
- 417. Premarital Intervention
- \*418. Parent Education
- \*419. Family Life Education

### Communication (code 2-1013) (124 units)

A B.A. in Family and Consumer Sciences: Communication prepares students for careers in business communications services and government agencies as well as for teaching youth and adult education programs. Courses in the program focus on enhancing the quality of life for diverse individuals and families through assignments and activities that promote solutions to problems encountered in daily living. Students who wish to teach in public schools and community colleges must complete requirements to earn the appropriate teaching credential. Career opportunities include: child care education; cooperative extension service; government and community agency services; teacher in junior and senior high school; adult or vocational education, and California community colleges; and education program specialist in business, industry and government.

#### Requirements

ART 100; CHEM 100; ECON 201 and 202 or 300, ENGL 100; ENGL 101 or 300 or 317; PSY 100; SOC 100 or ANTH 120; SPCH 210 and 210W; FCS 111, 222, 232, 233, 235, 251, 254, 275, 299, 312I, 321, 322, 323, 353, 387, 433, 486, 492 or 497 or advisor approved alternate, 499 plus 12 units of advisor approved electives. The student must select with an advisors approval 3 units from FCS 411, 412, 413, 414, or 415. Candidates for the Home Economics Single Subject Credential must take professional education requirements.

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#### Communication Courses

- 387. Consumer Technology
- \*486. Teaching-Learning Strategies in Family and Consumer Sciences
- \*488. Developing Occupational Programs in Family and Consumer Sciences
- \*490. Special Topics
- 492. Internship In Family and Consumer Sciences
- 497. Directed Studies
- 499. Perspectives in Family and Consumer Sciences
- EDSS 300H. Preliminary Directed Field Experiences
- EDSS 450H. Methods and Curriculum in Home Economic's Education

### Consumer Affairs (code 2-1014) (124 units)

Consumer Affairs provides students with a foundation in Consumer Advocacy, Personal Financial Management, and Housing Services. The program focuses on how businesses, government agencies, and community organizations interact with families and consumers. Career opportunities could include: consumer credit counselor, consumer protection agent, consumer educator, financial counselor, marketing consultant,

sales representative, customer service representative, paralegal, property manager, housing counselor, homeless coordinator.

ACCT 201; ECON 201 and 202 or 300; ENGL 101 or 317; FCS 299, 312I, 321, 322, 323, 326, 387, 420, 422, 425, 426, 427, 428, 429, 486, 492 or 497, 499; MKTG 300, 490; PSY 100; SOC 100; C/LA 250 or SOC 250, plus 9 units of advisor approved electives. Each prerequisite course must be completed with a grade of "C" or better. A course in which a grade lower than "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than "C" may proceed with other courses with approval of Area Coordinator.

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#### Consumer Affairs Courses

- 222. Contemporary Housing
- 309I. Consumer Survival in the Legal and Economic Environment: Selected Topics
- 321. Family and Consumer Resource Management
- 322. Family Housing and the Urban Community
- 323. Personal and Family Financial Management
- 326. Consumer Problems
- 420./520. Personal Finance for the Aging
- \*422. Housing Policies: Public and Private
- \*424. Independent Living for the Disabled and Elderly
- \*425. Personal Financial Planning Analysis
- \*426. Family Financial Problems
- \*427. Contemporary Issues in Consumer Affairs
- \*428. International Housing
- 429./529. Consumer Protection

### Apparel Design and Merchandising

A B.A. in Family and Consumer Sciences: Textiles and Clothing or Fashion Merchandising enables students to pursue careers in the design, production and merchandising of textile and apparel products and to meet individual and family textile and apparel needs. Career opportunities include: buyer-retailing, manufacturer's representative, product designer-pattern maker, store operations manager, stylist-fashion director, textiles (testing and evaluation) specialist.

Course requirements for a B.A. in Family and Consumer Sciences: Textiles and Clothing and Fashion Merchandising as well as a concentration in Apparel Design and Merchandising are:

#### Option in Fashion Merchandising (code 2-1015) (124 units)

ACCT 201; CHEM 100 or 111A; ECON 201 and 202 or 300; HIST 131; IS 240 or FCS 387; MKTG 300; PSY 100; SOC 100 or ANTH 120; FCS 251, 252 or 254, 255, 258, 299, 312I, 321\*, 351, 353, 355, 450\*, 455, 456, 457, 486, 492 or 497 and 499; plus 9 units of advisor approved electives. Each major course must be completed with a grade of "C" or better. A course in which a grade lower than "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than a "C" may proceed with other courses with approval of the Area Coordinator.

### Apparel Design and Merchandising Concentration

ACCT 201; CHEM 100 or 111A; ECON 201 and 202 or 300; HIST 131; PSY 100; SOC 100 or ANTH 120; FCS 251, 254, 255, 257, 258, 299, 312I, 321\*, 352, 353, 354, 355, 357, 387, 450\*, 452, 453, 454, 455, 456, 457, 486, 492 or 497 and 499. Each major course must be completed with a grade of "C" or better. A course in which a grade lower than "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than a "C" may proceed with other courses with approval of the Area Coordinator.

### Option in Textiles and Clothing (code 2-1016) (124 units)

CHEM 100 or 111A; ECON 201 and 202 or 300; HIST 131; PSY 100; SOC 100 or ANTH 120; FCS 251, 254, 255, 257, 258, 299, 312I, 321\*, 352, 353, 354, 357, 387, 450\*, 452, 453, 454, 456, 457, 486, 492 or 497 and 499. Each major course must be completed with a grade of "C" or better. A course in which a grade lower than "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than a "C" may proceed with other courses with approval of the Area Coordinator.

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### Apparel Design and Merchandising Courses

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- 251. Professional and Personal Apparel Selection
- 252. Analysis, Evaluation & Comparison of Ready-to-Wear
- 253. Survey of Textiles for the Contemporary Individual
- 254. Fundamentals of Apparel Production and Design
- 255. Introduction to the Fashion Industry
- 257. Apparel Design: Introduction to Flat Pattern
- 258. Pre-internship in Apparel Design and Merchandising
- 351. Fashion Promotion and Sales
- 352. Apparel Design: Computerized Pattern Making
- 353. Textiles
- 354. Apparel Design: Analysis of Garment Design, Tailoring and Production Processes
- 355. Fashion Merchandising Planning and Control
- 357. Apparel Design: Advanced Flat Pattern
- 450. Cultural Perspectives of Dress
- \*452. Apparel Design: Draping
- \*453. Quality Control in Apparel Design Merchandising
- \*454. Experimental Clothing
- \*455. Fashion Merchandising
- 456. Historic Perspectives of Fashion
- 457. International Textiles and Apparel
- \*458. Theories and Issues in Textiles and Clothing

### Bachelor of Science in Dietetics and Food Administration

Students must complete a minimum of 129 units to receive the Bachelor of Science degree in Dietetics and Food Administration. The courses which will provide these units are determined by the option chosen by the student. The Bachelor of Science degree consists of three options: Nutrition and Dietetics; Food Science; and Hospitality Foodservice and Hotel Management. The Nutrition and Dietetics option with appropriate elective selection fulfills the American Dietetic Association

(ADA) academic requirements for eligibility to apply for qualifying experiences required to become a Registered Dietitian.

Career opportunities include: clinical dietitian; consultant; community nutritionist; foodservice manager in hospitals, schools, universities, airlines, businesses; manager in the restaurant, hotel, or lodging industries; researcher in the food and nutrition industry, and government inspector in the food industry.

### Option in Nutrition and Dietetics (code 3-1009) (129 units)

Individuals choosing this option will concentrate their studies in the areas of nutritional science, medical nutrition therapy, community nutrition, food production and administration of foodservice operations, chemistry, physiology, plus a variety of supporting course work in related disciplines.

#### Requirements

A/P 207 or 342 and 342L; BIOL 260 or ED P 419 or H SC 403 or IS 310; CHEM 111A, 327, 448, 449; ENGL 100; ENGL 101 or 317; HRM 361 or PSY 381; IS 240; MICR 200; PSY 100; SOC 100; FCS 232, 233, 234, 235, 275, 299, 312I, 321, 331A, 331B, 332, 336, 436, 436L, 438, 461, 486; 3 units of 490 or 492 or 497, 499. Additionally, a minimum of 6 units of electives is selected in consultation with a faculty advisor. Recommended electives include: FCS 335, 337, 433, 439, 466, 492, 497. If a stronger foundation in Chemistry is desired, CHEM 320A and 320B may be selected instead of CHEM 327. If a stronger foundation in biochemistry is desired, CHEM 441A and 441B may be selected instead of CHEM 448.

Students who wish to take the Nutrition and Dietetics Option as a Pre-Professional degree (e.g., medical) should check with the appropriate programs to verify specific requirements.

### The American Dietetic Association Didactic Program

The ADA Didactic (Academic) Program in Dietetics is designed to provide students with a foundation of knowledge and skills in dietetics that will enable them to perform successfully in a dietetic internship or pre-professional practice program. The didactic program is currently granted approval status by the American Dietetic Association Council in Education, Division of Education Accreditation/Approval, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and the United States Department of Education. It is the responsibility of the student to consult with the ADA Didactic Program Director to verify current ADA requirements to become a Registered Dietitian.

Students who choose to meet ADA academic requirements must select FCS 335 and FCS 337 as electives in their major.

Students must receive a grade of "C" or better in the Didactic Program in Dietetics courses to receive verification of completion of the ADA approved program. Approval of student's academic program by the CSULB Didactic Program Director requires that the student complete courses FCS 337, 436L and 438 at CSULB.

### Option in Food Science (code 3-1010) (129 units)

The Food Science curriculum has an interdisciplinary focus which includes food science, food processing, sensory evaluation, nutrition, chemistry, and microbiology. The food industry careers awaiting graduates offer diverse opportunities as the world supply expands with technological developments in food product development, quality assurance, and food formulation and processing.

#### Requirements

A/P 207 or 342 and 342L; BIOL 260 or ED P 419 or H SC 403 or IS 310; CHEM 111A, 111B, 327, 448, or equivalent; ENGL 100, 317 or advisor approved course; MATH 119A; MICR 200, 473; MKTG 300; PHYS 100A; PSY 100, 230; SPCH 210; FCS 232, 234, 235, 299, 312I, 321, 331A, 332, 336, 338, 432, 435, 464, a minimum of 3 units of FCS 492 Internship, 3 units of FCS 497 as a capstone course in Food Science, 499.

### Option in Hospitality Foodservice and Hotel Management (code 3-1011) (129 units)

This program of study provides students with a basic foundation in hospitality foodservice and hotel management. The program focuses on restaurant and institutional foodservice management and provides students with the fundamentals for the effective operation of facilities in the foodservice/restaurant and hotel/lodging industries. A variety of support courses are required including those related to behavioral and social sciences, communications, business administration, leisure studies, natural and physical sciences, nutrition, economics, as well as other general education requirements and practical experience.

#### Requirements

A/P 107 or 207; ACCT 201; CHEM 100 or 111A or 202; ECON 300 or 201 and 202; ED P 419 or IS 310 or MATH 180 or H SC 403 or SOC 255; ENGL 100; FIN 324; HRM 360 or 361 or PSY 381; IS 240; MKTG 300; PHIL 160; PSY 100 or SOC 100; PSY 230 or PHIL 170; REC 241 or 211; SPCH 210; FCS 232, 233, 234, 235, 270, 275, 299, 321, 335, 336, 337, 372, 434, 437, 486, 492\* and 499. Additionally, a minimum of 12 units of pre-approved electives is selected in consultation with a faculty advisor. Recommended electives include: ACCT 310; GEOG 352; GERN 400I; REC 340I, 427, 462, 468; FCS 253, 309I, 312I, 319, 323, 331A or 433 or 439, 332, 429, 461, 464, 492\*, 497; or others as approved by advisor.

\*FCS 492 requires 800 hours of approved work experience as a prerequisite for this option.

### Foodservice Systems Administration Certificate (code 1-1070)

The Certificate program in Foodservice Systems Administration is designed to provide those students pursuing the bachelor's degree in Dietetics and Food Administration, Business Administration, and other related fields with additional background in foodservice management, increasing their expertise at the management entry level. The program is appropriate for a variety of applications, including foodservice in restaurants, catering, hospitals, public schools, industrial foodservice, hotels and motels, airlines, and in governmental regulatory agencies.

The Certificate may be earned in conjunction with the bachelor's degree or awarded subsequent to obtaining the degree at CSULB. Courses taken to meet the requirements of the Certificate may be the same ones used to satisfy major, minor or General Education requirements, or the degree requirements of the participating departments.

#### Requirements

1. A bachelor's degree in dietetics/food administration, business administration, or other related fields;
2. Satisfactory completion of the following courses:
  - A. Nutrition: FCS 232;
  - B. Food Preparation and Service: FCS 235, 275;
  - C. Foodservice Management: FCS 334, 335, 337, 434, 492;
  - D. Business Administration: ACCT 201, HRM 361, 362, 440, MGMT 300, MKTG 300, IS 240;
  - E. Related Fields: CHEM 202 and 302, ECON 300.
3. Maintain a GPA of 2.5 in the courses of the program and overall;
4. Consultation with and certification of successful completion by the Director of the Program in the Department of Family and Consumer Sciences.

Courses taken under the Credit/No Credit grading option may not be applied to this Certificate program.

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#### Dietetics and Food Administration Courses

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- 232. Introductory Nutrition
- 233. Applied Foodservice Sanitation
- 234. Orientation to Dietetics and Food Administration
- 235. Principles of Food Preparation
- 270. Introduction to Hospitality Foodservice and Hotel Management
- 275. Food Production Systems I
- 301. College Dining Services and Bookstore Administration
- 330. Dairy Science
- 331A. Fundamentals of Human Nutrition
- 331B. Fundamentals of Human Nutrition
- 332. Food Science
- 334. Fundamentals of Food Service Sanitation and Safety
- 335. Food Production Systems II
- 336. Cultural Aspects of Food and Nutrition
- 337. Foodservice Systems Management
- 338. Introduction to Food Processing
- 339. Metabolic Functions of Nutrients.
- 372. Hotel and Lodging Management
- 430. Nutrition and Health
- 432./532. Food Analysis
- 433. Nutrition in the Life Cycle
- \*434. Cost Control in Food Service Operations
- 435./535. Food Processing, Preservation and Packaging
- \*436. Advanced Nutrition
- \*436L. Nutritional Status Assessment Techniques
- 437. Beverage Management
- \*438. Medical Nutrition Therapy
- 439. Nutrition and Aging
- 461. Community Nutrition
- 464./564. Sensory Analysis of Foods

## Gerontology Certificate (code 1-1080)

A Certificate in Gerontology (24 units) may be earned in conjunction with the baccalaureate or master's degree. The purpose of this multidisciplinary program is to prepare specialists to work in the field of aging. Specific requirements are listed under Gerontology.

## Master of Arts in Family and Consumer Sciences (code 5-1020)

Each applicant must send the following materials to the Family and Consumer Sciences Graduate Coordinator (in addition to those sent to the Office of Enrollment Services):

1. official transcripts of undergraduate coursework;
2. three letters of recommendation (at least two of which are from professionals familiar with the student's scholastic performance); and
3. a completed Graduate Application form.

Admission to the department is dependent on approval by the department Graduate Coordinator.

### Prerequisites

1. A bachelor's degree with a major in Family and Consumer Sciences; or
2. A bachelor's degree with a minimum of 24 units of upper-division courses in Family and Consumer Sciences unless otherwise stated by the program area;
3. An undergraduate overall GPA of at least 3.0 and a GPA of at least 3.0 in the last 60 undergraduate units attempted. Students with less than a 3.0 GPA on the last 60 undergraduate units attempted, but who show promise in all other aspects, may be given special consideration after petitioning for admission into the program through the Graduate Coordinator;
4. Prerequisites for all courses carrying graduate credit must have been completed within seven years of taking the graduate courses. If the prerequisite is outdated, the prerequisite(s) may be repeated or credit obtained by examination;
5. Students deficient in undergraduate preparation must take courses to remove these deficiencies at the discretion of faculty in the specified subject matter area and the Graduate Coordinator.

### Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy;
2. Complete 9 units of graduate courses including FCS 696;
3. Pass the Writing Proficiency Examination;
4. Approval of the Graduate Coordinator, and Associate Dean of the College of Health and Human Services.

### Requirements

#### Thesis/Creative Project Students

1. Completion of a minimum of 30 units of approved upper-division and graduate courses with a minimum of 21 units in Family and Consumer Sciences;
2. At least 18 units of 500/600-level courses in Family and Consumer Sciences including FCS 696;
3. An approved course in statistics;

4. A thesis or creative project, FCS 698, plus oral thesis or creative project presentation.

#### Comprehensive Examination Students

1. Completion of a minimum of 36 units of approved upper-division and graduate course with a minimum of 21 units in Family and Consumer Sciences;
2. At least 18 units of 500/600-level courses in Family and Consumer Sciences including FCS 696;
3. An approved course in statistics;
4. A mini-research project, FCS 697, and a comprehensive examination.

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## Family and Consumer Sciences Courses

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- 511. Family Theories
- 515. Perspectives in Human Development
- 520./420. Personal Finance for the Aging
- 521. Decision Making in Home Management
- 529./429. Consumer Protection
- 550. Cultural Bases of Textiles and Apparel Design
- 552. Garment Design
- 559. Apparel Behavior
- 561. Curriculum Development in Family and Consumer Science
- 563. Evaluation in Family and Consumer Sciences
- 592. Internship in Family and Consumer Sciences
- 597. Independent Study
- 605. Seminar in Administration of Family and Consumer Sciences Programs
- 615A. Seminar in Child Development
- 615B. Seminar in Family Dynamics
- 625 A,B. Seminar in Family Finance and Home Management
- 655A. Introduction to Literature and Research in Apparel Design and Merchandising
- 655B. Apparel Product Development
- 665. Seminar in Family and Consumer Sciences
- 696. Research Methods
- 697. Directed Research
- 698. Thesis

## Master of Science in Gerontology (code 6-1040)

A Master of Science degree in Gerontology may be earned through the Department of Family and Consumer Sciences. This interdisciplinary program consists of 45 members of the Gerontology faculty interest group in 21 departments. Gerontology is the scientific study of the processes and phenomena of aging, including biological, psychological and sociological dimensions. Specific requirements are listed under Gerontology.

## Master of Science in Nutritional Science (code 6-1019)

The Master of Science Degree in Nutritional Science offers 3 emphases: Clinical/Community Nutrition, Food Science, and Foodservice Systems Management. These provide an opportunity for students to:

1. Specialize in clinical/community nutrition, food science and foodservice systems management;
2. Complete a master's degree and the academic requirements to qualify for membership in the American Dietetic Association concurrently and become eligible to apply to the Approved Dietetic Internship;

- Increase competence in food and nutrition subject matter in preparation for college teaching, research, graduate study beyond the master's degree and administrative positions in public and private agencies.

Each applicant must request that a copy of the official transcript(s) of college course work be sent to the Graduate Coordinator in the Department of Family and Consumer Sciences in addition to the copies required by the Enrollment Services Office. Three letters of recommendation and the general GRE score must be submitted to the department Graduate Coordinator to complete the application. At least two of these letters of recommendation must be written by persons familiar with the scholastic ability of the student. The student also must submit a completed graduate application. Admission to the program is dependent on approval by the department Graduate Coordinator.

#### Prerequisites

- A bachelor's degree with an undergraduate overall GPA of at least 3.0 and a GPA of 3.0 on the last 60 undergraduate units attempted. If students hold a 3.0 or better GPA and show academic potential for postgraduate study as judged by the GRE score (1350 minimum) they may be given conditional status;
- Students may be admitted to the program under conditional status for several reasons. Students are responsible for meeting all conditional requirements to be removed from conditional status prior to enrolling in 500/600 level courses:
  - Students who need to bring their GPA up to 3.0 must achieve a GPA of 3.0 within one year of admission. Courses taken to raise the GPA may not be included in the graduate program of study,
  - the student who needs to pass the Writing Proficiency Examination (WPE) must do so within one year of admission and must attempt the WPE the first semester of enrollment,
  - the student who needs to pass the Test of English as a Foreign Language (TOEFL) must do so within one year of admission, and/or
  - the student who needs to complete prerequisite deficiencies must do so using a program of study developed with the specialization area faculty advisor and approved by the Graduate Coordinator.
- Students from other disciplines will be required to complete prerequisite courses before enrolling in 500/600 level courses;
- Prerequisites for all courses carrying graduate credit must have been completed within seven years of taking the graduate courses. If any prerequisite is outdated, it may be repeated or credit obtained by written examination. Specifically, basic biological science courses and foundation nutrition and food science courses are evaluated for currency. A proficiency examination covering the content of FCS 331A and 332 courses is administered by the department for students in all emphases who have not taken these courses or their equivalents within the past five years. In addition, FCS 331B course content will be included in the proficiency examination for students in the Clinical/Community

Nutrition emphasis. Any student failing to pass the proficiency examination with a grade of "B" or better must take the appropriate course for credit;

- Entering graduate students will meet with the Graduate Coordinator to prepare a tentative degree program. In order to enroll in any graduate course, the student must complete all prerequisites and deficiencies and must obtain approval from the Graduate Coordinator.

#### Advancement to Candidacy

- Satisfy the general University requirements for advancement to candidacy;
- Completed 9 units of graduate courses, including FCS 696;
- Successful completion of Writing Proficiency Examination;
- Approval of the Graduate Coordinator, the Associate Dean of the College of Health and Human Services.

#### Requirements

- Completion of a minimum of 34 units of approved upper-division and graduate courses;
- At least 18 units of 500/600 level courses in Family and Consumer Sciences which include FCS 696, 697, 698 and those specified for the 3 emphases;
  - Clinical/Community Nutrition  
FCS 530A, 530B, 562, 591B or 635
  - Food Science  
FCS 533, 535, 562, 564, 597, 635, 532 pending course approval
  - Foodservice Systems Management  
FCS 533, 534, 562, 592, 635
- An advanced statistics course: EDP 519 or H/SC 503 or BIOL 563 or BIOL 565;
- Selection of appropriate electives by advisement to meet the competencies of each emphasis;
- An overall GPA of 3.0 or better;
- A written thesis;
- Oral presentation of the thesis.

#### American Dietetic Association (ADA) Approved Dietetic Internship

The Department of Family and Consumer Sciences offers a combined Master of Science in Nutritional Science and DI field experience program. This field experience fulfills the registration eligibility requirements of the American Dietetic Association (ADA) to become a Registered Dietitian. Upon successful completion of DI, the student will be eligible to write the Registration Examination for Dietitians.

The DI requires 1280 hours, 1187 hours of practice divided into three components: clinical dietetics, foodservice systems management and community nutrition. The Seminar in Dietetic Practice constitutes the remaining 93 hours of the DI. The field experience is conducted off campus at a variety of excellent facilities. Opportunities exist in acute and long-term health care sites, as well as in teaching, research, community and governmental agencies. Students will therefore receive training in general dietetics with experiences that expose them to various specialty areas.

## Admission Requirements

1. Completion of Program in Dietetics Didactic academic requirements as stipulated by ADA;
2. Earned baccalaureate degree;
3. GPA 3.0/4.0 scale required on the last 60 units of courses completed;
4. Related volunteer or work experience in the United States;
5. Graduate standing in the CSULB Master of Science, Nutritional Science program;
6. Application materials to Dietetic Internship Director including three letters of recommendation, formal ADA application, copies of all college transcripts and personal interview with Program Director and review committee.

## Program Requirements

Upon satisfactory completion of the Professional Practicum in Dietetics, FCS 591A and Seminar in Dietetic Practice, FCS 591B, and completion of two of the four core graduate courses, FCS 531, 533, 534, 562 or equivalent with a grade of "A" or "B", the student will be eligible to take the Registered Dietitian (R.D.) exam sponsored by the American Dietetic Association.

The 6 units of required graduate courses and a total of 2 units of FCS 591B are applicable toward the M.S. degree in Nutritional Science. Completion of the M.S. degree is not a requirement for completion of the Dietetic Internship. Students should contact the Dietetic Internship Director for complete details on this program.

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## Nutritional Science Courses

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- 530A. Carbohydrates, Lipids and Proteins
- 530B. Vitamins and Minerals
- 531. Advanced Community Nutrition
- 532./432. Food Analysis
- 533. Recent Advances in Food Science
- 534. Current Topics in Food-service Systems Research
- 535./435. Food Processing, Preservation and Packaging
- 562. Contemporary Issues in Nutrition
- 564./464. Sensory Analysis of Foods
- 591A. Professional Practicum in Dietetics
- 591B. Seminar in Dietetic Practice
- 635. Seminar in Food Science, Nutrition and Foodservice Systems Management

## Courses (FCS)

### Lower Division

111. Preschool Child (3)  
Prerequisites: PSY 100 or SOC 100 or ANTH 120 or equivalent (may be taken concurrently). Behavior and development in early childhood, with emphasis on the interaction of parents, children and teachers. (Lecture - discussion, 3 hours.) (CAN H EC 14)
211. Guiding Young Children (3)  
Prerequisites: PSY 100 or SOC 100 or equivalent. Processes, techniques, models, research, and selected issues in child guidance as applied to 3- to 5-year-old children in family and community settings. Development of a personal approach to guidance based on current scientific research and theory concerning child development. (Seminar 3 hours)

214. Environments for Young Children (3)  
Prerequisites: FCS 111 or HDEV 307I or equivalent. Introduction to designing professional care environments for infants, toddlers, and preschool children with emphasis on social, emotional, physical-motor, cognitive, and creative development in family and community settings. (Seminar 3 hours)

222. Contemporary Housing (3)  
Psychological, functional, technical and aesthetic concepts as they relate to individuals and families in housing environments. (Lecture-activity 3 hours.)

232. Introductory Nutrition (3)  
Essential nutrients, their physiological functions and human needs during the life cycle; food sources as applied to selection of an adequate diet; problems encountered providing food to meet nutritional needs; food additives and consumer protection. (Lecture-discussion 3 hours.) (CAN H EC 2)

233. Applied Foodservice Sanitation (1)  
This course is designed to acquaint students with the principles of sanitation and safety as applied to any restaurant or institutional foodservice facility. The course content includes: the cause, control and investigation of food borne illnesses; sanitary practices with purchasing, receiving, storing and preparing food; sanitary maintenance of kitchen, dining room and all equipment; personal hygiene; the safety of all equipment and the food handler; vector control; and safety practices. (Lecture-discussion, 1 hour.)

234. Orientation to Dietetics and Food Administration (2)  
Role of the professional in dietetics and food administration; orientation to career opportunities in Food, Nutrition and Foodservice Systems Management; personnel and physical facilities, including equipment in health care and mass feeding programs. (Lecture-discussion 1 hour, activity 2 hours.)

235. Principles of Food Preparation (3)  
Prerequisites: CHEM 100 or 111A or 202. Application of scientific principles in the preparation of selected food products with emphasis on the physical and chemical properties of food; methods and techniques of food preparation; factors that contribute to quality of prepared foods. (Lecture-discussion 2 hours, Laboratory 3 hours.) A course fee is required. (CAN H EC 8)

251. Professional and Personal Apparel Selection (3)  
Apparel selection for professional and personal needs based on design, culture and fashion. Wardrobe analysis, and coordination; consumer clothing and guidelines. (Lecture-discussion, 3 hours.) (CAN H EC 20)

252. Analysis, Evaluation & Comparison of Ready-to-Wear (3)  
Analysis of the quality of materials, design and construction in ready-to-wear garments and accessories; comparison of processes involved in manufacturing, concepts of sizing, principles of fit; aids in buying and selling. (Lecture-discussion 3 hours.)

253. Survey of Textiles for the Contemporary Individual (3)  
A consumer oriented approach to textile selection, use and care; provides a basis for logical, consistent rationale in choosing apparel, interior, and industrial textile products. (Lecture 3 hours.) (CAN H EC 6)

254. Fundamentals of Apparel Production and Design (3)  
Analysis of the interrelationship of garment design and apparel construction. Application of theories and methods of apparel design to garment construction. Traditional grading only for Majors. (Lecture-discussion 2 hours, Laboratory 3 hours.) (CAN H EC 10)

255. Introduction to the Fashion Industry (3)  
Organization, structure and interrelationship of industries and services that comprise the business of fashion; terminology, designers, trade organizations and publications. Professional opportunities explored. (Lecture-discussion 3 hours.)

257. Apparel Design: Introduction to Flat Pattern (3)  
Prerequisites: FCS 251 and 254. Introduction to the design concept as it applies to flat pattern manipulation. (Discussion 2 hours, Laboratory 3 hours.)

258. Pre-internship in Apparel Design and Merchandising (3)  
A structured work/learning experience in the retail industry designed to develop competencies required for successive performance in retail management or other fashion related fields. (Lecture-activity, 3 hours.)

270. Introduction to Hospitality Foodservice and Hotel Management (3)

Introduction to the hospitality foodservice and hotel industry and historical overview of the field. Careers in hospitality foodservice and hotel management are defined. Relationship of careers to the community and the foodservice and hotel/lodging industry are explored. Overview of the organization and current forces shaping foodservice and hotel operations. (Lecture-discussion, 3 hours.)

275. Food Production Systems I (3)

Prerequisites: FCS 232 and 235. Factors which influence individual, family and quantity foodservice. Menu planning and food selection, preparation and service in relation to management of time, energy and money. Foodservice practices for regular meals and special occasions. (Lecture-discussion 2 hours, laboratory 3 hours.) A course fee is required.

299. Themes and Issues in Family and Consumer Sciences (1)

Must be taken during first semester as Family and Consumer Sciences or Dietetics and Food Administration major. Study of home economics as a discipline of study and a profession in both historic and contemporary perspectives. An integrative, interdisciplinary framework is the basis for examining the relationship of each area of specialization to the mission of home economics and to the root disciplines. (Technical Activity, 2 hours.)

## Upper Division

301. College Dining Services and Bookstore Administration (3)

Prerequisite: Permission of instructor. Academic and experiential learning in the management of college dining services and bookstore. An internship for student employees of Forty-Niner Shops, Inc.; 150 hours of work experience, 18 hours of classroom instruction.

309I. Consumer Survival in the Legal and Economic Environment: Selected Topics (3) F,S,SS

Prerequisites: ENGL 100 and upper division status. A general consumer survival course with consideration of selected topics including the consumer as buyer of goods and services, the consumer as an investor, and the consumer in personal partnerships. Same course as ECON 309I and FIN 309I. (Lecture-activity 3 hours.)

311. Prenatal Development and Infancy (3)

Prerequisites: Upper-division standing, A/P 107 or 207, FCS 111. Human development from conception through prenatal development, childbirth, the neonatal period, infancy and toddlerhood with emphasis on the various aspects of development and the environmental/social factors essential for human growth. (Lecture-discussion 3 hours.)

312I. Family and Personal Development (3)

Prerequisites: PSY 100, SOC 100 or 142 or ANTH 120, ENGL 100 and upper-division status. Interdisciplinary introduction to the concepts underlying contemporary American family life and the influence of social and cultural conditions on human development. (Lecture-discussion 3 hours.)

314. The Older Child (3)

Prerequisites: FCS 111 or ED P 301 or PSY 361 or HDEV 307I or consent of instructor. Behavior and development in middle and late childhood and adolescence, with emphasis on individual and cultural differences. (Lecture-discussion 3 hours.)

319. Family Stress and Coping (3)

Prerequisites: ENGL 100 and ANTH 120 or PSY 100 or SOC 100 and upper division standing or consent of instructor. Examination of theories and research associated with stressors affecting family functioning throughout the lifecycle. Consideration given to both

normative transitions and non-normative stressors. Emphasis on strategies to assist families to deal productively with stress and change (Lecture-discussion, 3 hours.)

321. Family and Consumer Resource Management (3)

Prerequisites: Upper-division standing. Basic management principles applied to personal and family settings. The role of values, goal formation, decision-making, planning, implementing, and evaluation of managerial behavior in diverse family and cultural settings are examined. (Lecture-discussion, 3 hours.)

322. Family Housing and the Urban Community (3)

Prerequisites: Upper-division standing. Critical analysis of family housing in the urban community including aspects of shelter, city and service providers. Sociological, psychological, legislative, economic and technical factors are investigated. Special attention is given to families of various structures and socioeconomic background (Discussion 3 hours.)

323. Personal and Family Financial Management (3)

Prerequisite: Upper-division standing. A functional approach to personal finance including budget systems, consumer credit, insurance, debt collection system, status obligation, accumulating reserves. Applicable for personal and professional use. (Lecture-discussion 3 hours.)

326. Consumer Problems (3)

Prerequisite: Upper-division standing. A study of consumer problems, their effective prevention, and resolution through government, business, and private organizations with a view toward personal and professional interventions. (Lecture-discussion 3 hours.)

330. Dairy Science (2)

Prerequisites: FCS 232, 235. Study of dairy science from chemical microbiological quality assurance, processing techniques, nutritional values, and economic standpoints. Integration of recent technology as implemented to feature marketed dairy products both traditional and contemporary. (Lecture-discussion 2 hours.)

331A. Fundamentals of Human Nutrition (3)

Prerequisites: FCS 232, A/P 207, CHEM 302 or 327 or equivalent. Nutritional needs with emphasis on the physiological and chemical foundation for these needs; factors influencing nutrient needs. (Lecture-Discussion, 3 hours.)

331B. Fundamentals of Human Nutrition (3)

Prerequisites: FCS 331A. Nutritional needs with emphasis on changes through the life cycle. Introduction to dietary modifications in various pathological conditions. Introduction to nutrition assessment and nutrition education techniques. (Lecture-discussion, 3 hours.)

332. Food Science (3)

Prerequisites: CHEM 302 or 327, FCS 235, MICR 200 or equivalent. Composition and structure of foods: chemical changes in food that affect their color, flavor, texture, aroma, and nutritive quality during processing and preparation; techniques for food preservation. (Lecture - discussion 2 hours, laboratory 3 hours.) A course fee is required.

334. Fundamentals of Food Service Sanitation and Safety (3)

Basic biological information underlying good sanitary practices. Food-borne and waterborne diseases. Procedures for sanitation in the foodservice facility; sanitation-conscious employees; receiving and storage; food preparation and serving; proper dishwashing; facility and equipment cleaning; garbage and refuse disposal. General safety regulations including elementary first aid. (Lecture-discussion 3 hours.)

335. Food Production Systems II (3)

Prerequisites: FCS 233 and 275. Facilities at various types of quantity food operations are utilized to provide students with production and operational experiences – menu planning, costing, standardizing recipes, serving, merchandising, sanitation and safety. Field experiences include commercial and non-commercial settings such as hospitals, restaurants, hotels, school districts, universities, airlines and senior foodservice systems. (Lecture-discussion 2 hours, laboratory 3 hours.)



**336. Cultural Aspects of Food and Nutrition (3)**

Prerequisites: PSY 100 or SOC 100 or ANTH 120 or equivalent; FCS 232. Cross-cultural study of food and nutrition. Factors such as religion, food supply and socioeconomic status are considered as they influence nutritional status and food intake in various populations throughout the world. (Lecture 3 hours.)

**337. Foodservice Systems Management (3)**

Prerequisites: FCS 275 and 335. Principles of organizational management, cost control, personnel management, purchasing, facilities planning, and administration in foodservice operations. (Lecture-discussion 3 hours.)

**338. Introduction to Food Processing (3)**

Prerequisites: FCS 332. Study of industrial concepts of food processing and technology. Discussion of processing raw agricultural commodities through the production phases to a final product acceptable to consumers. (The course may include limited visitations to food preparation sites.) (Lecture-discussion 3 hours.)

**339. Metabolic Functions of Nutrients (1)**

Prerequisites: CHEM 302, A/P 207, and consent of instructor. Metabolic role of nutrients in the human body; practical application of nutrition to patient care. Open to Nursing Majors only. (Activity 2 hours.)

**351. Fashion Promotion and Sales (3)**

Prerequisites: FCS 251, 252 or 254, 255. Concepts, practices and procedures related to fashion promotion. Includes planning, directing and evaluating promotion activities such as visual merchandising, special events, publicity and personal and non-personal selling. (Discussion, 3 hours.)

**352. Apparel Design: Computerized Pattern Making (3) S**

Prerequisites: FCS 251, 255, 257 and 387. Use of computer aided design software for apparel pattern development. (Laboratory 6 hours.)

**353. Textiles (3)**

Prerequisites: CHEM 100 or 111A and FCS 255. Interrelationship of fiber, yarn, structure, fabric geometry and finishing treatments to the textile's appearance, comfort, durability and maintenance. (Discussion 2 hours, laboratory 3 hours.)

**354. Apparel Design: Analysis of Garment Design, Tailoring and Production Processes (3)**

Prerequisites: FCS 251, 254 and 255, or consent of instructor. Analysis of traditional and contemporary processes in the design and production of tailored apparel. Application of apparel design and production process for couture, ready-to-wear and individually produced garments. (Discussion 2 hours, Laboratory 3 hours.)

**355. Fashion Merchandising Planning and Control (3)**

Prerequisites: ELM Passage, ACCT 201, FCS 255, IS 240 or FCS 387, or consent of instructor. Concepts, practices and procedures as well as calculations and computer applications as they relate to apparel retail profit. Includes inventory methods, operating statements and purchase planning procedures. (Discussion, 3 hours.)

**357. Apparel Design: Advanced Flat Pattern (3) S**

Prerequisite: ELM Passage, FCS 251, 255, 257, and 353 (may be taken concurrently). Exploration of the total design concept as it applies to pattern manipulation. (Discussion 2 hours, laboratory 3 hours.)

**358. Fathers and Fathering (3)**

Prerequisites: PSY 100 and SOC 100 or FCS 111. An overview of the sociological and psychological literature on parenting with emphasis on fathers and fathering in the U.S. Focus on current literature and research regarding the perceived and changing roles of fathers. Discussion of fathers from various ethnic groups in an effort to diminish stereotypes. Same course as PSY 366. (Lecture-discussion 3 hours.)

**372. Hotel and Lodging Management (3)**

Prerequisite: FCS 270. Students will become acquainted with the organization and management of hotel and lodging facilities. The course covers the functions of various operational departments and how they interrelate. The importance of assuring quality guest service will be emphasized. Field trips may be required. (Lecture - discussion, 3 hours.)

**387. Consumer Technology (3)**

Prerequisites: FCS 299 and upper division standing. The impact of consumer technology on the quality of life of individuals and families in both home and home-based work environments. Computer application for consumers in family resource and household management, including problem-solving and decision-making. Professional applications. Analysis of social, psychological and economic impacts. (Discussion 2 hours, Laboratory 2 hours.)

**410. International Families: Families in Cross-Cultural Perspectives (3)**

Prerequisites: PSY 100 or SOC 100 or ANTH 120, or consent of instructor. Designed to provide students with an in-depth understanding of cross-cultural diversities in families from varied nationalities. Information concerning similarities and differences which exist in areas such as dating and marriage customs, family structures and family forms from selected cross-cultural families will be considered. Traditional grading only. (Lecture-discussion 3 hours.)

**\*411. Individual Child Study and Guidance (3)**

Prerequisite: Upper-division standing, FCS 311 or 314 or ED P 301 or HDEV 3071 or consent of instructor. Analysis and interpretation of theory, research, trends and techniques for the study and guidance of the individual child in family and community settings. (Lecture-discussion 3 hours.)

**\*412. Family Interaction (3)**

Prerequisites: Upper-division standing, FCS 312I, or consent of instructor. Dynamics of interaction and communication in interpersonal relationships throughout the family life cycle. Experience with a variety of communication skills in small group settings. (Lecture-discussion 3 hours.)

**\*413. Child and Family in the Community (3)**

Prerequisites: Upper-division standing, FCS 312I, or consent of instructor. Study of cultural varieties and the needs of the contemporary American family in an urban community; analysis of current issues and problems; identification of and experience with community resources and agencies. (Lecture-discussion 3 hours.)

**414. Fieldwork with Preschool Children (3)**

Prerequisites: FCS 111 and 214 or consent of instructor. Supervised teaching/learning experience with preschool children including development of skills for observation and assessment as well as curriculum planning, implementation, and evaluation. May be repeated for up to 6 units with assignments reflecting increasing levels of difficulty. (Lecture 1 hour, laboratory 6 hours.)

**415. Fieldwork with Infants/ Toddlers (3)**

Prerequisites: FCS 111 and FCS 214 or equivalents. Supervised teaching/learning experience with infants/toddlers, including development of skills for observation and assessment as well as curriculum planning, implementation, and evaluation. May be repeated for up to 6 units with assignments reflecting increasing levels of difficulty. (Lecture 1 hour, lab 6 hours)

**416A. Introduction to Administration and Supervision of Child Development Programs (3)**

Prerequisite: FCS 414. Minimum and recommended standards and laws pertaining to housing, equipment, play space, adult/child ratio, health supervision and meal service for children's programs. Selection and supervision of personnel, program planning and directing. (Lecture-discussion 3 hours.)

**416B. Applications of Administration and Supervision of Child Development Programs (3)**

Prerequisite: FCS 416 A. Decision theory and its application, communication strategies, planning, operating and evaluating programs for young children. (Lecture-discussion 3 hours.)

**417. Premarital Intervention (3)**

Prerequisites: FCS 312I or consent of instructor. Review of research on dating relationships and intervention programs designed for individuals or couples prior to marriage. Consideration of shyness, dating anxiety, intimacy, sexual decision-making, values clarification, self-disclosure, and conflict resolution. Emphasis on applying research to the development of programs to assist premarital individuals enrich their relationships. (Lecture-discussion 3 hours.)

- \*418. Parent Education (3)  
Prerequisites: FCS 413 and consent of instructor. Principles and techniques for working with parents in community and school programs. Assessment of needs and development of programs for adults in a variety of social and cultural settings. (Lecture-discussion 3 hours.)
- \*419. Family Life Education (2-3)  
Prerequisites: FCS 412 and 413 or consent of instructor. Concepts of family development and interaction with special emphasis on leadership opportunities for professional persons. (Lecture-discussion 3 hours.)
- 420./520. Personal Finance for the Aging (3)  
Prerequisites: 400-level course in Consumer Affairs or consent of instructor. Provides an understanding of the operations of personal finance as applied to the aging population. Topics include public and private sources of income, living expense, public and private sources of assistance, personal budget systems, financial planning, legal rights of the aged affecting their personal finances, and financial counseling for the aging. Same course as GERN 420/520. (Lecture-discussion 3 hrs)
- \*422. Housing Policies: Public and Private (3)  
Prerequisite: Upper division standing. Federal, state, and local policies, programs and legislation concerning housing and urban development. Analysis of the housing industry and its influence on the consumer market. (Discussion 3 hours.)
- \*424. Independent Living for Disabled and Elderly Persons (3)  
Prerequisite: FCS 321 or 322 or GERN 400I or consent of instructor. Independent living concepts related to physically and/or functionally disabled adults. Personal, environmental and programmatic responses to disability and aging. Activities include individual and group projects and site visits to such locations as an adapted private home, an Independent Living Center, a "special clothing" manufacturer, and a multipurpose rehabilitation center. Same course as GERN \*424. (Lecture/Activity, 3 hours.)
- \*425. Personal Financial Planning Analysis (3)  
Prerequisite: FCS 323 or consent of instructor. Analysis and protection of personal and family resources; planning and forecasting goals; development of financial strategies utilizing insurance, investment, tax management, pensions, wills and trusts. (Lecture-discussion 3 hours.)
- \*426. Family Financial Problems (3)  
Prerequisite: FCS 323 or consent of instructor. Theory and practice in the diagnosis of family financial crises; selecting alternative solutions; constructing practical methods for the prevention of family financial problems. (Discussion 2 hours, laboratory 3 hours.)
- \*427. Contemporary Issues in Consumer Affairs (3)  
Prerequisite: FCS 326. Exploration of issues and topics in consumer affairs including product development and liability, advertising, state and federal regulatory agencies, credit rating and avenues of consumer redress. (Discussion 3 hours.)
- \*428. International Housing (3)  
Prerequisite: Upper division standing. Theories and solutions of family housing in urban and rural communities throughout the world. (Discussion 3 hours.)
- 429./529. Consumer Protection (3)  
Prerequisites: Upper Division course in consumer affairs or consent of instructor. Concepts of consumer protection with analysis of a myriad of resources available for individuals and families with consumer problems. (Seminar 3 hours.)
430. Nutrition and Health (3)  
Prerequisite: Upper-division standing. Intensive study of nutrition including evaluation of current trends in food and nutrition. Designed for students in health education, elementary and secondary education, social service and other elective students. Not open to home economics majors. (Lecture-discussion 3 hours.)
- 432./532. Food Analysis (3)  
Prerequisites: CHEM 327, FCS 332 or equivalent. Application of scientific methods of food analysis. Consideration of the manner in which such variables as ingredients, proportions, and techniques in food preparation affect the quality of products. Experimental laboratory problems. (Lecture-discussion, 2 hours, laboratory 3 hours.) A course fee is required.
433. Nutrition in the Life Cycle (3)  
Prerequisite: FCS 232 or 331A or equivalent. Nutrition throughout the life cycle. Interaction of physical, biological, cultural and psychological factors involved in assessing and maintaining optimal nutritional health. Community nutrition programs introduced. (Lecture-discussion 3 hours.)
- \*434. Cost Control in Food Service Operations (3)  
Prerequisite: FCS 335 or consent of instructor. Financial management, including control of food, labor, equipment and other operational costs; principles and procedures used when purchasing food for foodservice operations; use of specifications; factors affecting quality; inventory management; development, utilization and maintenance of physical facilities; analysis of purchasing problems of foodservice managers. Field trips required. (Lecture-discussion 3 hours.)
- 435./535. Food Processing, Preservation and Packaging (3)  
Prerequisites: FCS 332 or consent of instructor. Methods and technological aspects in food processing, preservation and packaging. Application of principles and assessment of nutritional and physical qualities. Evaluation of chemical additives in food products. Microbiological aspects of food safety and food plant sanitation. (Lecture - discussion 2 hours, laboratory 3 hours.) A course fee is required.
- \*436. Advanced Nutrition (3)  
Prerequisites: FCS 331B, CHEM 448, 449 (may be taken concurrently). Metabolism of proteins, fats, carbohydrates, minerals and vitamins; interrelationship of nutrients; principles of determining nutritional requirements of individuals. (Lecture-discussion 3 hours.)
- \*436L. Nutritional Status Assessment Techniques (2)  
Prerequisites: FCS 436 (may be taken concurrently), CHEM 449. Designed to provide training in nutrition assessment and nutrition counseling. Use of procedures for interviewing, counseling and instructing patients/clients in various settings comparable to those encountered in dietetic practice. Includes laboratory methods for collection and interpretation of demographic, dietary, anthropometric, biochemical and clinical data. (Laboratory 3 hours, Clinical Practice 3 hours.)
437. Beverage Management (3)  
Prerequisites: FCS 335, FCS 337, senior standing. Identification, use and service of wines and other alcoholic beverages, with an in-depth analysis of the various elements of beverage operations including purchasing, control, merchandising and bar management. Field trips are made to hotels and restaurants to demonstrate and observe operating principles. (Lecture-discussion 3 hours.)
- \*438. Medical Nutrition Therapy (3)  
Prerequisites: FCS 436, 436L (may be taken concurrently). Therapeutic nutrition. Metabolic changes in specific pathological conditions; dietary modifications used for treatment. (Lecture-discussion, 3 hours.)
- \*439. Nutrition and Aging (3)  
Prerequisites: FCS 232 or A/P 207 or consent of instructor. Nutritional needs as related to physiological changes that occur during aging. Factors that influence food intake and nutritional status of the elderly. Diet adaptation for chronic diseases commonly found in older people. Same course as GERN \*439. (Lecture-discussion, 3 hours.)
450. Cultural Perspectives of Dress (3)  
Prerequisites: ENGL 100 and ANTH 120 or SOC 100 or 142 and upper division standing or consent of instructor. Factors influencing design of textiles and apparel, techniques of textile and apparel production, and human behavior in the selection of dress in societies and cultural groups are studied. Emphasis on symbolism of textiles and clothing designs as a communicative device for expressing social and cultural values. Impact of other cultures on western dress and impact of western dress on other apparel systems is included. (Seminar 3 hours.)

**\*452. Apparel Design: Draping (3)**

Prerequisites: FCS 353, 354 and 357, or consent of instructor. Exploration of the total design concept as it applies to fabric manipulation. (Discussion 2 hours, laboratory 3 hours.)

**\*453. Quality Control in Apparel Design and Merchandising (2)**

Prerequisites: FCS 255 and 353. The effect of textile fabric and apparel construction on garment performance. (Discussion 1 hour, activity 2 hours.)

**\*454. Experimental Clothing (3)**

Prerequisites: FCS 452 or consent of instructor. Exploration of clothing design and production through the experimental process. Individual investigation of the creative design process; evaluation of equipment; experiences with a variety of fabrics and techniques. (Discussion, 2 hours, laboratory, 3 hours.)

**\*455. Fashion Merchandising (3)**

Prerequisites: FCS 252 or 254, 255, senior standing, or consent of instructor. Application of merchandising concepts for the budgeting, planning, buying, promoting and selling of fashion goods and apparel in retail organizations. Traditional grading only. (Discussion 3 hours.)

**456. Historic Perspectives of Fashion (3)**

Prerequisites: FCS 251, 353, HIST 131, senior standing, or consent of instructor. Social, political, economic, geographic and religious forces that affect styles of fashion from antiquity to the present day. Emphasis is on the relationship of historic styles to current fashion. Primary focus is on the fashion influences of the western world. (Seminar 3 hours.)

**457. International Textiles and Apparel (3)**

Prerequisites: ECON 201 and 202 or 300, FCS 353, senior standing, or consent of instructor. International, political and economic issues relevant to the textile and apparel industries. Emphasis on understanding international aspects of the textile and apparel industries in the United States. (Seminar 3 hours.)

**\*458. Theories and Issues in Textiles and Clothing (1-3)**

Prerequisites: Six upper-division units in textiles and clothing or consent of instructor. Topics of current interest in textiles and clothing selected for intensive development. May be repeated for maximum of six units. Topics will be announced in the Schedule of Classes. (Discussion 1-3 hrs.)

**461. Community Nutrition (3)**

Prerequisites: Upper-division standing, FCS 331B. Survey of nutrition programs in community. Techniques of program planning, implementation, management evaluation. (Lecture-discussion 3 hours.)

**464./564. Sensory Analysis of Foods (3)**

Prerequisites: FCS 332, BIOL 260 or equivalent statistics; consent of instructor. Principles and methods of analysis of sensory attributes. Applications, advantages and limitations of sensory methods using trained judges and consumer panels. Computer use of statistical data analysis and plotting. Statistical analysis, data interpretation and comparison with previous literature. (Discussion, 2 hours, laboratory, 3 hours.) A course fee is required.

**466./566. Biochemical and Hormonal Adaptations to Physical Activity (3)**

Prerequisites: Upper-division undergraduate or Graduate standing; KPE 301 or equivalent; CHEM 111A or its equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. Study of the biochemical and hormonal changes that occur as a result of acute and chronic physical activity. Emphasis will be placed on the application of concepts to the development of exercise training programs. Upper-division undergraduate students register in FCS 466; graduate students register in FCS 566. Traditional grading only. Same as KPE 466./566. (Seminar 3 hours.)

**\*486. Teaching-Learning Strategies in Family and Consumer Sciences (3)**

Utilize the principles and concepts of each area of family and consumer sciences in developing a variety of teaching-learning experiences appropriate for individuals or groups in a community setting. (Laboratory 6 hours.)

**\*488. Developing Occupational Programs in Family and Consumer Sciences (3)**

Prerequisite: EDSS 300 H or teaching experience or consent of instructor. Utilizing knowledge and skills derived from the field of family and consumer sciences as a basis for offering occupational opportunities for youth and adult through planning programs in school and community. (Lecture-discussion 3 hours)

**\*490. Special Topics (1-3)**

Group investigation of selected topics. Topics will be announced in the Schedule of Classes. May be repeated for credit to a maximum of 9 units. (Seminar 1-3 hours.)

**490A. European Fashion Tour**

**490B. Fashion Tour of NY**

**490C. Fashion Tours LA**

**492. Internship In Family and Consumer Sciences (3)**

Prerequisites: Student must be a Family and Consumer Sciences major, have senior standing or be a Gerontology Certificate student, a 2.5 GPA overall or a 3.0 GPA in the option major and approval of a faculty member.

Apparel Design and Merchandising: FCS 453, 454, 455 and 457. Child Development and Family Studies: FCS 414 or 415 and 412 or 413 or 419.

Consumer Affairs: FCS 321, 323 and 326.

Communication: Consent of advisor.

Fashion Merchandising: FCS 455 and 457.

Food Science: FCS 331A and 332; it is recommended that students take FCS 432.

Gerontology: GERN 400I; ANTH 454; PSY 365 or HDEV 357I and consent of program director.

Hospitality Foodservice and Hotel Management: FCS 333, 335 and 800 hours of approved work experience.

Nutrition and Dietetics: FCS 331B, 332 and 333.

Textiles and Clothing: FCS 453 and 454.

Each prerequisite course must be completed with a grade of "C" or better. A course in which a grade lower than "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than a "C" may proceed with other courses with approval of the Area Coordinator. Field experience of 120 hours in which the student assumes a pre-professional role in an agency, business or other community setting. Internship supervisors monitor and evaluate student work based on preestablished criteria stated in the internship contract. The preestablished criteria in the contract consist of objectives developed by the student in consultation with the supervisor. The objectives and the placement site must be approved by the student's faculty advisor and the internship coordinator. Students evaluate the internship at the end of the experience. The course may be repeated for a maximum of six units. Same course as GERN 492. (Seminar 3 hours.)

**497. Directed Studies (1-3)**

Prerequisites: Upper class standing, consent of instructor. Independent study under the supervision of a faculty member. Exploration and experience in areas which are not a part of any regular course. May be repeated for a maximum of six units.

**499. Perspectives in Family and Consumer Sciences (2)**

Prerequisites: FCS 299, 321, 12 units of upper division coursework in Family and Consumer Sciences completed prior to enrollment. Must be taken in one of the last two semesters prior to graduation. Analysis of contemporary issues, public policies and future directions of family and consumer sciences as a discipline of study and as a profession with integrated specializations will be undertaken. A culminating outreach project is developed to emphasize the contribution of each specialization to the quality of life for individuals and families in an urban setting. (Lecture-discussion 2 hours.)

## Graduate Courses

### 511. Family Theories (3)

Prerequisite: FCS 412 or 413 or consent of instructor. Theoretical approaches to the study of the family; analysis of the process of interaction between the individual, the family and society with emphasis on current issues. (Seminar 3 hours.)

### 515. Perspectives in Human Development (3)

Prerequisite: FCS 411 or consent of instructor. Theory, trends and research toward maximum development of human potential as it applies to children in the family and community. (Seminar 3 hours.)

### 520./420. Personal Finance for the Aging (3)

Prerequisites: 400-level course in Consumer Affairs or consent of instructor. Provides an understanding of the operations of personal finance as applied to the aging population. Topics include public and private sources of income, living expense, public and private sources of assistance, personal budget systems, financial planning, legal rights of the aged affecting their personal finances, and financial counseling for the aging. Same course as GERN 520/420. (Lecture-discussion 3 hours.)

### 521. Decision Making in Home Management (3)

Prerequisites: 400-level course in home management or family finance; PSY 351 or SOC 335. In-depth course in the science of decision making as it can be applied to management in the home and in home economics. (Seminar 3 hours.)

### 529./429. Consumer Protection (3)

Prerequisites: Upper Division course in consumer affairs or consent of instructor. Concepts of consumer protection with analysis of a myriad of resources available for individuals and families with consumer problems. (Seminar 3 hours.)

### 530A. Carbohydrates, Lipids and Proteins (3)

Prerequisites: FCS 436, 436L, BIOL 260. Nutritional, metabolic and clinical aspects of carbohydrates, lipids and proteins. Current knowledge of interactions between macronutrients and assessment of needs. Traditional grading only. (Seminar 3 hours.)

### 530B. Vitamins and Minerals (3)

Prerequisites: FCS 436, 436L, BIOL 260. Nutritional, metabolic and clinical aspects of vitamins and minerals. Current knowledge of interactions between micro- and macro-nutrients. Principles of nutritional status assessment and determination of needs. Traditional grading only. (Seminar 3 hours.)

### 531. Advanced Community Nutrition (3)

Prerequisites: FCS 436 and 436L or 562; 461. Program planning and evaluation with emphasis on major nutrition-related public health problems. Students develop protocols for nutrition questionnaires, define a study sample and collect data. Skill development involves data analyses on computerized statistical packages, verbal and written communications. (Lecture-discussion 3 hours.)

### 532./432. Food Analysis (3)

Prerequisites: CHEM 327, FCS 332 or equivalent. Application of scientific methods of food analysis. Consideration of the manner in which such variables as ingredients, proportions, and techniques in food preparation affect the quality of products. Experimental laboratory problems. (Lecture-discussion, 2 hours, laboratory 3 hours.) A course fee is required.

### 533. Recent Advances in Food Science (3)

Prerequisites: FCS 432 or consent of instructor. New developments in food processing, techniques of food preservation, chemical additives. Food and water sanitation. Methods of standardization, preservation, and evaluation of quality. Retention of nutritive value, flavor, appearance, and safety of foods. (Lecture-discussion 3 hours.)

### 534. Current Topics in Food-service Systems Research (3)

Prerequisites: Graduate standing in food and nutrition or related fields. FCS 332, 335, 337, BIOL 260 (or equivalent). Study of recent research related to foodservice systems management. Extensive investigation of research data and techniques on special topics. Independent research will culminate in a research paper. (Discussion 2 hours, laboratory 3 hours.)

### 535./435. Food Processing, Preservation and Packaging (3)

Prerequisites: FCS 332 or consent of instructor. Methods and technological aspects in food processing, preservation and packaging. Application of principles and assessment of nutritional and physical qualities. Evaluation of chemical additives in food products. Microbiological aspects of food safety and food plant sanitation. (Lecture - discussion 2 hours, laboratory 3 hours.) A course fee is required.

### 550. Cultural Bases of Textile and Apparel Design (3)

Prerequisites: FCS 353, 450, 456, 457 or equivalents or consent of instructor. Factors influencing design and techniques of textile and apparel production in societies that create and use them. Symbolism of indigenous and adapted textile and clothing designs as a communicative device for expressing social and cultural values. Course may be repeated for up to six (6) units with assignments of increasing levels of difficulty. (Seminar 3 hours.)

### 552. Garment Design (3)

Prerequisites: FCS 452 or consent of instructor. Integration of problems encountered in garment design, fabric manipulation and clothing construction. The technical application of engineering principles involving pattern, fabric and the human form. Student research in design such as clothing for special needs. (Seminar 2 hours, laboratory 3 hours.)

### 559. Apparel Behavior (3)

Prerequisites: Admission to the Apparel Design and Merchandising emphasis in the Family and Consumer Sciences graduate program or consent of instructor. Psychological and sociological influences on the selection of professional and personal apparel. (Seminar 3 hours.)

### 561. Curriculum Development in Family and Consumer Sciences (3)

Prerequisite: Field experience in Home Economics, Family and Consumer Sciences or a related area. Current philosophies and principles basic in the analysis and organization of curricular programs and materials. (Seminar 3 hours.)

### 562. Contemporary Issues in Nutrition (3)

Prerequisite: FCS 436 or consent of instructor. Analysis of recent developments and current research in human nutrition. Topics include: nutrition through the life cycle; diet and dental health, athletic performance, human behavior, obesity, cancer; vegetarianism; practical application of scientific knowledge to diet management. (Seminar 3 hours.)

### 563. Evaluation in Family and Consumer Sciences (3)

Prerequisites: Upper division course in research methods (preferably FCS 696) and upper division course in statistics, or consent of instructor. Principles, design, and methods of evaluation for use by professional home economists. Selection and development of instrumentation for data collection and interpretation, methods of reporting for purposes of accountability. (Seminar 3 hours.) Traditional grading only. Same as GERN 563.

### 564./464. Sensory Analysis of Foods (3)

Prerequisites: FCS 332, BIOL 260 or equivalent statistics; consent of instructor. Principles and methods of analysis of sensory attributes. Applications, advantages and limitations of sensory methods using trained judges and consumer panels. Computer use of statistical data analysis and plotting. Statistical analysis, data interpretation and comparison with previous literature. (Discussion, 2 hours, laboratory, 3 hours.) A course fee is required.

### 566./466. Biochemical and Hormonal Adaptations to Physical Activity (3)

Prerequisites: Upper-division undergraduate or Graduate standing; KPE 301 or equivalent; CHEM 111A or its equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. Study of the biochemical and hormonal changes that occur as a result of acute and chronic physical activity. Emphasis will be placed on the application of concepts to the development of exercise training programs. Upper-division undergraduate students register in FCS 466; graduate students register in FCS 566. Traditional grading only. Same as KPE 466./566. (Seminar 3 hours.)

**591A. Professional Practicum in Dietetics (11)**

Prerequisites: FCS 531, 533, 534, 562, admission to the American Dietetic Association (ADA) Dietetic Internship (DI) and consent of instructor. Supervised on-site practicum in selected field settings preparing the student to meet performance requirements to qualify for the dietetic registration examination. A total of 22 units of FCS 591A are required to completion of the AP4, with a maximum of 11 units per semester. Not applicable toward the M.S. degree in Nutritional Science. Course may be repeated for a maximum of 22 units. (Clinical Practice.)

**591B. Seminar in Dietetic Practice (1)**

Concurrent enrollment in FCS 591A. Oral and written presentations, critical review of case studies and practices in the American Dietetic Association (ADA) Dietetic Internship (DI) field experience, FCS 591A Professional Practicum in Dietetics. A maximum of 2 units applicable to the M.S. degree in Nutritional Science. Traditional grading only. Course may be repeated for a maximum of 2 units. (Seminar 1 hour.)

**592. Internship in Family and Consumer Sciences/ Gerontology (3)**

Prerequisites: Graduate standing and consent of instructor. Field experience in which student assumes a self directed responsible role in an agency, business or other community setting. May be repeated to a maximum of six units. Same course as GERN 592. (Seminar 3 hours.)

**597. Independent Study (1-3)**

Prerequisites: FCS 400 level course in area of study. Varied learning activities utilized to achieve competency related to family and consumer sciences not offered in regular course. Written report required. (Projects.)

**605. Seminar in Administration of Family & Consumer Sciences/Gerontology Programs (3)**

Prerequisites: FCS 696 or GERN 696 or consent of instructor. Application of administration, management and leadership theories to family and consumer sciences/gerontology programs. Concepts include structure of organizations, leadership styles, management techniques, methods of analyzing and evaluating business systems, management philosophies and performance evaluation procedures. Activities and assignments focus on organization theory, planning, decision making and control techniques, in relation to leadership and management skills needed for success as a family and consumer sciences/gerontology administrator. Same course as GERN 605. (Seminar 3 hours.)

**615A. Seminar in Child Development (3)**

Prerequisites: FCS 511 or 515, 696 or consent of instructor. Area of study will be announced in the Schedule of Classes. (Seminar 3 hours.)

**615B. Seminar in Family Dynamics (3)**

Prerequisites: FCS 511 or 515, 696 or consent of instructor. Area of study will be announced in the Schedule of Classes. (Seminar 3 hours.)

**625 A,B. Seminar in Family Finance and Home Management (3,3)**

Prerequisites: A: Family Finance: FCS 529, 696. B: Home Management: FCS 521, 696. Area of study will be announced in Schedule of Classes. (Seminar 3 hours.)

**635. Seminar in Food Science, Nutrition and Foodservice Systems Management (1) F**

Prerequisite: Graduate standing. Presentation and discussion of advanced work in special fields. Must be repeated for credit for a minimum of two units and for not more than a total of three units. (Seminar 1 hour.)

**655A. Introduction to Literature and Research in Apparel Design and Merchandising (3)**

Prerequisites: FCS 559. Introduction to the literature and research in Apparel Design and Merchandising with emphasis on the substantive content and scope of the research. (Seminar 3 hours.)

**655B. Apparel Product Development (3)**

Prerequisites: ED P 419, FCS 655A and 696. An introduction to the research and strategies needed to develop apparel products and services for culturally diverse consumer markets. (Seminar 3 hours.)

**665. Seminar in Family and Consumer Sciences (3)**

Prerequisites: FCS 696, consent of instructor. Identification and critical analysis of current issues, trends and philosophies in family and consumer sciences. Exploration of possible future directions for family and consumer sciences as a discipline and a profession. Focus is on the mission of contemporary family and consumer sciences programs to improve the quality of life for individuals and families. Activities and assignments integrate concepts and theories in child development and family studies, consumer affairs, food and nutrition, gerontology, interior design and textiles, clothing and fashion merchandising. (Seminar 3 hours.)

**696. Research Methods (3)**

Prerequisite: Upper-division course in statistics (may be taken concurrently). Problems in family and consumer sciences with emphasis on the methods of research and use of the library. Required of all master's degree candidates in family and consumer sciences. (Seminar 3 hours.)

**697. Directed Research (1-3)**

Prerequisites: Advancement to candidacy, Family and Consumer Sciences 500-level course in area of study and 696. Independent study under the guidance of a faculty member. (Thesis.)

**698. Thesis (1-4)**

Prerequisites: Advancement to candidacy, approval of department graduate committee. Planning, preparation and completion of a thesis related to the family and consumer sciences field. (Thesis.)



# FEES

## Average Annual Cost of Education and Sources of Funds Per Full-Time Equivalent Student

The 23 campuses and the Chancellor's Office of The California State University are financed primarily through funding provided by the taxpayers of California. The total state appropriation to the CSU for 1997/98 (including capital outlay funding in the amount of \$153,000,000) is \$2,037,557,000. However, the total cost of education for the CSU system is \$2,631,016,000 which must provide support for a projected 258,000 full-time equivalent students (FTES). The number of full-time equivalent students is determined by dividing the total academic student load by 15 units per term (the figure used here to define a full-time student's academic load).

The total cost of education in the CSU is defined as the expenditures for current operations, including payments made to the students in the form of financial aid, and all fully reimbursed programs contained in state appropriations, but excluding capital outlay appropriations and lottery funds. The average cost of education is determined by dividing the total cost by the total FTES. The average cost is further differentiated into three categories: State Support (the state appropriation, excluding capital outlay), Student Fee Support, and Support from Other Sources (including federal funds).

Thus, excluding costs which relate to capital outlay, the average cost of education per FTE student is \$10,198. Of this amount, the average student fee support per FTE is \$2,263. (The State University Fee, application fee, and nonresident tuition are included in the average costs paid by the students; individual students may pay less or more than \$2,263, depending on whether they are part-time, full-time, resident, or nonresident students.)

	Amount	Avg Cost per FTE Student	%
Total Cost of Education**	\$2,631,016,000	\$10,198	100.0
• State Appropriation*	1,884,557,000	7,305	71.6
• Student Fee Support	583,866,000	2,263	22.2
• Support from Other Sources**	162,593,000	630	6.2
Detail:			
Total State Support (including capital outlay)	\$2,037,557,000		
Total Support (including State General Fund appropriation, student fee support, and support from other sources)	\$2,631,016,000		

\* Includes a supplemental appropriation of \$2.5 million for the Economic Improvement Initiative; does not include a \$5.1 million retirement reduction due to rate decreases during 1997/98; does not include \$6.5 million reappropriated for lease bond payments.

\*\* Based on final campus budget submissions subsequent to the passage of the Budget Act. Totals may differ slightly from other CSU published amounts.

## Schedule of Fees 1998-1999

Legal residents of California are not charged tuition. The following reflects applicable fees and nonresident tuition for the semester system in which CSULB operates. The following fees represent Fall 1998 and Spring 1999 semesters. (Fees are subject to change without notice.)

Students who wish to drop units AND to simultaneously or subsequently add the same number of units to accomplish this exchange may do so without financial penalty in State University Fees, provided this exchange in units meets all other signature requirements. This activity may not occur later than 14 days following the day of the term when instruction begins, which is the normal refund deadline date.

## Procedure for the Establishment or Abolishment of a Student Body Fee

The law governing The California State University provides that a student body fee may be established by student referendum with the approval of 2/3 of those students voting. The Student Body Fee was established at CSULB by student referendum on December 12, 1985. The same fee can be abolished by a similar 2/3 approval of students voting on a referendum called for by a petition signed by 10% of the regularly enrolled students (Education Code, Section 89300.)

The level of the fee is set by the Chancellor. An increase in the student body fee may be approved by the Chancellor only following a referendum on the fee increase approved by a majority of students voting. Student body fees support a variety of cultural and recreational programs, child care centers, and special student support programs.

## All Students

Application Fee (nonrefundable), payable by check or money order at time application is made: \$55.00

### Undergraduates

#### State University Fee (per semester)

0.1 units to 6.0 units .....	\$438.00
6.1 units or more .....	\$753.00

#### Other Mandatory Activity Fees (per semester)

Facilities Fee .....	\$3.00
Instructionally Related Activities Fee (IRA) .....	\$25.00
Associated Students Inc. Fee .....	\$17.00
University Student Union Fee .....	\$50.00
Student ID Card .....	\$1.00
Student Health Services Fee .....	\$35.00

#### Total Resident Fees Per Semester

0.1 to 6.0 units .....	\$569.00
6.1 or more units .....	\$884.00

### Graduates

#### State University Fee (per semester)

0.1 units to 6.0 units .....	\$459.00
6.1 units or more .....	\$792.00

#### Other Mandatory Activity Fees (per semester)

Facilities Fee .....	\$3.00
Instructionally Related Activities Fee (IRA) .....	\$25.00
Associated Students Inc. Fee .....	\$17.00
University Student Union Fee .....	\$50.00
Student ID Card .....	\$1.00
Student Health Services Fee .....	\$35.00

#### Total Resident Fees Per Semester

0.1 to 6.0 units .....	\$590.00
6.1 or more units .....	\$923.00

No fees of any kind shall be required of or collected from those individuals who qualify for such exemption under the provisions of the Alan Pattee Scholarship Act.

### Nonresident Students (U.S. and Foreign) Tuition

Non-Resident Tuition is charged to all U.S. non-California residents and Foreign students. Tuition is \$246.00 per unit, in addition to applicable State University and Other Mandatory Fees. (Tuition is subject to change by State Legislative action without notice.)

The total fee paid per term is determined by the total number of units taken, including those in excess of fifteen units.

### Optional Fees (per semester)

The following represents rates for the Fall 1998 and Spring 1999 semesters and are subject to change.

Motorcycle and Moped Parking (per semester) .....	\$15.75
Automobile Parking (per semester) .....	\$63.00
Replacement Parking Permit .....	Full Price

### Other Fees and Charges (non-refundable)

Late Registration .....	\$25.00
Application and Reapplication Fee .....	\$55.00
Diploma/Commencement Fee .....	\$40.00
Duplicate Cash Receipt .....	\$7.00
Missed Deadline Fee .....	\$10.00
Dishonored Check Charge .....	\$20.00
(If the Dishonored Check was for payment of registration fees, the Late Registration Fee may also apply)	
Disputed Credit Card Charge .....	\$10.00
Complete transcript of record .....	\$4.00
Replacement of Student ID Card .....	\$5.00

REMINDER: Fees are Subject to Change Without Advance Notice

Payment of State University Fee, other mandatory activity fees (as detailed earlier in this section under "All Students") and any other obligations must be paid prior to registration.

### Credit Cards

Credit Card Payments - VISA or MASTERCARD - ONLY

Payments can be accepted at:

1. U-ASK - University Automated Student Kiosk. (Various locations on Campus.)
2. C-CAPS - Credit Card Authorization/Payment System. Telephone number is (562) 985-7300. Hours are Monday - Friday, 7:00 AM - 7:00 PM Saturdays when VRR is available.
3. Cashier's Office, SSA 148 Hours are Monday - Thursday, 9:00 AM - 7:00 PM Friday, 9:00 AM - 5:00 PM NOTE: Office closes at 5:00 p.m. during Spring Recess, Winter Recess and Summer Break.

Credit card payments are not accepted through the U.S. Mail, or at the Business Office.

Your VISA or MASTERCARD can be used to pay for the following fees:

1. Registration Fees
2. Non-Resident Tuition
3. Financial Obligations (ie: Fines, breakage, etc.)
4. Student Parking (Auto & Motorcycle)

Please have the following ready when using U-ASK or C-CAPS:

1. Student Identification Number (Social Security Number).
2. Student Personal Identification Number (PIN).
3. Credit Card Number.
4. Credit Card Expiration Date.

Your Credit Card statement is your receipt.

For a receipt send a self-addressed, stamped envelope Attention: Student Account Services, CSULB, 1250 Bellflower Blvd., Long Beach, CA 90840-0103.

DO NOT pay for registration fees any earlier than seven (7) calendar days before you enroll in classes. If you do not enroll in classes within seven (7) calendar days a credit will be processed to the credit card used to pay registration fees. You will then need to make a new payment with your credit card to enroll in classes.

Payment of registration fees CANNOT be made if the following exist on your account:

1. Unpaid Housing Balance - contact the Housing Office to clear problems.
2. Holds for any outstanding obligations.
3. Disputed credit card charges.

(Contact the Student Account Services Department for information. (562) 985-8280.)

### Short Term Loans

A limited number of short term loans for assistance in paying registration fees, books, or authorized emergencies are available to qualified students on a first come, first served basis. Brochures describing this program are available from the Student Financial Services, SSA/148, Window #10, and the "Information Connection Center" located in the courtyard of the SSA building and Student Account Services, SSA 173. Recorded Information is available by calling (562) 985-4060.

### Installment Payment Plan

The Installment Payment Plan is available to all eligible students except financial aid recipients who have sufficient funds to cover the State University Fee. A \$33 non-refundable charge is assessed to defer the administrative costs of the program. A 9% service charge is assessed to the deferred balance for non-resident tuition and international Visa students. An Installment Plan Contract must be obtained from the Student Account Services, SSA/148, Window #10 before submitting payment.

### Auditors

Students enrolled as auditors, not for credit, are exempt from payment of the application fee, but must pay fees appropriate to the number of units taken.

### Refund of Fees

Details concerning fees which may be refunded, the circumstances under which fees may be refunded, and the appropriate procedure to be followed in seeking refunds may be obtained by consulting California Code of Regulations, Title 5, Section 42201 (parking fees), 41913 (nonresident tuition), 42019 (housing charges), and 41802 (all other fees). In all cases it is important to act quickly in applying for a refund. Deadlines are reflected in the Schedule of Classes.



## Refund of Basic Registration Fee

A refund of the basic registration fee is automatic if processed within 14 calendar days from the beginning of instruction. You must use VRR for a complete withdrawal, or for a reduction in units to 6 units or less. Students must complete the class drop or withdrawal process prior to becoming eligible for any fee credits. The fee credit is based on the effective date of the reduction in enrolled units or complete withdrawal. Any outstanding obligations that the student may have will be deducted from any credits for fees and/or tuition due to the student. A \$5.00 processing fee will be withheld from refunds. The processing of refunds begins the week after the add/drop period ends and continues weekly with all refunds for the term being mailed no later than the following dates: Fall Semester - November 13, Spring Semester, April 15.

## Refund of Non-Resident Tuition

Upon complete withdrawal from the University, or a reduction in units, the non-resident tuition will be refunded based on the transaction date according to the schedule. The amount to be refunded or credited to the student's account is determined by the effective withdrawal or drop date. Refer to the Schedule of Classes for withdrawal or drop dates.

### Fees Collected in Error

Fees collected in error as determined by University Policy.

Transaction Date	Receive
No Deadline .....	Total Fee Paid

### Medical Withdrawal

Refer to Schedule of Classes for  
Deadlines ..... Total Registration Fee Paid

### Other Fees

Late Fee .....	Non Refundable
Application Fee .....	Non Refundable
Disputed Credit Card .....	Non Refundable
Dishonored Check Fee .....	Non Refundable
Student I.D. Card Fee .....	Non Refundable

**Parking Fees** — Attach all parking documents, permits stickers, decals and gate cards to the refund application and return to Student Financial Services Services, Window #10, SSA 148. Refer to the Schedule of Classes for deadline information.

Recipients of financial aid should contact the Financial Aid Disbursements Office regarding refunds.

## Refund of Tuition and Registration Fees

Details concerning Tuition and Registration Fee Refunding may be found in the Schedule of Classes. As this information may differ from one semester to another, students are advised to refer to the Schedule of Classes for that particular semester.

## Special Consideration for Financial Appeal

There are two levels of financial appeals. They are as follows:

### I. Request for Refunds After Deadline

Students who withdraw or drop in units after the deadlines detailed below have passed may appeal for special consideration for a refund based on the following:

1. Campus Rule
2. Compulsory Military Service
3. Physical Disability or Death of Student

Further information regarding special consideration may be obtained from the current semester's Schedule of Classes or by calling the Student Account Services at (562) 985-8280.

### II. Financial Appeals Independent Review Committee (F.A.I.R.)

If a student wishes to petition the decision made at the first appeal level, a written request must be submitted to the F.A.I.R. Committee for review.

This Committee has been approved by the President as the final financial appeal level. It consists of both student representation and representatives from various University Offices. F.A.I.R. will only review appeals for the current academic year.

## State University Fee Refunds

If a student completely withdraws from the University using VRR within 14 days following the start of instruction, this fee will automatically be refunded less a \$5.00 charge and less any other money due the University. If reduction of the student's enrollment causes the student to be in a lower fee category within the first 14 days from the start of instruction, the difference will be refunded to the student, less a \$5.00 charge and less any other money due the University.

## Nonresident (U.S., Out-of-State, and Foreign)

If a nonresident student officially withdraws from the University, drops in unit load, or is reclassified as a resident, tuition is automatically refunded, less any other money due the University, in the following amounts effective the date the withdrawal occurred:

Withdrawal Date	Percent Refunded
1. Before or during the first week of the semester .....	100%
2. During the second week of the semester .....	90%
3. During the third week of the semester .....	70%
4. During the fourth week of the semester .....	50%
5. During the fifth week of the semester .....	30%
6. During the sixth week of the semester .....	20%
7. Seventh week through the end of the semester .....	None

## Parking Fee

Parking at CSULB is limited. Parking permits are required 24 hours a day, Monday through Friday, and the vehicle code is enforced at all times. Please contact the Parking Office (562) 985-4146 for additional information.

To request a partial or full refund, attach all parking documents, permits stickers, decals and gate cards to the refund application and return to Student Financial Services, Window #10, SSA 148. Refer to the Schedule of Classes for deadline information. If parking documents are not available or have not been received, students MUST contact the Parking Administration Office located on Merriam Way adjacent to the parking structure. If any of these parking documents are affixed to the vehicle, their removal by a campus security officer or under the officer's direction shall constitute appropriate return. The following refund is based on the first day of instruction:

Period Refund	Percent Refunded	Amount Refunded
1-30 days	75%	\$47.25
31-60 days	50%	\$31.50
61-90 days	25%	\$15.75
91-end of semester	None	None

Fees charged for self-propelled vehicles of less than four wheels which are required to be licensed by the State Department of Motor Vehicles shall be applied at 25% of the refunds above rounded to the nearest dollar, except that there shall be no refund if such amount is less than \$5.

There shall be no refund for:

1. coin operated parking meters,
2. daily permits for coin operated parking gates,
3. special events, and
4. fees paid by monthly payroll deductions.

#### Determination of Residence for Nonresident Tuition Purposes

The campus Office of Enrollment Services determines the residency status of all new and returning students for nonresident tuition purposes. Responses to the Application for Admission, Residency Questionnaire, and Reclassification Request Form, and, if necessary, other evidence furnished by the student are used in making this determination. Failure to submit adequate information to establish a right to classification as a California resident will be classified as a nonresident.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University is found in California Education Code Sections 68000-68090, 68121, 68123, 68124, and 89705-89707.5, and in Title 5 of the California Code of Regulations, Sections 41900-41912. A copy of the statutes and regulations is available for inspection at the campus Admissions Office.

Legal residence may be established by an adult who is physically present in the state and who, at the same time, intends to make California his or her permanent home. Steps must be taken at least one year prior to residence determination date to show an intent to make California the permanent home with concurrent relinquishment of the prior legal residence. The steps necessary to show California residency intent will vary from case to case. Included among the steps may be registering to vote and voting in elections in California; filing resident California state income tax forms on total income; ownership of residential property or continuous occupancy or renting of an apartment on a lease basis where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; maintaining California vehicle plates and operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service.

The student who is within the state for educational purposes only does not gain the status of resident regardless of the length of the student's stay in California.

In general, an unmarried minor (a person under 18 years of age) derives legal residence from the parent with whom the minor maintains or last maintained his or her place of abode. The residence of an unmarried minor who has a parent living cannot be changed by the minor's own act, by the appointment of a legal guardian or by the relinquishment of a parent's right of control.

A married person may establish his or her residence independent of his or her spouse.

An alien may establish his or her residence, unless precluded by the Immigration and Nationality Act from establishing domicile in the United States. An unmarried minor alien derives his or her residence from the parent with whom the minor maintains or last maintained his or her place of abode.

Nonresident students seeking reclassification are required by law to complete a supplemental questionnaire concerning financial independence.

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a "resident student" for tuition purposes. A residence determination date is set for each academic term and is the date from which residence is determined for that term. The residence determination dates are: Fall — September 20; Spring — January 25.

Questions regarding residence determination dates should be directed to the campus Admissions Office which can give you the residence determination date for the term for which you are registering.

There are exceptions from nonresident tuition including:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student, who remained, was still a minor. When the minor reaches age 18, the exception continues for one year to enable the student to qualify as a resident student;
2. Minors who have been present in California with the intent of acquiring residence for more than a year before the residence determination date, and entirely self-supporting for that period of time;
3. Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult or adults, not a parent, for the two years immediately preceding the residence determination date. Such adult must have been a California resident for the most recent year;
4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. The exception, once attained, is not affected by retirement or transfer of the military person outside the state;
5. Military personnel in active service stationed in California on the residence determination date for purposes other than education at state-supported institutions of higher education. Effective January 1, 1994, this exception continues until the military personnel has resided in the state the minimum time necessary to become a resident.
6. Military personnel in active service in California for more than one year immediately prior to being discharged from the military. Eligibility for this exception runs from the date

the student is discharged from the military until the student has resided in state the minimum time necessary to become a resident.

7. Dependent children of a parent who has been a California resident for the most recent year. This exception continues until the student has resided in the state the minimum time necessary to become a resident, so long as continuous residence is maintained at an institution.
8. Graduates of any school located in California that is operated by the United States Bureau of Indian Affairs, including, but not limited to, the Sherman Indian High School. The exception continues so long as continuous attendance is maintained by the student at an institution.
9. Certain credentialed, full-time employees of California school districts;
10. Full-time State University employees and their children and spouses; State employees assigned to work outside the State and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for one year;
11. Certain exchange students;
12. Children of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of law enforcement or fire suppression duties.

Any student, following a final campus decision on his or her residence classification only, may make written appeal to The California State University, Office of General Counsel, 400 Golden Shore, Long Beach, California 90802-4275, within 120 calendar days of notification of the final decision on campus of the classification. The Office of General Counsel may make a decision on the issue, or it may send the matter back to the campus for further review. Students classified incorrectly as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is subject to discipline pursuant to Section 41301 of Title 5 of the California Code of Regulations. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Admissions Office. Applications for a change in classification with respect to a previous term are not accepted.

The student is cautioned that this summation of rules regarding residency determination is by no means a complete explanation of their meaning. The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes, and in the regulations between the time this catalog is published and the relevant residence determination date.

Changes in residency for tuition purposes are not automatic. Students wishing to apply for residence reclassification may submit a form and supporting documents from October 1 to November 1 for Spring semester, and from April 1 to May 1 for Fall semester.

Exceptions from nonresident tuition are valid for one semester only. Students must reapply for an exemption each semester. Forms are located at the Office of Enrollment Services, SSA 101.

## Debts Owed to the Institution

Should a student or former student fail to pay a debt owed to the institution, the institution may "withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise or any combination of the above from any person owing a debt" until the debt is paid (see Title 5, California Code of Regulations, Sections 42380 and 42381). For example, the institution may withhold permission to receive official transcripts of grades from any person owing a debt. If a student believes that he or she does not owe all or part of an unpaid obligation, the student should contact the campus business office. The business office, or another office on campus to which the student may be referred by the business office, will review the pertinent information, including information the student may wish to present, and will advise the student of its conclusions with respect to the debt.

## Financial Obligations and Holds

Other University offices, including but not limited to the Library, may request that a student reimburse the University for an item that was not returned, returned late or damaged; or they may impose other charges. The requesting office may ask the Student Account Services Office to post this charge to the student's account. Once posted it becomes an obligation to the student. Student Account Services will be able to provide general information concerning obligations. The student will be directed to the appropriate department in which to inquire about the obligation. Until all obligations are paid, or a written release from the originating office is received by the Student Account Services Office, a financial hold will be placed on academic records and the student is restricted from receiving University services, including but not limited to registration and transcripts. If the obligation continues to appear on the University reports, the student's name will be submitted to the Franchise Tax Board. In this case, the student or former student, permanently loses the privilege of submitting checks as payment for fees or services. (Acceptable methods of payment are cash, cashiers' check or money order). The State then has the authority to withhold amounts owed to the University from any tax refund to which the student may be entitled.

To pay your balance due — Cashier's Office, SSA/148.

For information regarding the amount due — Student Financial Services. SSA/148, Window #10, or call Student Account Services at (562) 985-8280.

- EPT, ELM and WPE — For information, refer to your Schedule of Classes. For further information, contact the Testing and Evaluation Services (562) 985-4006
- Perkins Loans — Business Office, SSA 158, (562) 985-5348
- Measles — Student Health Services, (562) 985-4771
- VISA hold (Foreign Clearance) — CIE, SSA 201, (562) 985-4106

## Dishonored Checks

Students paying fees by personal check are hereby given notice that if the unpaid check is returned dishonored to the University FOR ANY REASON, a \$20.00 fee is charged to the student's account. The University has no control whether the bank sends checks through a second time for clearing. The check should be honored upon first presentation to the bank.

In compliance with California Code of Regulations Title V, Section 42381, students with dishonored checks may be disenrolled from classes and may be required to reapply for admission to the University. Also, future services including but not limited to transcripts and grades may be withheld.

Dishonored checks are monitored in the student's record. Any student with a record of two (2) dishonored checks will lose check writing privileges with the University and future payments by personal check will not be accepted.

#### Disputed Credit Card Charge

Students are strongly encouraged to contact the Student Financial Services Window #10 (SSA/148), or call Student Account Services at (562) 985-8280, before disputing a credit card charge through the bank. Upon receipt of a disputed credit card charge, the amount of the credit card charge plus a \$10.00 fee becomes the STUDENT'S financial obligation to the University. Payment of Registration fees with a credit card charge which has later been disputed may result in disenrollment and in withholding of future University services including transcripts, grades and future registration (California Code of Regulations Title V, section 42381). Students who are disenrolled may be required to reapply for admission to the University.

# FINANCIAL ASSISTANCE

## Estimated Expenses

Students should be prepared to meet expenses for fees at the time of registration. Books should be purchased when classes begin. Other expenses are ongoing and must be anticipated monthly and included in the total cost of attendance. Expenses generally go up an average three to four percent per year. Actual costs depend upon where the student lives and if there are dependent children. Financial aid programs are designed to help students meet standard University-related expenses during the academic year. The following budgets will assist students in planning costs for average expenses: (Costs include University fees, books and supplies, room and board, personal miscellaneous and transportation based on 1997-1998 CSULB budgets.)

Student living at home with parents (nine month term) .....	\$7,246
Student living in a residence hall (nine month term) .....	\$9,558
Single student living off-campus (apartment, house nine month term, assumes shared housing) .....	\$12,268

## Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from Financial Aid, SSA Bldg., Rm. 101, (562) 985-4641:

1. Student financial assistance programs, including state grants, available to students who enroll at CSULB;
2. The means, including forms, by which application for student financial assistance is made and requirements for accurately preparing such application;
3. The rights and responsibilities of students receiving financial assistance; and
4. The standards the student must maintain to be considered to be making satisfactory academic progress for the purpose of establishing and maintaining eligibility for financial assistance.

The following information concerning the cost of attending California State University, Long Beach is available from the Office of Financial Aid, SSA Bldg., Rm. 101, 985-4641. This information includes:

1. Estimated costs of books and supplies;
2. Estimates of typical student room and board costs and typical commuting costs; and
3. Any additional costs of the program in which the student is enrolled or expresses a specific interest.

Information concerning the refund policy of California State University, Long Beach for the return of unearned tuition and fees or other refundable portions of costs is available from the Controller, SSA Bldg., Rm. 365.

Information concerning California State University policies regarding any refund due to the federal Title IV student assistance programs as required by the regulations is available from the Office of Financial Aid, SSA Bldg., Rm. 101, 985-4641.

Information concerning the academic programs of California State University may be obtained from Curricular Administration and may include:

1. The current degree programs and other educational and training programs;
2. The instructional, laboratory, and other physical plant facilities which relate to the academic program;
3. The faculty and other instructional personnel;
4. Data regarding student retention and graduation at CSULB and, if available, the number and percentage of students completing the program in which the student is enrolled or has expressed interest; and
5. The names of associations, agencies, or governmental bodies which accredit, approve, or license the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the institution's accreditation, approval, or licensing.

The Office of Financial Aid at CSULB provides both financial and advisory assistance to enable students to pursue a quality education despite increasing costs. It administers funds made available by the federal and state governments, CSU and by private sources that are awarded to students who demonstrate a need to cover educational expenses.

Due to limited funding, deadlines are critical. Students financial aid files must be complete before financial need can be determined. To receive maximum funding, students must file a Free Application for Federal Student Aid (FAFSA) by March 2.

## Application

To apply for financial aid from CSULB, students must file the Free Application for Federal Student Aid (FAFSA). The FAFSA is a multi-purpose form that also is used to apply for California Grants from the California Student Aid Commission and for Pell Grant funds from the federal government. The FAFSA must be mailed to a nationally designated processor. New students may obtain the FAFSA from high school counselors or local college financial aid offices. Students currently enrolled at CSULB may pick up the FAFSA from the Office of Financial Aid. Detailed information about CSULB financial aid programs is available in the Office of Financial Aid, SSA Bldg., Room 101, (562) 985-4641. The submission of various supportive documents may be required. These may include the following: (1) verification of all taxable and nontaxable income reported on the FAFSA; and (2) other clarifying information requested by the Office of Financial Aid. Upon receipt of all documentation, the applicant's file is evaluated to determine eligibility for financial aid. A student is automatically considered for all programs for which he/she qualifies at the University by submitting the FAFSA, and appropriate supporting documents. All loan, grant and work programs are available for the academic year.

## Financial Aid Eligibility

To determine financial aid eligibility, a standard needs analysis system is used. This system allows the Office of Financial Aid to analyze family financial strength and ability to contribute toward the cost of attending CSULB. Subtracted from the student's educational expenses to arrive at financial need are: the parental contribution, the applicant's (and spouse's) contribution from employment, savings, a portion of assets and other resources. As long as program funds permit, a "package" consisting of various types of funds (grants, loans, work-study) is awarded to meet full need.

Although enrollment is assumed to be full-time, part-time students are eligible to receive aid if they carry a minimum of six undergraduate units, or four graduate level units.

## Notification of Awards

Upon determination of eligibility, students are sent a financial aid offer. Students are also notified if determined to be ineligible.

It is the goal of CSULB to package aid that fully meets the need of all qualified aid applicants. However, in the event that funds are insufficient, priority will be given to students whose financial aid files meet the first priority deadlines and who demonstrate the highest need.

## Academic Responsibilities

Aid recipients must:

1. be in good academic standing;
2. make satisfactory academic progress toward a degree by earning credit for units attempted each semester; and
3. remain within the maximum time frame for the degree program in which the student is enrolled.

Aid eligibility is governed by the number of units attempted and successfully completed with a passing grade ("D" or better). Most aid recipients enroll in a full-time program of study carrying 12 undergraduate units or eight graduate level units (500-level courses or higher) per semester. To be considered an eligible financial aid applicant, students cannot have earned more academic units than an established "unit cap." At CSULB, the established unit cap for students seeking a bachelor's degree is 150 units and for master's degree candidates the unit cap is 50 units. This includes units earned as a recipient of financial aid as well as units earned while not receiving aid. It also includes any transferable units for those students who have attended college elsewhere.

## Financial Responsibilities

If you are determined ineligible for financial aid, you are responsible for the payment of any University obligations you may have, including fees. If, as a result of the ineligibility, you wish to terminate your enrollment you must formally drop your classes within 10 days following day of the term when instruction begins. Otherwise, you will remain responsible for these fees.

## Campus Financial Aid Programs

### Federal Perkins Loans

The Federal Perkins Loan is a federal program providing long-term, low interest loans to both graduate and undergraduate students. Repayment of loan principal and interest begins six months after you cease to be enrolled at last half-time.

### Federal Supplemental Educational Opportunity Grant (SEOG)

The SEOG is a federally funded grant program for undergraduate students with exceptional financial need.

### Federal Work-Study (FWS)

The work-study program is a federally funded employment program to expand part-time job opportunities for students with financial need. Students are placed in jobs according to their skills, career and academic goals and must see the Office of Financial Aid for job referral. Positions are available on campus or with organizations off campus.

### Educational Opportunity Program Grants

EOP grants are provided by the State of California for undergraduate students admitted to one of The California State University campuses under the Educational Opportunity Program. Eligibility is determined by the same need criteria as federal financial aid programs. Students also receive special academic counseling and tutorial assistance when needed. Further information may be obtained by contacting the Educational Opportunity Program Office on campus.

### State University Grant

The State University Grant is funded by the State of California to assist students whose ability to attend postsecondary institutions is jeopardized by increases in student fees. Students must be residents of California and must demonstrate financial need.

### Graduate Equity Fellowship

The Graduate Equity Fellowship is funded by the California State University to graduate students underrepresented in their field of study. These groups are currently defined as: individuals with disabilities; women majoring in academic areas in which women are underrepresented; African Americans, Hispanics, American Indians, Filipinos and Pacific Islanders. Applicants must be California residents, demonstrate financial need of at least \$1000, and be accepted into or continuing in a full-time graduate program with at least a 3.0 grade-point average. Approximately 40 recipients are selected annually depending upon fund availability.

### University Scholarships

The Office of Financial Aid administers a limited number of small scholarships funded by CSULB. Other scholarships are funded by private donors, businesses, corporations, agencies, religious groups, and fraternal and civic organizations. Most scholarships are not based solely on financial need. They may be awarded on the basis of academic achievement, leadership, merit, motivations, and talent. Some scholarships are administered directly by the academic department for specific academic majors. Students may consult with their academic department or the Office of Financial Aid regarding scholarships available.

## President's Scholars Program — Four Years

High school valedictorians may be eligible. Includes registration fees, housing, and book allowance – up to \$24,000 for four years.

National Merit Scholarship finalists may also be eligible. Includes registration fees, housing, food, and book allowance – up to \$34,000 for four years.

Applications are available from your high school counselor. For more information contact Valerie Bordeaux in the CSULB Office of University Outreach and School Relations at (562) 985-5358.

## Outside Student Aid Programs

The following programs are administered by other agencies and coordinated by the Office of Financial Aid:

### State Graduate Fellowships

Fellowships are administered by the California Student Aid Commission and awarded to entering and continuing graduate students who are California residents and who plan to teach at the college level. The fellowship covers a portion of registration fees only. Selection is competitive and is based upon unusual ability, achievement and potential for success using GRE test scores and grade-point average.

### Cal Grant A

Cal Grant A is awarded by the California Student Aid Commission to entering and continuing undergraduate students who are California residents. Cal Grant A awards are based on academic achievement and financial need. Grants are for fees only.

### Cal Grant B

Cal Grant B is awarded by the California Student Aid Commission to entering undergraduate students who have not completed more than one semester of college. Applicants must be California residents, and must demonstrate substantial financial need. Grants vary depending on educational costs. Fees, in addition to the basic award, are normally provided in the second, third, and fourth years. The grant is renewable for four years.

### Federal Pell Grant Program

The Pell Grant Program is a federal aid program designed to provide financial assistance to undergraduate students who demonstrate financial need under the guidelines of the program. Once a student is determined eligible for the Pell Grant, the amount of the award is based on the cost of education at the school attended and enrollment on a half-time, three-quarter-time, or full-time basis. Eligibility is limited to U.S. citizens and eligible non-citizens.

### Federal Stafford Loan (GSL)

The Stafford Loan Program enables eligible students to obtain loans through banks, credit unions, and other lending institutions outside of the University. During the time the student is enrolled at least half-time, the federal government pays the interest on the cumulative amount borrowed if the loan is based on financial need. Programs available to students during the summer are Federal Stafford Loan, Federal Subsidized Loan, and Parent Loan.

Information, brochures, advising, and application forms are available from SSA 101, or phone (562) 985-4641.

Federal regulations allow any student to apply for the Federal Stafford Loan providing the student: 1) is enrolled and in good standing or has been accepted for enrollment at an eligible school; 2) is enrolled as at least a half-time student; and 3) is a citizen of the United States or an eligible non-citizen. Local lender policy is available from the Office of Financial Aid.

### Alan Pattee Scholarships

Children of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of law enforcement or fire suppression duties are not charged fees or tuition of any kind at any California State University campus, according to the Alan Pattee Scholarship Act, California Education Code Section 68121. Students qualifying for these benefits are known as Alan Pattee scholars. For further information contact the Admissions/Registrar's Office, which determines eligibility.

### Bureau of Indian Affairs (BIA) Grants

Students who are at least one-fourth American Indian, Eskimo, or Aleut may apply for a BIA grant. The amount of the grant depends upon financial need and availability of funds. Students must complete an application for financial aid and then contact their tribe or tribal agency for an application.

## Other Types of Financial Assistance

### Cooperative Education (Co-Op)

The Cooperative Education Office places students in career or academic related positions with corporations, businesses, agencies and institutions. Students are paid at normal entry-level wages. Minimum periods of employment for full-time Cooperative Education placements are one semester. For part-time placements, a minimum of 20 hours is required. Summer internships are also available. Contact the Experiential Learning Center, SSA 250.

### Student Part-Time Employment

Listings are available and assistance is offered in the Career Development Center to students interested in part-time employment.

### Federal/State Regulations

The information contained in this publication accurately reflects regulations and policies at the time of printing. Be aware that Federal and State regulations governing financial aid processing and eligibility are subject to change at any time.

# FILM AND ELECTRONIC ARTS

*College of the Arts*

Department Chair

Micheal C. Pounds

Department Office

University Telecommunications Center (UTC), Room 104

Telephone

(562) 985-5404

Faculty

Professors

Sharyn Blumenthal

Robert G. Finney

Saundra McMillan

Micheal C. Pounds

Jose Sanchez-H.

J. David Viera

Associate Professors

Stephen Cooper

Premajor Advisor

Karen Burman

Administrative Coordinator

Karen Burman

Film and Electronic Arts is an innovative academic program which emphasizes both professional education and liberal arts, both theory and practice. Focusing upon the integration of media and the arts in our information society, as well as upon the impact of technology on our culture and the media themselves, the curriculum is designed to assist the student major in becoming more future-oriented while developing a sound foundation in the arts and the humanities.

The faculty includes a diversity of expertise and interests which cross traditional media lines, resulting in ongoing discussion and experimentation while integrating the traditional audio, film and video production modes. Theory and aesthetics are taught as an integral part of the development of communication and production skills. Part-time lecturers include a variety of highly-qualified Los Angeles area media professionals.

### *Admission under Impaction*

The number of applicants to the major in Film and Electronic Arts exceeds the number that can be accommodated by the Department's facilities and resources. For this reason, the Film and Electronic Arts program has been designated as impacted by the California State University.

Applicants for admission to the University with a major in Film and Electronic Arts will be designated as pre-majors and assigned a pre-major code. Acceptance into the pre-major category does not imply or assure subsequent acceptance into the major. Similarly, acceptance into the pre-major is not a prerequisite for admission into the major. Some FEA courses are open to non-majors as well as majors. Completion of any of these university-wide courses does not imply acceptance into the major.

Admission into the major is only open to matriculated students in the university and is determined solely on the basis of meeting all of the following supplemental criteria:

1. Completion of minimum of 56 semester units of college-level course work with a cumulative GPA of 2.80 or higher.
2. Completion of FEA 200 with a grade of "B" or higher.
3. Completion of the general education requirement in mathematics.
4. Successful completion of the CSULB Writing Proficiency Examination (WPE) requirement.
5. International student applicants are required to complete the Test of English as a Foreign Language (TOEFL) with a score of 550 or higher.
6. Priority admissions will be given to legal residents of the State of California.

To apply for admission to the Film and Electronic Arts major, after meeting the six criteria above, a student must complete the departmental major application form obtainable from the department office, sign it, and attach official transcripts of all previous college work at CSULB or elsewhere.

Admission to the major does not guarantee access to or enrollment in intermediate or advanced production courses.



## Bachelor of Arts Film and Electronic Arts (pre-code 2-5880)

Two B.A. degree options are offered by the department: one in Film and Electronic Media requiring 39 units in the major and 12 units of electives and one in Film and Video Production requiring 51 units in the major. After successfully completing all lower division requirements for admission to the major (including FEA 200 with a grade of "A" or "B"), students will be admitted to the B.A. degree Option in Film and Electronic Media. Students may apply for admission to the B.A. degree Option in Film and Video Production after completing FEA 308 or 309. Admission to the production option is highly competitive and will be based on the quality of a creative portfolio submitted by the applicant.

### Option in Film and Electronic Media (code 2-5881) (124 units)

#### Requirements

- I. Pre-Major Screening Course  
FEA 200
- II. Media Studies Core  
FEA 301 or 302 and FEA 300 or 305 and FEA 313 or 314
- III. Media Practice Core (choose 2 courses from one of the following tracks for a total of 6 units)
  - A. Film/Video/Audio: FEA 303, and FEA 307 or 308 or 309
  - B. Management: FEA 327, 373, 376, 420
  - C. Writing: FEA 303, 304, 404, 408

(Students interested in the B.A. Option in Film and Video Production can apply after completing FEA 308 or 309. Admission is by portfolio application.)

- IV. Culture, Media, and Politics  
(choose 3)  
FEA 310, 317, 318I, 380, 394, 412, 430, 486I
- V. International Media (choose 3)  
FEA 363, 364, 392A, 392B, 392C, 454/ITAL 454, 456/FREN 456
- VI. Electives (12 units)  
This requirement can be met with a sequence of elective courses in FEA or with a combination of courses from other academic units chosen in consultation with the student's adviser.
- VII. Senior Theory Course (choose 1)  
FEA 401, 402 or 430

### Option in Film and Video Production (code 2-5882) (124 units)

The Option in Film and Video Production involves a separate and competitive admission process. FEA majors may apply for the Film and Video Production Option after successfully completing FEA 308 or 309.

The requirements for admission to the option are as follows: 1) Grade of "B" or better in FEA 308 or 309; 2) Submission of a creative portfolio consisting of one film or video produced in FEA 308 or 309; 3) A completed application form; and 4) A statement by the student outlining academic goals or career objectives. Admissions decisions, based on a review of these application requirements and materials, will be made by a

committee of full-time faculty members. The department is committed to diversity and encourages women and minority students to apply.

#### Requirements

- IA. Pre-major Screening Course  
FEA 200
- IB. Film and Video Production Option Screening Course  
FEA 309 (requires major status)  
Note: Students submit creative portfolio and application materials for admission to the Option in F/V Production after completing this course.
- II. Media Studies Core  
FEA 302, 305, and 314
- III. Advanced Film/Video Production (choose 1 Concentration)  
Video Concentration: FEA 326, 330, 332  
Film Concentration: FEA 336, 340, 342
- IV. Culture, Media, and Politics (choose 2)  
FEA 310, 317, 318I, 380, 394, 412, 430, 486I
- V. International Media (choose 2)  
FEA 363, 364, 392A, 392B, 392C, 454/ITAL 454, 456/FREN 456
- VI. Production Electives (choose 4)  
FEA 303, 304, 320, 327, 328, 330, 332, 340, 342, 344, 404, 408, 415, 492
- VII. Senior Theory Course (choose 1)  
FEA 401 or 402

#### Courses (FEA)

##### Lower Division

200. Media Aesthetics (3)  
Study of aesthetic principles governing media productions. Emphasis on relationships between various art forms and development of critical vocabulary. Traditional grading only.

##### Upper Division

300. History of Electronic Media (3)  
Prerequisite: Major status or consent of instructor. The development of electronic media in the United States. Traditional grading only.

301. Electronic Media: Theory and Culture (3)  
Prerequisites: Major status or consent of instructor. Study of electronic media and their role in the information society. Consideration of mass communication theories and dimensions of electronic media today, including the traditional media of radio, television and cable. Emphasis upon new media technologies and their potential impact upon media and society in the future. Traditional grading only.

302. Critical Study of Film (3)  
Prerequisites: Major status or consent of instructor. The critical study of the intrinsic aesthetic dimensions of film. Viewing and analysis of a representative selection of highly-regarded works. Discussion of basic concepts such as genres, national cinemas and styles. Traditional grading only.

303. Film and Electronic Media Writing (3)  
Prerequisite: Major status or consent of instructor. Study of scripting and other writing skills unique to audio, video, and film. (Lecture-Discussion 3 hours) Traditional grading only.

304. Writing the Short Script (3)  
Prerequisite: Major status or consent of instructor. Scriptwriting with emphasis on adaptation and dramatic fiction. Traditional grading only.

305. **Film History (3)**  
Prerequisite: Major status or consent of instructor. Historical development of the motion picture. Traditional grading only. Course fee required.
307. **Audio Production (3)**  
Prerequisite: Major status or consent of instructor. Basic principles and techniques of audio production. (Act 4 hrs to be arr.) Traditional grading only.
308. **Video Production (3)**  
Prerequisite: Major status or consent of instructor. Basic principles and techniques of video production. (Act 4 hrs to be arr.) Traditional grading only.
309. **Film/Video Production (3)**  
Prerequisite: Major status or consent of instructor. Basic principles and techniques of film/video production. (Act 4 hrs to be arr.) Traditional grading only.
310. **Film and Culture (3)**  
An exploration of the ways films create, pattern, shape, reinforce, and/or change culture. A variety of viewpoints, derived from contemporary critical and cultural studies, highlight the relationship between a culture and its images. Course fee required.
312. **Television Programming Symposium (3)**  
Discussion and analysis of creative problems in the television industry. Current local and network programs. Interviews with visiting executives, producers, directors, writers, performers and technicians. May be repeated once. Only 3 units may be used as credit toward major.
313. **New Technologies in Film and Electronic Media (3)**  
Prerequisites: FEA 300 and 301, or 302 and 305, or consent of instructor. Study of developing technologies in film and electronic media production, distribution, and exhibition. Focus on economic, social, and policy issues raised by technological innovation and the impact of new technology on the industry. Traditional grading only.
314. **Theatrical Film Symposium (3)**  
Lectures and discussions of creative problems in the motion picture industry; current films; interviews with visiting producers, directors, writers, performers and technicians. May be repeated once. Only three units may be used toward the major.
316. **Mass Media & Society (3)**  
Theory and functions of the mass media in America. Enduring issues and unresolved problems of the media. Impact of mass culture on a mass-mediated society. G. E. credit only. Does not count toward units in the major.
317. **Women in the History of U.S. Film (3)**  
History of women as they are represented, presented as images, or constructed in the development of U.S. film. Theory and analysis of film from a feminist perspective. (Same course as W/ST 316.)
- 318I. **Theory of Fiction and Film (3)**  
Prerequisites: ENGL 100 and upper division status. Examination of the narrative methods and conventions of American and British fiction and the methods and conventions of film; consideration of the relationships between the artistic structure of fiction and film; study of theoretical and practical approaches to fiction and film. Same course as ENGL 318I.
320. **Sound Design (3)**  
Prerequisites: FEA 309 with a "B" or better or consent of instructor. Examination of the basic aesthetic and technical principles of sound design for film and video production.
325. **Radio Station Activity (2)**  
Prerequisite: FEA 307 or consent of instructor. Experience in administering and programming the University radio station. (Activity hours to be arranged.) Course may be repeated for a maximum of 4 units. Credit/No Credit grading only.
326. **Intermediate Video Production (3)**  
Prerequisites: FEA 308 or consent of instructor. Enrollment restricted to majors in Film and Video Production Option (2-5882). Theory and practical experience in directing, shooting, and editing video documentaries. Emphasis on electronic field production. (Production laboratory 9 hours.) Course fee required. Traditional grading only.
327. **Production Management (3)**  
Prerequisite: Major status or consent of instructor. Examination of the step-by-step process of budgeting and scheduling feature length motion pictures. Students will learn methods and procedures of breaking down a script, analyzing production elements, preparing a production board, scheduling principal photography, and preparing a comprehensive budget. (Lecture 3 hours; activity hours to be arranged.) Traditional grading only.
328. **Film and Video Lighting (3)**  
Prerequisites: FEA 308 or 309 or consent of the instructor. Examination of the basic aesthetic and technical principles of film and video lighting. Students will explore various creative lighting styles and techniques through lectures and practical exercises.
330. **Advanced Video Production (3)**  
Prerequisites: FEA 326 or consent of instructor. Enrollment restricted to majors in Film and Video Production option (2-5882). Application of the principles and practices of narrative image making for video. Topics include: directing, cinematography, and electronic editing. (Production laboratory 9 hours.) Course fee required. May be repeated to a maximum of 6 units.
332. **Advanced Video Production II (3)**  
Prerequisites: FEA 326 or 330 or consent of instructor. Enrollment restricted to majors in the Film and Video Production Option (code 2-5882). Focuses on advanced problems in music video, experimental (visual and narrative), and/or commercial applications in video production. Emphasis is on group projects intended for public distribution. (Production laboratory 9 hours). Course may be repeated to a maximum of 6 units.
335. **University Television Activity (2)**  
Prerequisites: FEA 330 or consent of instructor. Experience in administration and production of video projects at the University Television facility. (Activity hours to be arranged.) May be repeated once for a maximum of 4 units. Credit/No Credit grading only.
336. **Intermediate Film Production (3)**  
Prerequisites: FEA 309 or consent of instructor. Enrollment restricted to majors in Film and Video Production Option (2-5882). Preparation for the advanced level of film production through research and exercises designed to develop essential filmmaking skills. (Production laboratory 9 hours.) Course fee required. Traditional grading only.
340. **Advanced Film Production (3)**  
Prerequisites: FEA 336 or consent of instructor. Enrollment restricted to majors in Film and Video Production Option (2-5882). Experience in the group production of original films. Emphasis is on narrative short films resulting in public performance. (Production laboratory 9 hours.) Course may be repeated for a maximum of 6 units. Course fee required.
342. **Advanced Film Production II (3)**  
Prerequisites: FEA 340 or consent of instructor. Enrollment restricted to majors in Film and Video Production Option (2-5882). Experience in the group production of original films. Emphasis is on narrative short films resulting in public performance. (Production laboratory 9 hours.) Course may be repeated for a maximum of 6 units. Course fee required.
344. **Directing (3)**  
Prerequisites: FEA 308 or 309 or consent of instructor. Theory and practical experience in the directing of narrative film. Emphasis on directing actors in fictional work. (Activity hours to be arranged.)
355. **Audio-Video-Film Activity (1)**  
Prerequisite: FEA 309 or consent of instructor. Group and individual experience in areas of audio-video-film production, and broadcast education. Specific assignments determined in consultation with instructor. (Activity hours to be arranged.) May be repeated once, for a maximum of two units. Credit/No Credit grading only.
363. **International Electronic Media Systems (3)**  
Prerequisites: FEA 301 or 302 or consent of instructor. Comparative analysis of internal and external electronic media systems with emphasis on their motives, origins, technologies, and programming. Consideration of political, economic, regulatory constraints, and the potential impact of new technologies.

364. **Global Electronic Media Communication (3)**  
Prerequisites: FEA 301 or 302 or consent of instructor. Study of international electronic media systems targeted toward other nations with emphasis on their cultural, economic, and political influences. Focus on the impact of new technologies on such cross border communication in the future. Traditional grading only.
373. **Electronic Media Programming (3)**  
Prerequisites: FEA 300 and 301, or 302 and 305, or consent of instructor. Principles and practices of programming for electronic media networks, television and radio stations, and local cable systems. Analysis of the relationship between programming, promotion, and profit. Traditional grading only.
376. **Film and Electronic Media Sales and Promotion (3)**  
Study of marketing, promotion, and sales among film distributors, production companies, program suppliers, broadcast networks, cable systems, local radio, television, and cable operators. Theory and application of media research principles, promotion strategies. Development of selling skills.
380. **Documentary History and Theory (3)**  
Prerequisites: FEA 302 and 305 completed or consent of instructor. A critical study of the history, methods, and aesthetics of documentary media production. A specific focus on problems of representation, objectivity, and personal style in both theory and practice. Course fee required. Traditional grading only.
392. **International Cinema (3)**  
Prerequisites: FEA 302 and 305 completed or consent of instructor. Variable topics course which explores the domain of international cinema. Course may be repeated for a maximum of 6 units with different topics. Topics will be announced in the Schedule of Classes. Course fee required. Traditional grading only.
- A. European Cinema 1930-1960  
B. European Cinema 1960-1990  
C. Latin American Cinema
394. **American Film Genres (3)**  
Prerequisites: FEA 302 and 305 completed or consent of instructor. Historical and critical examination of Hollywood film genres. Places genre analysis and theory within a sociocultural perspective including issues of gender and ethnicity. Genres to be covered include the Western, film noir, science fiction/horror, detective/gangster, the musical, war films, screwball comedy, and family melodrama. May be repeated for a max. of 6 units with different topics. Traditional grading only.
401. **Film Critical Theory (3)**  
Prerequisites: FEA 302, 305 and an additional 6 units in film studies. A study of the classical theoretical models for the analysis and evaluation of films. Topics to be examined include theories of realism, formalism, auteurism, genre, structuralism, and narrative studies. Aims to assess the nature and limitations of film aesthetics, and includes a survey of contemporary critiques of classical film theory. Course fee required. Traditional grading only.
402. **Television Critical Theory (3)**  
Prerequisites: FEA 300 or 305. Examines television from an aesthetic and textual perspective. Specific interests include the distinctive ways that television produces its meanings, as well as the ways that critical analysis differs from quantitative mass communications approaches. Topics to be covered include semiotics, post-modernism, and feminism, as well as narrative, ideological, and psychoanalytic theories of criticism. Traditional grading only.
404. **Advanced Scriptwriting for Film and Electronic Media (3)**  
Prerequisite: FEA 303 or 304 with a "B" or better or consent of instructor. Writing dramatic and comedic screenplays and teleplays. Includes study of produced models with emphasis on the creative process. Course may be repeated for a maximum of 6 units.
405. **Comedy Writing (3)**  
Study of a variety of historical and contemporary models. Practice in the creation of print pieces; stand-up routines; scripts for television, film, and other media. Heavy focus on comedy as social, political, and technological criticism.
408. **Writing the Screen Adaptation (3)**  
Prerequisites: FEA 303 or 304 with a grade of "B" or better, or ENGL 405 or 407 with a grade of "B" or better, or consent of instructor. Writing script adaptations, with a study of adaptation theory and successful adaptational models. Course may be repeated to a maximum of 6 units.
412. **American Television and African-Americans (3)**  
Prerequisites: Upper division status or consent of instructor. Comparative examination of the depiction of African Americans in American network and syndicated television in a variety of types of programs. Traditional grading only.
415. **Electronic Editing (3)**  
Prerequisite: FEA 308 or 309 or consent of instructor. Principles of non-linear editing in post-production.
420. **Electronic Media: Labor and Management (3)**  
Prerequisites: Junior or senior status and at least 12 completed units in the FEA major, or consent of instructor. Study of management and labor in the changing field of telecommunications, with emphasis upon the manager's roles and functions in the labor intensive cable, film, radio, television and related industries.
430. **Government Policy and Politics (3)**  
Prerequisites: 12 units in the electronic media track including FEA 300 and 301. Current issues, policies, and regulations affecting the cable, film, radio, television industries, including the impact of new technologies. Traditional grading only.
454. **Italian Cinema (3)**  
Historical and critical examination of Italian cinema. Traditional grading only for majors. Same course as ITAL 454.
456. **French Cinema (3)**  
Historical and critical examination of French cinema. Traditional grading only for majors. Same course as FREN 456.
- 486I. **Alternative Media (3)**  
Prerequisites: ENGL 100 and upper division status. Critical study of censorship and suppression of information in mainstream media by governmental and corporate entities. Focus on the importance of freedom of information and access to diverse viewpoints. Students select and research environmental, multicultural, peace, and other issues utilizing alternative media.
- 488./688. **CSU Summer Arts (1-6)**  
Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.
490. **Special Topics in Radio, Television and Film (3)**  
Prerequisite: Major status or consent of instructor. Topics of current interest in radio-television-film selected for intensive development. May be repeated for a maximum of 9 units with different topics; only 6 units may be applied toward the major. Topics will be announced in the Schedule of Classes. Traditional grading only.
492. **Internship (3)**  
Prerequisites: Senior standing in major or consent of instructor. Students intern with cooperating media facilities. Course may be repeated for a maximum of 6 units. Credit/No Credit grading only.
498. **Senior Seminar (3)**  
Intensive study of significant issues in film and electronic media.
499. **Special Projects in Radio, Television, and Film (1-3)**  
Prerequisites: Senior standing in major and consent of instructor. Research into an area of special interest to the student, culminating in a research paper or production. Productions will be limited by equipment and facilities available during any term.
- 688./488. **CSU Summer Arts (1-6)**  
Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

# FINANCE, REAL ESTATE, AND LAW

*College of Business Administration*

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Janie Daly

For all degree requirements see Business Administration.

## Courses (FIN)

### Lower Division

#### 222. Legal Aspects of Business Transactions (3)

Introduction to law and the legal system, elements of contracts, sales, and commercial paper.

### Upper Division

#### 300. Personal Finance (3)

Financial analysis planning and management for the individual. Topics include owning and financing a home, minimizing taxes, investing – goals and strategies, budgeting to match income and expenses, developing a savings plan, controlling expenses and credit usage, determining life, health, home and auto insurance needs, planning retirement.

#### 302. Insurance Principles (3)

Principles of risk-bearing and insurance; life and property-liability insurance needs of the individual. Types of carriers and insurance markets; organization and functions of carriers; industry regulation.

#### 309I. Consumer Survival in the Legal and Economic Environment: Selected Topics (3)

Prerequisites: ENGL 100 and upper division status. A general consumer survival course with consideration of selected topics including the consumer as buyer of goods and services, the consumer as an investor, and the consumer in personal partnerships. Same course as ECON 309I and FCS 309I.

#### 324. Legal and Regulatory Environment of Business (3)

Prerequisites: FIN 222. Introduction to business ethics and corporate social responsibility; a consideration of social and economic influences on domestic and multinational corporations; and exploration of business and government relationships, employment law, business organizations and consumer protection.

#### 342. Real Estate Principles (3)

Overview of real estate markets, institutions and activities from the perspective of the decision makers involved in real estate development, financing and equity investment. The fundamental physical, legal, regulatory, economic, mathematical and taxation considerations influencing real estate decision and values are investigated. The real estate decision support areas of brokerage, property management, appraisal and counseling are examined.

#### 360. Capital Markets (3)

Prerequisite: FIN 362. Capital formation, rates, markets and institutions. Flow of fund analysis, intermediation, interest rate structures, risks and liquidity. Management of financial institutions.

#### 362. Business Finance (3)

Prerequisite: IS 310 can be taken concurrently. An introductory course for all business majors, integrating computer applications and management information systems to the following areas of finance: (1) Time Value of Money, Risk, Valuation, Cost of Capital, Capital Structure; (2) Capital Budgeting; (3) Long-Term Financing Decisions; (4) Working Capital Policy and Management; (5) Financial Analysis and Planning; (6) Special topics including; Mergers, Bankruptcy, and International Finance.

#### 382. Investment Principles (3)

Prerequisites: FIN 362. Investment markets and transactions; sources of investment information and advice; return vs. risk; margin trading and short selling; investment planning; investing in equities and fixed income securities; speculative tax-sheltered investments; gold and other tangibles; portfolio management. Demonstrations and use of microcomputer technology in the above areas, including accessing various databases available to the investor.

#### 424. International Legal Environment of Business (3)

Prerequisite: FIN 324. A study of the international legal environment in which multinational firms operate. Selected topics include treaties and laws, government policies, resolution of legal disputes, regulation of competition, enforcement of property rights and issues involving ethical responsibilities. Traditional grading only.

#### 444. Legal Aspects of Real Estate (3)

Prerequisite: FIN 342. Basic principles of law of real estate as related to conveyances, titles, private and public restrictions on the use of land, escrows, community property and financial transactions.

#### 446. Residential Appraising (3)

Prerequisite: FIN 342. Determining real property values, economic foundations, housing market, purpose of appraisals, analysis of factors involved and their relationship to trends in property values. Gross rent multiplier analysis in residential and income property. Emphasis on residential properties.

#### 447. Real Estate Investment (3)

Prerequisites: FIN 342. Examination of methods of traditional and modern decision methods to analyze investment in real estate by individuals, corporations, and government. Through analysis and discussions of investment methods in light of modern financial theory and practice, decision to investment in real estate is considered. Additional topics such as sale-leaseback, leasing, discounted cash flow, and various internal rate of return and net present value models are evaluated. Investment strategy and analysis is integrated to enable the assessment of real property for purchase, sale, renovation, or to hold decisions. Economic and market studies are also evaluated with respect to conventional and developing approaches. Traditional grading only.

#### 448. Income Property Valuation (3)

Prerequisites: FIN 342 and 362. Analysis of factors influencing values of residential, commercial and industrial properties. Appraisal principles and procedures are developed and applied to the valuation of land, single-family homes, apartments, office and commercial buildings, leases and other real property interests.

#### 449. Real Estate Finance and Investments (3)

Prerequisite: FIN 342 and 362. Survey of markets, institutions, instruments and techniques associated with financing real property. Examination of the interactions of investment opportunities, property type, financing strategy, business risk and taxation in connection with maximizing return on capital invested in real estate. Financial modeling of the real estate investment decision used to identify investment strategies that achieve superior portfolio performance.

#### 450. Real Estate Development (3)

Prerequisites: FIN 342 and 448. Organization and planning of the development process through optimal land planning and site development. Market analysis in a political and planning context is considered in relation to public regulation and master planning. Market feasibility analysis is considered within the framework of particular property types such as: hotel/motel, office building, commercial and retail properties, and industrial property development. Also addressed is the study of economic growth and urban planning models and the real estate counseling function. Emphasis on creative and conceptual developments and land economics. Traditional grading only.

#### 464. Financial Management (3)

Prerequisites: FIN 362 and ACCT 310 or 320. An intermediate level course in financial management integrating computer applications and management information systems into the area of financial functions and decisions. The course is primarily a case study and requires use of the computer and appropriate software. The main areas of concentration are: cash budgeting, capital budgeting, business combinations and mergers, cost of capital, and international finance.

#### 482. Security Markets (3)

Prerequisite: FIN 362. Examination of purposes and functions of over-the-counter markets and organized exchanges for securities marketing. Operations of New York Stock Exchange and Chicago

Board of Trade are reviewed. Fundamental and technical aspects of securities industry required of individuals in qualifying for certificates as customers brokers, security salesmen and analysts and other registered positions of finance and investment. Market analysis and strategy with individual presentation required.

#### 484. Security Analysis (3)

Prerequisite: FIN 382. Use of microcomputer technology to perform security analysis including bonds and the bond market, stocks and the stock market, security valuation, fundamental and technical analysis, portfolio management and risk-reward relationships. A review of the various microcomputer software programs available to perform all aspects of security analysis and portfolio management, including accessing and utilization of the numerous databases available to the investment analyst.

#### 488. Derivatives and Futures Markets (3)

Prerequisite: FIN 362. The study of futures markets includes an analysis of the exchanges, the operation of member firms, the mechanics of trading, the construction of a personal-risk profile analysis and the discussion of traditional decision variables, including the construction of a 2-asset portfolio. Included is a solid theoretical examination of the question of bias in futures prices, the theory of the price of storage, ledger and speculator behavior, and the stochastic nature of the futures prices. Traditional grading only.

#### 490. International Finance (3)

Prerequisite: FIN 362; suggested, CBA 300. International trade theories, international payments; currency value fluctuations and exchange rates; international capital markets; roles of developing countries; international institutions and multi-national enterprises. Individual research required.

#### 495. Selected Topics (1-3)

Prerequisite: Consent of instructor. Topics of current interest in finance selected for intensive study. May be repeated for a maximum of 6 units. Topics will be announced in the Schedule of Classes.

#### 497. Directed Studies (1-3)

Prerequisites: Consent of instructor and department Chair, on Dean's List and 3.0 GPA or higher in finance. Individual projects, study and research of advanced nature in finance.

#### 499A-B. Applied Portfolio Management (3-3)

Prerequisites: FIN 499A: FIN 382, 484, 464 (either or both of FIN 484 & 464 may be taken concurrently), and consent of instructor and department chair; FIN 499B: FIN 499A and consent of instructor and department chair. FIN 499A to be offered in Fall and accepted students must enroll in FIN 499B in Spring. Participation in the management of an actual investment portfolio. Research, monitor, and analyze securities and make buy & sell recommendations for a student-managed investment fund utilizing state-of-the-art computer software and on-line information data retrieval services. Contribute to the publication of a semi-annual report of the activities of the fund. Market, sector and firm analysis with individual and group presentations and outside research required. Traditional grading only.

### Graduate Prerequisite Courses

#### 500. Legal Environment of Business (3)

Prerequisite: MBA standing required. Framework and role of law in society emphasizing the judicial process, basic concepts of commercial law and evolution of legal attitudes between business and government. Traditional grading only.

#### 501. Financial Survey (3)

Prerequisite: MBA standing required. Financial theory, management and environment of the firm integrating computer applications, management information systems and cases to the following areas of finance: (1) Time value of money, risk, valuation, cost of capital, capital structure; (2) Capital budgeting; (3) Long-term financing decisions; (4) Working capital policy and management; (5) Financial analysis and planning; and (6) Special topics including mergers, bankruptcy, and international finance. Traditional grading only.

## Graduate Division

### 524. International Legal Environment of Business (3)

Prerequisite: FIN 500. A study of the international legal environment in which multinational firms operate. Selected topics include treaties and laws, government policies, resolution of legal disputes, regulation of competition, enforcement of property rights and issues involving ethical responsibilities. Traditional grading only.

### 531. Estate Planning (3)

Prerequisite: FIN 500. Planning and administration of the disposition of property by wills, estates and trusts including use of life insurance, impact of federal and state taxes and special trust provisions and devices.

### 532. Problems in Real Estate (3)

Prerequisite: FIN 449 or consent of instructor. Effect of government on the market functions and structure, management of related industry firms, investment risk and return analysis and special urbanization trends.

### 533. Capital Budgeting (3)

Prerequisite: FIN 501. Theory of capital budgeting within the framework of the firm. Cost of capital determination and logic of expansion vs. growth and equity financing vs. debt financing. Computer applications are required for this course. Traditional grading only.

### 630. Seminar in Financial Forecasting (3)

Prerequisite: FIN 501. Research projects in industry, individual company, product and commodity areas. Computer applications are required in this course. Traditional grading only.

### 631. Seminar in Business Finance (3)

Prerequisite: FIN 501. Specific analysis of capital formation with selected problems concerning supply and demand of investment funds. Problems imposed on equity capital markets by public taxation, business debt financing and practices of investing institutions. Presentation and interpretation of student reports on selected topics. Computer applications are required for this course. Traditional grading only.

### 633. Seminar in Investments (3)

Prerequisite: FIN 501. Selected problems in security analysis, portfolio planning, balance and adjustment as related to (1) individual circumstances of the investor, (2) specific market conditions, and (3) broader financial aspects of the economy. Presentation and interpretation of student reports on selected topics. Computer applications are required for this course. Traditional grading only.

### 666. Seminar in Financial Management (3)

Prerequisites: FIN 501, Graduate Standing, background in economics, accounting and finance. Financial management concepts and theory are developed. Applications of the theoretical concepts are explored through readings, computer work and project assignments. Traditional grading only.

### 691. Seminar in International Finance (3)

Prerequisite: FIN 501. Background in economics, accounting and finance, graduate standing in business administration. Covers real and monetary factors in the finance of international business, international capital markets, movement of funds and special problem areas.

### 695. Selected Topics (3)

Prerequisite: Consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering. Course may be repeated for a maximum of 6 units with different topics. Traditional grading only.

### 697. Directed Studies (1-3)

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

### 699A-B. Applied Portfolio Management (3-3)

Prerequisites: FIN 699A: FIN 500, 501, 631, 633 and consent of instructor, and department chair; FIN 699B: FIN 699A and consent of instructor and department chair. FIN 699A will be offered in Fall and accepted students must enroll in FIN 699B in Spring. Participation in the management of an actual investment portfolio. Research, monitor, and analyze securities and make buy & sell recommendations for a student-managed investment fund utilizing state-of-the-art computer software and on-line information data retrieval services. Contribute to the publication of a semi-annual report of the activities of the fund. Market, sector and firm analysis with individual and group presentations and outside research required. Traditional grading only.



# GENERAL EDUCATION

General Education is an important aspect of the baccalaureate degree and of your personal development. It is that part of your university program which encourages you to develop or improve such basic life skills as creativity, critical thinking, self-motivation, independence, an understanding of values, and a general philosophy by which to make decisions throughout life. Possession of these skills makes possible your continued personal growth and the further development of your creative and adaptive capabilities and qualities necessary for you to adjust to and influence a rapidly changing world. It is the basis for lifelong learning, and it can increase your ability to be self-directing.

At California State University, Long Beach, courses approved for General Education credit provide:

- Information: the raw material for thinking, analysis, reflection, and discourse;
- Methods of inquiry: direction and practice in methodologies of the several disciplines;
- Basic Skills: the ability to analyze ideas and data, to relate these to other materials, to develop arguments both logical and cogent, to reach conclusions, and to present the results of these processes with clarity and style;
- Qualities of Mind: a respect for data and unpleasant facts; an appreciation of the arts; tolerance, commitment, a taste for learning; creativity, perpetual curiosity, and a sensitivity to ethical considerations.

The present policy of the Board of Trustees of The California State University is that students graduating from a CSU campus must fulfill certain breadth requirements (Section 40405, Title 5, California Code of Regulations). Of these, a minimum of 9 semester units must be upper-division general education courses taken at the campus conferring the degree. Partial credit may be transferred from another institution; a participating, regionally-accredited institution may certify completion of 39 semester units.

Each campus in the CSU system may define which of its courses satisfy its General Education Requirements and determine which courses are transferable from other institutions (except where a maximum of 39 units are certified). The campus may add requirements and enact other regulations.

Beginning in the 1996-97 academic year, CSULB inaugurated a series of theme years. Each involves the campus in a year-long series of major speakers, video conferences, performances, films, events, field trips, and classes (across campus and in the community) focused on a single intellectual issue of importance to our time. Please see the end of this section for a listing of courses with theme year content.

## General Education Requirements

Each California State University, Long Beach, baccalaureate graduate must have completed at least 51 semester units of General Education courses. Only courses specifically approved for General Education and so listed in the Schedule of Classes may be used to fulfill General Education requirements. At least three units of the 51 General Education units must be instruction which focuses on instructive examples of

human diversity (Human Diversity Courses). At least nine of the 51 General Education units must be units taken at CSULB and after you achieve upper-division standing (completion of 60 semester units). Of the nine upper-division units, at least six units must be from among approved interdisciplinary courses (I-suffix). 51 units of General Education course work include three units of work in U.S. History and three units in U.S. Constitution and American Ideals, required by Section 40404, Title 5, California Code of Regulations. (See Category D. below). Title 5 provides that each student shall demonstrate competence by completing a course in these fields or by passing a comprehensive examination in them. These examinations are provided by the Departments of History and Political Science, respectively.

No course in your major department may be used to satisfy G.E. requirements with these exceptions: all courses in Category A, Category B.1.a for life science majors, Category B.2 for mathematics majors, Category C.1 and C.3 for art and music majors, Category D.1.a for history majors, Category D.1.b for political science majors, all interdisciplinary courses (IC) and all human diversity courses (HD) for all majors. A cross-categorized Interdisciplinary Course may be counted (at the student's option) in one of the categories, but not in more than one.

Engineering and Technology students have special GE requirements. They have to satisfy one of the themes by taking two upper-division IC courses within that theme. For details, see the College of Engineering section of this Catalog.

General Education units must be distributed as follows:

### Category A

Communication in the English Language and Critical Thinking — 9 units to include:

1. One approved course in written English;
2. One approved course in oral communication or a combination of oral and written communication, to include an understanding of the process of communication and experience in communication;
3. One approved course in critical thinking, designed to develop the ability to reason clearly and logically and to analyze the thinking of others.

### Category B

Physical Universe — 12 units to include:

1. At least six units of inquiry into the physical universe and its life forms to include one approved course in the life sciences and one approved course in the physical sciences; both must involve laboratory experience;
2. At least three units of study in mathematical concepts and quantitative reasoning; approved courses foster an understanding of mathematical concepts rather than merely providing instruction in basic computational skills;
3. Another three units as necessary, selected from approved courses, to achieve a minimum of 12 units.



### Category C

Humanities and the Arts — 12 units to include:

1. At least three units from approved fine arts courses;
2. At least six units from approved courses to include courses in at least two of the following areas:
  - a. literature
  - b. philosophy, and
  - c. foreign languages.
3. Another three units as necessary, selected from approved courses to achieve a minimum of 12 units.

### Category D

Social and Behavioral Sciences and Their Historical Backgrounds — 15 units to include:

1. Citizenship:
  - a. Three (3) units selected from courses in U.S. History;
  - b. Three (3) units selected from courses in U.S. Constitution and Ideals (formerly Category F.)
2. Social and Behavioral Science: At least nine (9) units from approved courses in at least two disciplines:
  - a. At least three (3) units selected from approved courses which concern world societies and cultures in an international context;
  - b. The remaining units are to be selected from the general list of approved social and behavioral science courses (categories D.1.a, D.1.b, D.2.a, and D.2.b).

### Category E

Self-Integration — 3 units:

At least three units selected from approved courses which facilitate understanding of the human being as an integrated physiological, psychological, and social organism.

Cross categorized courses may count in only one category, not both.

The following General Education courses are approved for the fall semester. There may be some changes in the spring semester. Please consult the Spring Schedule of Classes for the updated list.

Dept.	Course #	Course Title	Category
A/P	107	Human Biology	GB1a
A/P	207	Human Physiology	GB1a
A/P	308I	Human Body & Mind	GE
A/ST	190	Tao Reasoning	GA3
A/ST	300I	Traditional Asia	GC3 or GD2a
A/ST	301I	Modern Asia	GD2a
A/ST	310	U.S. and Asia	GD2a
A/ST	393I	Japan's Heritage	GC3 or GD2a
A/ST	495I	China Heritage	GC3 or GD2a
AIS	100	Indian History to 1871	GD2b
AIS	101	Indian History Since 1871	GD2b
AIS	319•	U.S. Ethnic Experience	HD2b
AIS	340	American Indian Literature	GC2a
AMST	300	Intro to American Studies	GC3
ANTH	120	Intro to Cultural Anthropology	GD2a
ANTH	140	Intro to Archaeology	GD2b
ANTH	150	Elements Of Human Integration	GE
ANTH	170	Intro to Linguistics	GD2b
ANTH	210	Intro to Physical Anthropology	GB3
ANTH	305I	Radical Social Analysis	GD2b
ANTH	307I	Modernization	GD2a

Dept.	Course #	Course Title	Category
ANTH	311I	Human Adventure	GD2b
ANTH	313	Peoples of the World: Prehistory	GD2b
ANTH	314	Peoples of the World: Ethnography	GD2a
ANTH	315•	Human Variation	HE
ANTH	329•	Cultural Diversity in California	HD2b
ANTH	353	Health & Healing	GE
ANTH	412I	Culture & Communication	GD2a
ART	100	Perceptual Skill Through Drawing	GC1
ART	110	Intro to the Visual Arts	GC1
ART	113A	Survey of Eastern Art	GC1
ART	113B	Survey of Eastern Art	GC1
ART	115B	Foundation Art History II	GC1
ART	115C	Foundation Art History III	GC1
ART	330I	Cross Cultural Visual Literacy	GC1 or GD2a
ART	335I	Art & Anthropology	GC1
ASAM	100	Language Skills	GA1
ASAM	200•	Asian Amer Inter-Ethnic Relations	HD2b
ASAM	220	Asian American History	GD2b
ASAM	260	Intro to Asian American Literature	GC2a
ASAM	319•	U.S. Ethnic Experience	HD2b
ASAM	335I•	Asian/Latino Immigration Since WWII	HD2b
ASAM	370	Asian Man & Woman In America	GE
ASAM	380	Asian Phil & Religion in America	GC2b
ASTR	100	Astronomy	GB1b or GB3
ASTR	100L	Intro to Astronomy Lab	GB1b
ASTR	101	Astronomy	GB1b
ASTR	370I	Extraterrestrial Environment	GB3
B/ST	100	Language Skills	GA1
B/ST	110	Intro to Black Studies	GD2b
B/ST	120	Afro-Amer History to 1865	GD2b
B/ST	121	Afro-Amer History 1865 to Present	GD2b
B/ST	140	Intro to African-American Literature	GC2a
B/ST	155	Afro-American Music	GC1
B/ST	160	Intro to Black Arts	GC1
B/ST	200	Ancient African Civilizations	GD2a
B/ST	201	History of Slavery	GD2b
B/ST	270A	Elementary Swahili	GC2c
B/ST	304	African Colonial Experience	GD2b
B/ST	319•	U.S. Ethnic Experience	GC2a
B/ST	332	Civil Rights & the Law	GD2b
B/ST	337	Cultures of Pan-African Peoples	GD2b
B/ST	343	African & Caribbean Literature	GC3
B/ST	346	Black Theatre	GC2a
B/ST	353	Black Religion	GC3
B/ST	363	History of African Art	GC1
B/ST	400	Afro-American Social Thought	GD2b
B/ST	410	The Black Family	GE
B/ST	430	African Political Leadership in the 20th Century	GD2a
BIOL	100	Biology of Human Environment	GB3
BIOL	200	General Biology	GB1a
BIOL	201	Marine Natural History	GB1a
BIOL	211A	Biological Sciences I	GB1a
BIOL	303I	Coastal Systems & Human Impact	GB3
C D	330	Speech & Hearing Science	GE
C/LA	310	Film & Culture	GC1
C/LA	314I	Intro to Contemporary Europe	GD2a
C/LA	315I	Contemporary European Society	GD2a
C/LA	350I	California Culture	GC3 or GD2b
C/LA	444I	European Culture Today	GC3
C/LT.	124	Intro to World Theatre & Drama	GC3
C/LT	161	Reading The World	GC2a or GC3
C/LT	230	World Literature	GC2a
C/LT	232	Folklore & Mythology	GC2a
C/LT	234	Intro to Asian Literature	GC2a
C/LT	235	Middle East & So Asian Lit Zionism	GC2b or GD2b
C/LT	236	Intro to Southeast Asian Literature	GC2a

Dept.	Course #	Course Title	Category	Dept.	Course #	Course Title	Category
C/LT	250	European Literature & Other Arts I	GC3	ENGL	100	Composition	GA1
C/LT	251	European Literature & Other Arts II	GC3	ENGL	100W	Composition	GA1
C/LT	261	Intro to Comparative Literature	GC2a	ENGL	180	Appreciation of Literature	GC2a
C/LT	310I	Greek World	GC2a or GD2b	ENGL	200	Critical Reading & Writing	GA3
C/LT	312I	Roman World	GC2a or GD2b	ENGL	205	Intro to Creative Writing-Fiction	GC1
C/LT	320I	Comic Spirit	GC2a	ENGL	206	Intro to Creative Writing-Poetry	GC1
C/LT	324I	Western Theatre Today	GC3	ENGL	250A	Survey of English Literature	GC2a
C/LT	342	The Bible as Literature	GC2a	ENGL	250B	Survey of English Literature	GC2a
C/LT	412I	Art & Literature	GC1 or GC2a	ENGL	318I	Theory of Fiction & Film	GC3
C/LT	413I	Romantic Spirit	GC1 or GC2a	ENGL	363	Shakespeare I	GC2a
C/LT	414I	Medieval World	GC3 or GD2b	ENGL	370A	Survey of American Literature	GC2a
C/LT	415I•	Ethnic Lit & Culture in America	HC2a	ENGL	370B	Survey of American Literature	GC2a
C/LT	416•	Global Lit in American Culture	HC2a or HC3	ENGL	372I	Wit & Humor in America	GC2a
C/LT	422I	Renaissance Theatre & Drama	GC3	ENGL	375•	Contemporary Amer Ethnic Writers	HC2a
C/LT	451I	Film & Novel	GC3	ENGL	382	Women and Literature	GC2a
C/LT	454I	Mythic Visions into Mythology	GC2a	ENGL	385	The Short Story	GC2a
CHEM	100	Chemistry & Today's World	GB1b	ENGL	386	Poetry	GC2a
CHEM	111A	General Chemistry	GB1b	ENGR	302I	Development of Renewable Energy	GD2b
CHEM	202	Survey of General & Organic Chem	GB3	ENGR	370I	Astronautics Space	GB3
CHEM	302	Survey of Biochemistry	GB1b	ENGR	375I	Total Quality & Cont Improvement	GD2b or GE
CHIN	101	Fundamentals of Chinese	GC2c	FCS	232	Intro to Nutrition	GE
CHIN	102	Fundamentals of Chinese	GC2c	FCS	251	Prof & Personal Apparel Selection	GE
CHIN	201	Intermediate Chinese	GC2c	FCS	309I	Consumer Survival	GD2b or GE
CHIN	202	Intermediate Chinese	GC2c	FCS	312I	Family & Personal Development	GD2b or GE
CHIN	370	Chinese Lit in English Translation	GC2a	FCS	319•	Family Stress & Coping	HD2b
CHLS	101	Intro to Chicano Life	GD2b	FCS	321•	Family & Consumer Resource Mngt	HD2b
CHLS	103A	Bilingual Comm Skills-Spanish	GC2c	FCS	323	Personal & Family Management	GE
CHLS	103B	Bilingual Comm Skills-Spanish	GC2c	FCS	450•	Cultural Perspectives of Dress	HD2b
CHLS	104	Bilingual Comm Skills-English	GA1	FEA	310	Film & Culture	GC1
CHLS	105	Identity & Assim in Chicano Life	GD2b	FEA	316	Mass Media & Society	GD2b
CHLS	205	Intro to Chicano Literary Studies	GC2a	FEA	318I	Theory of Fiction & Film	GC3
CHLS	300	Chicano History	GD2b	FEA	486I	Alternative Media	GC3
CHLS	319•	U.S. Ethnic Experience	HD2b	FIN	309I	Consumer Survival	GD2b or GE
CHLS	335I•	Asian & Latino Imm Since WWII	HD2b	FREN	101A	Fundamentals of French	GC2c
CHLS	350	Latino Population in the U.S.	GD2b	FREN	101B	Fundamentals of French	GC2c
CHLS	390I	Hispanic Southwest: Historic & Literary Images	GD2b	FREN	201A	Intermediate French	GC2c
CHLS	470I	Latina/os Health Status & Health Care Access	GD2b or GE	FREN	201B	Intermediate French	GC2c
CLSC	124	Classical Spirit	GC2a or GC3	GEOG	100	World Regional Geography	GD2a
CLSC	135	Women in the Classical World	GC2a or GC3	GEOG	120•	Geog of Human Diversity in U.S.	HD2b
CLSC	291	Intro to Greek Mythology	GC3	GEOG	140	Intro to Physical Geography	GB3
CLSC	310I	Pagan Culture	GC2a or GC2b	GEOG	160	Intro to Human Geography	GD2a
CLSC	410I	Law & Lit in the Classical World	GC2a or GC2b	GEOG	306	U.S. and Canada	GD2b
CLSC	421I	Classical Drama	GC3	GEOG	307I	Modernization	GD2a
CRIM	101	Criminal Justice System in Society	GD2b	GEOG	308I	Africa South of the Sahara	GD2a
DANC	110	Viewing Dance	GC1	GEOG	309I	Middle East & North Africa	GD2a
DANC	373I	Nonverbal Communication	GC1 or GD2b	GEOG	314I	South & Southeast Asia	GD2a
DANC	435I	Dance in Film	GC1	GEOG	316	Europe	GD2a
DESN	367	History & Theory of Architecture	GC1	GEOG	318	Russia & Its Neighbors	GD2a
DESN	368	History & Theory of Design	GC1	GEOG	320I	Latin America	GD2a
DESN	370	Design in Contemporary Society	GC1	GEOG	326	Pacific Island Area	GD2a
ECON	201	Principles of Microeconomics	GD2b	GEOL	102	General Geology	GB1b or GB3
ECON	202	Principles of Microeconomics	GD2b	GEOL	104	Geology Laboratory	GB1b
ECON	300	Fundamentals of Economics	GD2b	GEOL	105	Geology Field Lab	GB1b
ECON	306I	Environ Issues of the World Econ	GD2a	GEOL	160	Intro to Oceanography	GB1b or GB3
ECON	308	Consumer Economy	GE	GEOL	160L	Intro to Oceanography Lab	GB1b
ECON	309I	Consumer Survival	GD2b or GE	GEOL	163	Atmosphere & Weather	GB3
ECON	360I	American Economic History	GD2b	GEOL	190	Environmental Geology	GB3
ECON	361I	European Economic History	GD2a	GEOL	191	Air & Water Pollution	GB3
ECON	365	Economy of Modern China	GD2a	GEOL	300I	Earth System & Global Change	GB3
ECON	368	Comparative Economic Systems	GD2a	GERM	303I	Coastal Systems & Human Impacts	GB3
ECON	369	East/Central European Economies	GD2a	GERM	101A	Fundamentals of German	GC2c
ECON	370	Pacific Rim Economy	GD2a	GERM	101B	Fundamentals of German	GC2c
ED P	191	Career & Personal Exploration	GE	GERM	201A	Intermediate German	GC2c
ED P	357	Self Management	GE	GERM	201B	Intermediate German	GC2c
ED P	373I	Nonverbal Communication	GC1 or GD2b	GERM	315	Survey of German Lit & Culture I	GC2a
				GERM	316	Survey of German Lit & Culture II	GC2a
				GERM	380I	Contemp German Society & Culture	GC3 or GD2b

Dept.	Course #	Course Title	Category	Dept.	Course #	Course Title	Category
GERN	400I	Perspectives on Gerontology	GD2b or GE	KPE	157	Fitness for Living	GE
GK	101A	Elementary Greek	GC2c	KPE	230	Sports Appreciation	GE
GK	101B	Elementary Greek	GC2c	KPE	332I	Sociocultural Dimensions of Sport & Human Movement	GD2b
H SC	210	Contemporary Health Problems	GE	KPE	338I	Women in Sport	HD2b or HE
H SC	420I	International Health	GD2a or GE	KPE	339I	Psychology of Sports Behavior	GD2b
H SC	425I	Human Sexuality	HE	LAT	101A	Elementary Latin	GC2c
H SC	427	Drugs & Health	GE	LAT	101B	Elementary Latin	GC2c
HCA	422I	Global Issues-Health Service Admin	GD2a	LING	363I	Implications of Human Language	GE
HCA	470I	Latina/os Health Status & Health Care Administration	GD2b or GE	M S	101	U.S. Defense Establishment	GD2b
HDEV	307I	Human Development-Childhood	GD2b or GE	MATH	103	Mathematical Ideas	GB2
HDEV	357I	Human Development-Adult	GD2b or GE	MATH	110	Math for Elementary Teachers I	GB2
HDEV	400I	Death & Dying	GD2b or GE	MATH	112	College Algebra	GB2
HIST	110	World Antiquity	GD2b	MATH	114	Finite Math	GB2
HIST	111	World History: Origins to 1500	GD2a	MATH	115	Calculus for Business	GB2
HIST	112	The World Since 1700	GD2a	MATH	117	Precalculus Math	GB2
HIST	131	Early Western Civilization	GD2a	MATH	119A	Survey of Calculus I	GB2
HIST	132	Modern Western Civilization	GD2a	MATH	119B	Survey Calculus II	GB2
HIST	151	Early England	GD2b	MATH	120	Calculus for Technology	GB2
HIST	152	Modern Britain	GD2b	MATH	122	Calculus I	GB2
HIST	162A	Comparative Hist U.S. & Latin Amer	GD1a	MATH	123	Calculus II	GB2
HIST	162B	Comparative Hist U.S. & Latin Amer	GD1a	MICR	101	Intro to Human Disease	GB3
HIST	172	Early U.S. History	GD1a	MICR	200	Gen Micro/ Health Professionals	GB1a
HIST	173	Recent U.S. History	GD1a	MICR	300I	Human Immunology	GB3
HIST	201	Facts Evidence & Explanation	GA3	MICR	302I	Molecular Biology & Bioethics	GB3
HIST	300	U.S.-Past & Present	GD1a	MICR	303	Public Health & Pollution	GB3
HIST	303I	Rebels & Renegades	GC3 or GD2b	MUS	180	Exploring Music	GC1
HIST	306I	Legal Responsibility	GD2b	MUS	190	Listener's Approach to Music	GC1
HIST	307I	Modernization	GD2a	MUS	290	Pop Music in America	GC1
HIST	308I	Law & Civilization	GD2b	MUS	363I	Music & Humanities	GC1
HIST	309I	Men & Masculinity	GE	MUS	364I	Music & Humanities	GC1
HIST	310I	Greek World	GC2a or GD2b	MUS	365I	Renaissance World	GC3 or GD2b
HIST	312I	Roman World	GC2a or GD2b	MUS	375I	The Avant-Garde	GC1
HIST	314	Roman History	GD2b	MUS	393	Jazz-An American Music	GC1
HIST	323I	Renaissance World	GC3 or GD2b	MUS	490	Music Cultures of the World	HC1
HIST	337	Europe-19th Century	GD2a	NRSG	481I	Parenting	GE
HIST	339	Europe Since 1914	GD2a	NSCI	375I	Discovery-Serendipitous Science	GB3
HIST	341A	Foundations of Russia	GD2a	NSCI	377I	Blood Research	GB3
HIST	341B	Modern Russia	GD2a	OCST	388I	Technological Literacy	GE
HIST	362	Colonial Latin American	GD2a	OCST	417I	Work, Technology & Society	GD2b
HIST	364	Latin American Nations	GD2a	PHIL	100	Intro to Philosophy	GC2b
HIST	370	Chicano History	GD2b	PHIL	160	Intro to Ethics	GC2b
HIST	371	Religion in American History	GC2b or GD2b	PHIL	160L	Intro to Ethics	GC2b
HIST	383A	Japan to 1850	GD2b	PHIL	170	Elementary Logic	GA3
HIST	383B	Modern Japan	GD2b	PHIL	203	History of Early Philosophy	GC2b
HIST	400I	Hist of Western Scientific Thought	GD2b or GB3	PHIL	204	History of Modern Philosophy	GC2b
HIST	404I	Social History of Musical Life	GC3 or GD2b	PHIL	302I	Molecular Biology & Bioethics	GB3
HIST	407I	Japan & U.S. in 20th Cent	GC2a or GD2a or GD2b	PHIL	305	Philosophy in Literature	GC2b
HIST	411I	Early Christianity & Society	GC3 or GD2b	PHIL	306	Philosophy of China & Japan	GC2b
HIST	414I	Medieval World	GC3 or GD2b	PHIL	307	Philosophy of India	GC2b
HIST	474I	Urbanization of Modern America	GD2b	PHIL	330	Philosophy of Religion	GC2b
HIST	485A	Women in the U.S.- Early Period	GD2b	PHIL	351	Political Philosophy	GC2b
HIST	485B	Women in the U.S. - Since 1850	GD2b	PHIL	352	Philosophy of Law	GC2b
I/ST	317I	Problems in Intern'l Social Conflict	GD2a	PHIL	354	Feminism & Philosophy	GC2b
I/ST	318I	Cases in Intern'l Social Conflict	GD2a	PHIL	360	Ethics & Ecology	GC2b
I/ST	319I	International Development	GD2a	PHIL	361	Philosophy-Art & Beauty	GC2b
ITAL	101A	Fundamentals of Italian	GC2c	PHIL	362I	Ethics & Ecology	GC2b
ITAL	101B	Fundamentals of Italian	GC2c	PHIL	381	Phil Of Science	GC2b
ITAL	201A	Intermediate Italian	GC2c	PHIL	451I	Liberty & Justice	HC2b
ITAL	201B	Intermediate Italian	GC2c	PHIL	452I	Law Philosophy & the Humanities	GC2b
JAPN	101	Fundamentals of Japanese	GC2c	PHSC	112	Intro to Physical Science	GB1b
JAPN	102	Fundamentals of Japanese	GC2c	PHSC	331	Light Lasers & Visual Image	GB3
JAPN	201	Intermediate Japanese	GC2c	PHYS	100A	General Physics	GB1b
JAPN	202	Intermediate Japanese	GC2c	PHYS	104	Survey of General Physics	GB1b
JAPN	370	Japanese Literature-Engl Translation	GC2a	PHYS	151	Mechanics & Heat	GB1b
JOUR	312I	World Press	GD2a	PHYS	152	Electricity & Magnetism	GB1b
JOUR	315	Journalism as Literature	GC2a	PHYS	400I	Hist of Western Scientific Thought	GD2b or GB3

Dept.	Course #	Course Title	Category	Dept.	Course #	Course Title	Category
POSC	100	Intro to American Government	GD1b	RUSS	4101	Russian Civilization	GC3
POSC	201	Intro to Political Science	GD2b	S W	220	Intro to Social Welfare	GD2b
POSC	210	Issues of American Politics	GD2b	S W	330	Birth through Adolescence	GE
POSC	215	Issues of Comparative Politics	GD2a	S W	331	Young Adulthood through Old Age	GE
POSC	220	Issues of Global Politics	GD2a	S W	350	Social Policy-Law & Court	GD2b
POSC	225	Issues of Political Theory	GD2b	S W	351	Policy Analysis	GD2b
POSC	230	Issues in Political Economy	GD2b	S W	4811	Immigration Issues in Social Work	GD2a
POSC	301	Classical Political Theory	GD2b	S W	4841	Social Welfare for the Elderly	GD2a
POSC	322	Political Parties	GD2b	S W	491	Conflict Resolution	GD2b
POSC	323•	Minority Politics	HD2b	SOC	100	Principles of Sociology	GD2b
POSC	325	American Political Economy	GD2b	SOC	142	Social Trends & Problems	GD2b
POSC	328	Intro to Public Policy	GD2b	SOC	335I	Social Psychology	GD2b
POSC	353	Politics of Western Europe	GD2a	SOC	340	Latino Population in the U.S.	GD2b
POSC	371	Intro to International Politics	GD2a	SOC	346•	Race, Gender & Class	HD2b
POSC	391	American Government	GD1b	SOC	350	International Population Problems	GD2a
POSC	395I	Politics Through Culture	GD2b	SOC	372I	Living in Space	GD2b
POSC	412	Law & Social Change	GD2b	SOC	374I	Solar System Habitation	GD2b
POSC	461I	Politics of Development	GD2a	SOC	376I	Interstellar Migration	GD2b
POSC	482	American Foreign Policy	GD2b	SOC	4101	Social Ecology	GD2b
POSC	494I	Politics of the Future	GD2a	SOC	441I	Criminology	GD2b
PSY	100	General Psychology	GD2b	SOC	449I	Sociology of Political Rights	GD2b
PSY	230	Critical Thinking	GA3	SOC	461I	Alcohol & Society	GE
PSY	241	Psychobiology	GB3	SOC	462	Medical Sociology	GE
PSY	300I	Mind Control or Freedom	GD2b	SOC	466	Aids & Society	GD2a or GE
PSY	339I	Psychology of Sport Behavior	GD2b	SOC	485I	Sociology of Language	GD2b
PSY	346I	Human Sociobiology	GD2b	SPAN	101B	Fundamentals of Spanish	GC2c
PSY	350I	Psy & Contemp Social Issues	GD2b	SPAN	201A	Intermediate Spanish	GC2c
PSY	351•	Social Psychology	HD2b	SPAN	201B	Intermediate Spanish	GC2c
PSY	354	Psychology of Women	GD2b	SPAN	250	Spanish for Bilinguals	GC2c
PSY	356	Personality	GD2b	SPAN	330	Literary Masterpieces-Spain	GC2a
PSY	361•	Child & Adolescent Development	HD2b	SPAN	341	Literary Masterpieces-Spanish Amer	GC2a
PSY	365	Psy of Adult Development & Aging	GD2b	COMM	130	Essential Public Speaking	GA2
PSY	370	Abnormal Psychology	GD2b	COMM	131	Argumentation	GA3
PSY	375•	Community Psychology	HD2b	COMM	131W	Argumentation Workshop	GA3
R/ST	100	Intro to Religion	GC3	COMM	132	Small Group Discussion	GA2
R/ST	103	Intro to World Religions-Eastern	GC3	COMM	210	Interpersonal Communication	GA2
R/ST	202	Religion & Society	GC3	COMM	271	Voice & Applied Speaking	GA2
R/ST	210	Intro to the Bible	GC3	COMM	331	Argumentation-Debate	GA2
R/ST	301	Approaching Religion	GC2b	COMM	335	Persuasive Speaking	GA2
R/ST	302I•	American Religious Diversity	HC2a or HC2b	COMM	412	Gender & Communication	GE
R/ST	311	Old Testament	GC3	COMM	441I	Freedom of Communication	GA2
R/ST	312I	Dead Sea Scrolls	GC3 or GD2b	COMM	442I	Campaign Persuasion	GA2
R/ST	315I	Modern Jewish Thought - Zionism	HD2b	THEA	113	Intro to Acting	GC1
R/ST	322	New Testament	GC3	THEA	122	Appreciation of Theatre Arts	GC1
R/ST	331I	Islamic Religion & Culture	GC2b	THEA	124	Intro to World Theatre & Drama	GC3
R/ST	341I	Buddhism	GC2b	THEA	324I	Western Theatre Today	GC3
R/ST	343	Religions of China	GC2b	THEA	421I	Classical Drama	GC3
R/ST	344	Religions of Japan	GC2b	U/ST	401I	Urban Life & Problems	GD2b
R/ST	351	Religions of India & South Asia	GC2b	UNIV	300I	Odyssey	see Schedule of Classes
R/ST	353I	Religions of Southeast Asia	GC2b or GD2b	UNIV	301I•	Odyssey	see Schedule of Classes
R/ST	362I	Religion & Psychology	GC3 or GD2b	USP	100	Angles of Vision	GA3
R/ST	371I	American Religious Experience	GC2b or GD2b	USP	200	Fireside Forum	GE
R/ST	375	Historical Jesus	GC3	W/ST	101	Women & Their Bodies	GE
R/ST	376I	Christian Origins	GC3	W/ST	102	Women in Contemporary Society	GD2b
R/ST	383I	Christianity & Marxism	GC2b or GD2b	W/ST	307I•	Money, Sex, Power	HD2b
R/ST	391I	Religion & Science	GC2b	W/ST	318I•	U.S. Women of Color	HC2a
R/ST	425I	Religion & Modern Literature	GC3	W/ST	319•	U.S. Ethnic Experience	HD2b
R/ST	471I	Early Christianity	GC3 or GD2b	W/ST	338I•	Women in Sport	HD2b or HE
R/ST	472I	Formation of Modern Christianity	GC2b or GD2b	W/ST	365I	Women & Pop Culture	GC3 or GD2b
R/ST	485	Contemporary Religious Thought	GC2b	W/ST	382	Women And Literature	GC2a
REC	320•	Universality of Play	HE	W/ST	401I	Women in Global Perspective	GD2a
REC	340I	Leisure in Contemporary Society	GE	W/ST	485A	Hist of Women in U.S.-Early Period	GD2b
RUSS	101A	Fundamentals of Russian	GC2c	W/ST	485B	Hist of Women in U.S.-Since 1850	GD2b
RUSS	101B	Fundamentals of Russian	GC2c				
RUSS	201A	Intermediate Russian	GC2c				
RUSS	201B	Intermediate Russian	GC2c				
RUSS	310	Russian Literature in English	GC3				

• Denotes course which meets Human Diversity requirement.

# GEOGRAPHY

*College of Liberal Arts*

Department Chair  
Gary Peters

Department Office  
Liberal Arts 4 (LA4), Room 106

Telephone  
(562) 985-4977

## Faculty

### Professors

Molly Debysingh  
Frank Gossette  
Edward Karabenick  
Richard Outwater  
Gary Peters  
Joel Splansky  
Judith Tyner  
Jean Wheeler  
Benjamin Wisner

### Associate Professor

James Curtis

### Assistant Professor

Irisita Azary

### Department Secretary

Robin Ikemi

Students desiring information should contact the department office for referral to one of the faculty advisors.

### Credential Advisor

Jean Wheeler

### Undergraduate Advisor

Judith Tyner

### Graduate Advisor

Joel Splansky

Geography integrates information from many social and natural sciences by focusing upon human activities within the context of their physical and cultural environment. Because of the diversity of subject matter which it considers, geography offers a broad, liberal education which is applicable to many careers. These include elementary, secondary, and college teaching; cartography; geographic information systems (GIS); computer mapping; regional, urban and environmental planning; business; government and the foreign service.

The Geography Department offers the bachelor of arts and master of arts degrees, as well as a minor. Certain geography courses are applicable to teaching credential programs; to the degree in liberal studies; and to certificate programs in environmental, liberal, urban, Asian, Latin American, and Russian and East European studies.

Students may obtain materials from the department describing the geography programs and courses recommended for career preparation.

The master of arts degree in geography is designed for those wishing to expand their geographic competence beyond that expected of the bachelor's degree. The Master of Arts degree in Geography is becoming a common requirement for employment advancement and it provides the preparation necessary for admission to geography Ph.D. programs at other universities. Candidates are responsible for observing the general requirements stated in this Catalog as well as the specific departmental requirements contained in the Geography Master of Arts Handbook.

## Bachelor of Arts in Geography (code 2-8515) (124 units)

### Requirements

The Geography major requires 48 units of which at least 9 units must be lower division and at least 36 units must be upper division.

Lower Division: 9 units required: GEOG 140, 160, and 200 (or other approved statistics course)

Upper Division: 36 units as follows:

1. Regional courses: 6 units required, only one course marked \* may be used for the regional requirement: 304\*, 306\*, 316, 326, 308I, 309I, 312I, 318, 320I; and
2. Systematic courses: 15 units required, \*\*must include at least one of these systematics: GEOG 440\*\*, 442\*\*, 444\*\*, 455, 352, 452, 460, 466, 467, 470; and
3. Methods and Techniques courses: 9 units required which must include GEOG 380, and 6 units from: 400, 482, 483, 484, 485, 486, 488.

Electives: 9 units required, at least 6 units of which must be upper division Geography courses or U/ST 401I.

Recommendation: Courses should be selected in consultation with the undergraduate advisor for the purpose of planning career objectives. \* At the time of enrollment in 494 or 497 the student must obtain written departmental notification whether the course will meet systematic or methods and techniques or regional requirements for the major.

## Minor in Geography (code 0-8515)

A minimum of 21 units consisting of GEOG 380 and 18 units chosen in consultation with an advisor. At least 12 units must be in upper division.

## Certificate in Cartography and Geographic Information Systems (code 1-8040)

Directors

Dr. Judith Tyner, Director

Dr. Franklin Gossette, Associate Director

This program offers specialized training in a variety of theoretical and applied cartographic techniques. The program is designed to provide experience in communication through maps and serves as a supplement to standard degree programs. It provides essential training for those seeking map making careers in both the public and private sector.

### Requirements

1. A Bachelor's Degree, which may be earned concurrently.
2. Consultation with the Director of the program.
3. 30 units distributed as follows:
  - A. Courses marked with an \* are required;
  - B. At least one elective must be taken from each category;
  - C. Courses marked with \*\* are not available to undergraduate students.

### Design and Presentation

GEOG 482\*, 484\*

### Analysis

GEOG 200 (or equivalent)\*, 380\*, 400, 483\*, 485\*, MATH 101 (or equivalent), 117.

### Methods/Applications

GEOG 486, 488\*, 492/592, 680\*\*, CE 225, ME 172, GEOL 535\*\*.

## Certificate in Urban and Regional Studies (code 1-8120)

The Urban and Regional Studies Program housed in the Department of Geography offers training in a variety of significant urban problem areas. The certificate program is designed to provide exposure to the analysis of urban problems and serves as an excellent supplement to standard degree programs. It offers essential training for those seeking both private sector and public sector careers in fields concerned with the urban region, its development, problems, and special communities.

Because urban problems cut across such a variety of disciplines, the program is characterized by an interdisciplinary approach. This is accomplished within the certificate curriculum by allowing students to draw together in a distinctive mix related courses from a variety of other departments. The result is a program that provides essential knowledge of the dynamics of urban regions. This approach assures a common core of essential knowledge, while allowing flexibility to each student in designing an individualized program of study using electives drawn from a variety of relevant disciplinary concentrations. The Certificate Program in Urban Studies is a 24-unit course of study comprised of 9 units of core requirements and 15 elective units.

A brochure describing the Urban and Regional Studies Certificate Program in greater detail is available in the Geography Department Office.

### Requirements

1. A bachelor's degree;
2. Consultation with the Chair of the Department;
3. Twenty-four units distributed as follows:  
Core requirements: U/ST 401I, GEOG 466 and 467.

Elective Courses: 15 units to be selected from the following: ANTH 416; ASAM 345; ECON 300, 436, 437, 451; FIN 342; GEOG 452; HIST 468, 469, 474I; FCS 342; CHLS 350 (same as SOC 340); POSC 327, 442, 447 or 448; PSY 375; C/LA 319 (same as AIS 319, AMST 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319); SOC 340 (same as CHLS 350), 410I; U/ST 446; W/ST 432.

## Master of Arts in Geography (code 5-8515)

### Prerequisites

1. A bachelor's degree in geography; or,
2. A bachelor's degree with 24 units of upper division courses in geography substantially equivalent to those required for a geography major at this University; or,
3. A bachelor's degree in a related discipline with 24 units of upper division courses in a combination of geography and approved courses in related disciplines;
4. Completion of a beginning statistics course substantially equivalent to GEOG 200 at CSULB.;
5. An undergraduate GPA of 3.0 (B) or better in geography, or alternative evidence of ability to do graduate work;
6. File with the department a declaration of intent to seek the master's degree in geography.

### Advancement to Candidacy

1. See the Geography Graduate Study Handbook;
2. See the general University requirements;

### Requirements

1. Completion of courses required to remove prerequisite deficiencies;
2. Passage of the Writing Proficiency Examination;
3. Completion of 30 units of approved upper division and graduate courses. A minimum of 24 units of Geography courses. If not already taken for undergraduate credit, a Cartography course (GEOG 482 and 485/585 qualify) and a Field Methods course (GEOG 486 qualifies). A minimum of 18 units of 500- and 600-level courses, which must include GEOG 596, 2 seminars and 6 units of thesis (GEOG 698).

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### Regional

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These courses examine the relationships among peoples, cultures and their landscapes in specific areas of the world. There are no prerequisites for these courses; their broad scope provides the student with a better understanding and appreciation of the world in which we live. Thus, they are ideally suited for general education and liberal studies.

304. California
306. United States and Canada
- 307I. Modernization in Global Perspective

- 308I. Africa South of the Sahara
- 309I. The Middle East and North Africa
- 316. Europe
- 318. Russia and Its Neighbors
- 319. International Development
- 320I. Latin America
- 326. Pacific Island Area

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### Systematic Geography

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These courses deal with diverse subjects and are organized to provide the basic framework for the physical and cultural sub-fields of the discipline.

- 352. Geography of Travel and Tourism
- 355. International Environmental Issues
- 401. Urban Life and Problems
- 440./540. Land and Water Environments
- \*442. Biogeography
- \*444. Climatology
- \*452. Economic Geography
- \*455. People As Agents of Environmental Change
- \*460. Population Geography
- \*466. Urban Geography: Principles
- 467./567. Urban Geography: Metropolitan Problems
- \*470. Political Geography

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### Methods and Techniques

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These courses develop skills in graphic and statistical communication and field analysis which are used within the various sub-fields of the discipline.

- 380. Map Reading and Interpretation
- \*400. Geographical Analysis
- \*482. Principles of Thematic Map Design
- \*483. Aerial Photo Interpretation and Remote Sensing
- 484./584. Advanced Concepts in Presentation Cartography
- 485./585. Introduction to Geographic Information Systems
- \*486. Field Methods in Landscape Analysis
- 488./588. Geographic Information Systems

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### General

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- \*494. Special Topics
- \*497. Directed Studies

## Courses (GEOG)

### Lower Division

- 100. World Regional Geography (3)  
Through spatial approach, Geography of the World's Regions introduces students to the world's geographic realms and examines their cultural, population, and political dynamics, resources and economic development, patterns of settlement and environment elements .
- 100L. World Regional Geography (3)  
Through spatial approach, Geography of the World's Regions introduces students to the world's geographic realms and examines their cultural, population, and political dynamics, resources and economic development, patterns of settlement and environment elements .
- 120. Geography of Human Diversity in the United States (3)  
This course examines America's human diversity from a geographical perspective. Five broad themes are considered: (1) the origin,

migration and dispersal of ethnic groups, (2) the current geographical pattern of ethnic groups in rural and urban areas including ethnic neighborhoods, (3) spatial inequalities based on ethnicity and/or gender, (4) distinctive landscape expressions of human diversity, and (5) patterns of ethnicity in Southern California. Although contemporary ethnic mosaics are examined as a consequence of centuries of interaction among all Americans, particular emphasis is given to Americans of African, Hispanic and Asian origin and American Indians.

140. Introduction to Physical Geography (3)  
Systematic study of the physical environment with an emphasis on human-environmental interaction and perceptions of environmental hazards and resources. (CAN GEOG 2)

160. Introduction to Human Geography (3)  
Geographic aspects of culture, including the past and present social, political and economic factors that are related to man's perception, organization and use of his environment. (CAN GEOG 4)

200. Introduction to Research Methods for Geographers (3)  
Not open for credit for those who already have completed a first course in statistics. An introduction to the scientific method in geography, with an emphasis on basic statistical techniques and their applications. (Lecture 2 hours, Laboratory 3 hours).

### Upper Division

General Education Category A must be completed prior to taking any upper division course.

304. California (3)  
California's diverse natural and cultural environment with emphasis upon social and economic problems and the human response to environmental hazards.

306. United States and Canada (3)  
Common social, economic and political interests of the major human use regions of the United States and Canada. Describes and interprets the culture patterns of each region in relation to the natural settings in which they have developed.

307I. Modernization in Global Perspective (3)  
Prerequisites: ENGL 100 and upper division status. An exploration of the ways in which current psychological and material problems in modern society (both western and Third World) can be traced to a process of accelerating change which began with the advance of technology, the rise of capitalism, the abandonment of "old values," the increasing complexity of bureaucracy and a lowering of social barriers. Exploration of all facets of modernization utilizing films, discussions and readings (fiction and nonfiction). Same course as HIST 307I and ANTH 307I.

308I. Africa South of the Sahara (3)  
Prerequisites: ENGL 100 and upper division status. Human and environmental settings of Africa South of Sahara and the ecological, cultural, demographic, economic settlement & political relationships that characterize them.

309I. The Middle East and North Africa (3)  
Prerequisites: ENGL 100 and upper division status. Human and physical settings of the Middle East and North Africa and the cultural, economic, settlement, and political relationships that characterize them stressing those factors which underlie the region's instability and global importance.

314I. South and Southeast Asia (3)  
Characteristics and problems of South and Southeast Asia focusing on environmental and cultural patterns, and on issues of resource utilization, population growth, and economic development. (Lecture 3 hours.)

316. Europe (3)  
The human and physical patterns of Europe. Current cultural conditions and environmental problems.

318. Russia and Its Neighbors (3)  
Systematic and regional study of the physical, economic and cultural geography of the Soviet Union.

319. International Development (3)

This course focuses on the issues and problems of development confronting the countries of the Third World. The causes and theories of underdevelopment will provide a background for identifying the problems of underdevelopment and for exploring regional, national and global strategies for development. Same course as I/ST 319I.

320I. Latin America (3)

Prerequisites: ENGL 100 and upper division status. Human and environmental characteristics of Middle and South America with a focus on the historical-cultural factors which shaped their present-day societies and the problems of population growth, resource utilization and economic development.

326. Pacific Island Area (3)

Regional synthesis of the physical and cultural geography of Australia, New Zealand and the island groups of Oceania.

352. Geography of Travel and Tourism (3)

Spatial characteristics of recreational and tourist activity. Factors of tourism, travel patterns, environmental and economic impacts, and analysis of regional tourism patterns.

355. International Environmental Issues (3)

An examination of the deterioration, destruction, maintenance and restoration of environmental systems and resources forms the core content of this course. Identification of major environmental problems that have international dimensions, an analysis of their causes and ramifications, and an investigation of potential and/or already initiated attempts at their resolution form the structural framework of the course. Same course as I/ST 355.

380. Map and Aerial Photography Interpretation (3)

Interpretation and understanding of maps as graphic communication with particular emphasis on critical analysis, symbolization, scale, and projection. Introduction to the use of aerial photographs with an emphasis on object recognition of physical and human features. (Lecture, problems 3 hours)

\*400. Geographical Analysis (3)

Prerequisites: GEOG 200, or MATH 180, or equivalent. Examination of advanced quantitative techniques commonly employed by geographers in analysis of spatial phenomena. Topics to be covered include: multivariate statistical methods as models for geographical analysis. Emphasis on the applications of these techniques in geographical research, including the use of computers where appropriate.

401. Urban Life and Problems (3)

Prerequisites: ENGL 100 and upper division status. Not open to students with credit in SOC 419. Review and analysis of the changing urban scene: urban life-styles; community patterns of land use and design; population trends; conflicts in the increasingly multicultural setting of the central city; housing and community development; suburban-central city relationships; human utilization of urban life spaces; examination of the views of landmark urbanists; and future trends. Same course as U/ST 401I.

440./540. Land and Water Environments (3)

Prerequisites: GEOG 140 and 380 or consent of instructor. (Undergraduates register in GEOG 440; graduates register in GEOG 540.) Landforms and related soil and water resources as physical components of the human environment. (Lecture-problems and field experience.)

\*442. Biogeography (3)

Prerequisite: GEOG 140. A course in biology is strongly recommended. Methods of mapping plant and animal distributions, spatial interaction with environmental limiting factors and man's role in temporal and spatial variation of ecosystems. (Lec-problems; field experience.)

\*444. Climatology (3)

Prerequisite: GEOG 140 or GEOL 463. Descriptive and explanatory analysis of the elements and controls of climate. Climates of the world with emphasis on California and North America. (Lecture, problems 3 hours.)

\*452. Economic Geography (3)

Prerequisite: Consent of instructor. Location theory and its application to the study of the distribution of various economic activities, international and interregional changes in the spatial structure of economic activities and the role of these changes in international and regional development. (Lecture, problems.)

\*455. People As Agents of Environmental Change (3)

Spatial variations in environmental change as effected by humans. A systematic and regional analysis at both macro and micro levels. (Lecture 3 hours.)

\*460. Population Geography (3)

Introduction to the geographic study of population. Includes growth and distribution of world population; results of changing births, deaths, and migration; variations in population composition; related problems such as food supplies and environmental deterioration.

\*466. Urban Geography: Principles (3)

Examination of cities; their location, shape, structure and function. Selected world population clusters, theoretical and practical application of urban planning and the evolution of cities are studied. (Lecture-problems.)

467./567. Urban Geography: Metropolitan Problems (3)

Prerequisite: GEOG 466 or consent of instructor. (Undergraduates register in GEOG 467; graduates register in GEOG 567.) Geographic components of metropolitan problems and their solutions. Problems related to transportation systems, housing, evolution of ghettos, urban perception and behavioral patterns will be discussed in terms of theoretical and practically applied urban planning solutions. (Lec, problems 3 hrs.)

\*470. Political Geography (3)

Prerequisite: GEOG 100 or consent of instructor. Comparative study of the earth's politically organized regions and related systems. Varied approaches are explored, such as power analysis, genetic analysis and functional analysis of political units. Stress is upon political geographic concepts used in analyzing the viability of states and nations. (Lecture, problems.)

\*482. Principles of Thematic Map Design (3)

Prerequisites: GEOG 200 or equivalent and 380 or consent of instructor. Theory and techniques in the creation of thematic maps including design, generalization, and symbolization, with an emphasis on computer presentation methods. (Seminar 2 hours, laboratory 3 hours.)

\*483. Remote Sensing (3)

Prerequisite: GEOG 380, or consent of instructor. Interpretation and processing of remotely sensed imagery including acquisition of imagery, the electromagnetic spectrum, kinds of imagery, and digital methodology. (Lecture 2 hours, lab activities 2 hours.)

484./584. Advanced Concepts in Presentation Cartography (3)

Prerequisites: GEOG 200 or equivalent, GEOG 380 and GEOG 482. (Undergraduates register in GEOG 484; Graduates register in GEOG 584.) Advanced theory and techniques for presentation cartography including communication, visualization, terrain representation, animation, and color. (Lecture-discussion 2 hours, Lab 3 hours.) Traditional grading only.

485./585. Introduction to Geographic Information Systems (3)

Prerequisites: GEOG 200 or equivalent; GEOG 380; GEOG 482, or consent of instructor. (Undergraduates register in GEOG 485; Graduates register in GEOG 585.) Fundamental concepts and techniques of geographic information systems are introduced, including problems of acquiring and processing machine-readable map data. (Seminar 2 hours, laboratory 3 hours). Traditional grading only.

\*486. Field Methods in Landscape Analysis (3)

Prerequisite: GEOG 380 or consent of instructor. Introduction to field techniques, including formulation of field plans, recording direct observation, field mapping, sampling techniques, interviewing, and organizing and evaluating data for presentation. (Lecture-discussion 2 hrs, supervised field work 2 hrs.)



488./588. Geographic Information Systems (3)

Prerequisites: GEOG 200 or equivalent; GEOG 380; GEOG 482; GEOG 485 or permission of instructor. (Undergraduates register in GEOG 488; Graduates register in GEOG 588.) Advanced concepts in geographic information systems and techniques are introduced and their applications in geography and related disciplines are explored. (Lecture 2 hours; laboratory 3 hours.) Traditional grading only.

\*492. Internship in Applied Geography (3-6)

Prerequisites: Junior or Senior standing and consent of instructor. Community-based placement to enhance professional preparation in applied geography. May be repeated once for credit. Course may be repeated for a maximum of six (6) units. Credit/No credit grading only. Student will work under faculty supervision.

\*494. Special Topics (1-3)

Prerequisite: Consent of instructor. Application of geographical concepts and methodology to selected contemporary problems. Themes will be announced in the Schedule of Classes. May be repeated for a max of 6 units with consent of department chairperson. May not be credited toward the major in geography without written department consent in advance of enrollment.

\*497. Directed Studies (1-3)

Prerequisite: Consent of instructor. Individually directed studies of special problems in geography. May be repeated for a maximum of six units with consent of department chairperson. May not be credited toward the major in geography without written department consent in advance of enrollment.

## Graduate Division

540./440. Land and Water Environments (3)

Prerequisites: GEOG 140 and 380 or consent of instructor. (Undergraduates register in GEOG 440; graduates register in GEOG 540.) Landforms and related soil and water resources as physical components of the human environment. (Lecture-problems and field experience.)

567./467. Urban Geography: Metropolitan Problems (3)

Prerequisite: GEOG 466 or consent of instructor. (Undergraduates register in GEOG 467; graduates register in GEOG 567.) Geographic components of metropolitan problems and their solutions. Problems related to transportation systems, housing, evolution of ghettos, urban perception and behavioral patterns will be discussed in terms of theoretical and practically applied urban planning solutions. (Lec, problems 3 hrs)

584./484. Advanced Concepts in Presentation Cartography (3)

Prerequisites: GEOG 200 or equivalent, GEOG 380 and GEOG 482. (Undergraduates register in GEOG 484; Graduates register in GEOG 584.) Advanced theory and techniques for presentation cartography including communication, visualization, terrain representation, animation, and color. (Lecture-discussion 2 hours, lab 3 hours.) Traditional grading only.

585./485. Introduction to Geographic Information Systems (3)

Prerequisites: GEOG 200 or equivalent; GEOG 380; GEOG 482, or consent of instructor. (Undergraduates register in GEOG 485; Graduates register in GEOG 585.) Fundamental concepts and techniques of geographic information systems are introduced, including problems of acquiring and processing machine-readable map data. (Seminar 2 hours, laboratory 3 hours.) Traditional grading only.

588./488. Geographic Information Systems (3)

Prerequisites: GEOG 200 or equivalent; GEOG 380; GEOG 482; GEOG 485 or GEOG 585 or permission of instructor. (Undergraduates register in GEOG 488; Graduates register in GEOG 588.) Advanced concepts in geographic information systems and techniques are introduced and their applications in geography and related disciplines are explored. (Lecture 2 hours; laboratory 3 hours.) Traditional grading only.

596. Literature and Methods in Geography (3)

Prerequisite: Consent of instructor. Proseminar in the methods, theory and techniques of geographic investigation with emphasis upon classical and contemporary literature.

600. Seminar in Regional Geography (3)

Prerequisite: Consent of instructor. Regional methods of study common to geographic research, and their utilization in developing regional concepts.

640. Seminar in Physical Geography (3)

Prerequisite: Consent of instructor. Physical/environmental issues and problems.

650. Seminar in Cultural Geography (3)

Prerequisite: Consent of instructor. Systematic investigation of human occupancy in its varied environmental and regional settings. May be repeated once with consent of department advisor.

666. Seminar in Urban Geography (3)

Prerequisite: Consent of instructor. Geographic concepts and techniques of research applied to specific urban areas. May be repeated once with consent of department advisor.

680. Seminar in Cartography and Geographical Information Systems (3)

Prerequisites: Consent of Instructor. Application of geographic concepts and methodology to selected cartographic and GIS problems. Maybe be repeated with the consent of Department Advisor. Possible research themes: cartographic communication, history of cartography, applications of geographic information systems.

697. Directed Research (1-3)

Prerequisite: Consent of instructor. Research in geography supervised on an individual basis.

698. Thesis (1-6)

Prerequisite: Consent of instructor. Planning, preparation and completion of thesis for the master's degree.

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## Urban Studies Courses (U/ST)

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### Upper Division

General Education Category A must be completed prior to taking any upper division course.

4011. Urban Life and Problems (3)

Prerequisites: ENGL 100 and upper division status. Not open to students with credit in SOC 419. Review and analysis of the changing urban scene: urban life-styles; community patterns of land use and design; population trends; conflicts in the increasingly multicultural setting of the central city; housing and community development; suburban-central city relationships; human utilization of urban life spaces; examination of the views of landmark urbanists; and future trends. Same course as GEOG 401.

446. Land Use Planning (3)

Not open to students with credit in U/ST 490 Land Use Planning. This course provides an examination of urban land use planning from the perspective of professional urban planners. The course will focus on planning issues and responses in some of the following major areas: land use; coastal zone planning; resource planning; urban growth, speculation, and economics; design and aesthetic issues; planning parameters for residences, shopping centers, and industrial parks; revitalization of built-up core areas and transportation.

490. Topics in Urban and Regional Studies (1-3)

Prerequisite: Consent of instructor. Topics of current interest in urban and regional studies selected for intensive development. Topics will be announced in the Schedule of Classes.

499. Independent Study (1-3)

Prerequisite: Consent of instructor. Independent study under the supervision of a faculty member.

# GEOLOGICAL SCIENCES

*College of Natural Sciences and Mathematics*

Department Chair

Stanley C. Finney

Department Office

PH3 102

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Professors

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Kwan M. Chan

Stanley C. Finney

Roswitha B. Grannell

Jack Green

Robert E. Winchell

Associate Professor

R.D. Francis

James C. Sample

Assistant Professors

Isam Amin

Richard J. Behl

Department Secretary

Margaret F. Kemp

Students desiring information should contact the department office for referral to one of the faculty advisors:

Undergraduate Advisor

Elizabeth L. Ambos

Graduate Advisor

James C. Sample

The Geological Sciences includes the study of the solid earth, the hydrosphere, and the atmosphere. Within the broad field of Geological Science students may elect to take coursework leading to professional careers in such areas as geohydrology, environmental geology, urban geology, engineering geology, petroleum geology, mineral exploration and government service. The degree programs also prepare students for academic careers in schools or universities, although additional work is usually required for such careers. All Earth Science and Geology majors must contact the department office to obtain a departmental advisor prior to the first semester in residence.

The Geological Sciences Department participates in the interdisciplinary Center for Ocean Science Studies. See the Ocean Science Studies section of this Catalog for additional information.

### *Concurrent and/or Summer Enrollment in Another College*

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the College of Natural Sciences and Mathematics must petition the appropriate department for prior approval to enroll in specific courses. This policy applies to concurrent enrollment or summer enrollment. University policy must also be complied with. See 'Concurrent Enrollment' and 'Transfer of Undergraduate Credit' in this Catalog. Courses not receiving prior approval will not be accepted for credit by the department.

### *Facilitated Enrollment into Classes*

All entering students who declare a major in a degree program offered by this Department must participate in the College of Natural Sciences and Mathematics' Science Safari to Success (for first-time freshmen) or EONS (Enrollment and Orientation in the Natural Sciences and Mathematics for transfer students) Program. These programs are held in June-July for those starting in the Fall Semester and in January for those starting in the Spring Semester. Department advisors will be available to provide an overview of the students' chosen baccalaureate degree program, to assist with academic advisement, to provide information on the many career opportunities available, and to aid students in enrolling in classes. Contact the Student Access to Science Center (FO5-109) or Department Office for additional information.

### **Bachelor of Science in Geology (code 3-7664) (125-132 units)**

The bachelor of science degree program is intended to provide a thorough background in the geological sciences for those planning to pursue careers in industry or to do graduate study. The program is designed with the conviction that, in an ever-changing and technologically-oriented geological sciences industry and research environment, a student must have a strong geological background. As such, he/she needs a program which explores the fundamental

geological processes, cultivates skills in integrative three-dimensional geological thinking, provides laboratory and field experience, and stimulates interest in the many subdisciplines of the geological sciences.

Within the broad field of geology, students may elect to follow any one of five emphases: General Geology, Petroleum Geology, Stratigraphy/Sedimentology, Geochemistry/Mineralogy-Petrology, and Structural Geology. Each student should contact the undergraduate advisor for assistance in planning the degree program.

Geology majors must receive a grade of "C" or better in all courses required for the major. A grade of "C" or better is required in the laboratory portion of each geology course in order to pass that course. Also, before any geology course can be taken, all geology prerequisites for that course must be completed with a grade of "C" or better.

A minimum of 125-132 units is required for the bachelor of science degree in the various emphases in geology. Emphases other than General Geology are based on the General Geology emphasis, but have structured electives and other variations from that plan. An additional course chosen with the consent of the undergraduate advisor may be recommended for individual emphases. Transfer students should fulfill, prior to transferring, where possible, the appropriate lower division curricular requirements as outlined in later sections. Particular attention should be paid to fulfilling the lower division math, chemistry, physics, and biology requirements.

Lower Division: GEOL 102, 104, 240, 273; MATH 122, 123, CHEM 111A-B; PHYS 151, 152; BIOL 200. Additional required courses for the various emphases are listed below.

Upper Division: GEOL 321, 324, 341, 343, 428, 429, 433, 450, 451. Additional required courses for the various emphases are listed below.

1. General Geology: Twelve units of elective courses (normally at upper division) approved in advance by the undergraduate advisor. At least one of the courses taken toward these 12 units must be chosen from among the following: GEOL 460, 461, or 462.
2. Petroleum Geology: MATH 224, GEOL 420, 460, 461, 471.
3. Stratigraphy/Sedimentology: GEOL 364, 364L, 420, 424, 431, 461.
4. Geochemistry/Mineralogy-Petrology: MATH 224; CHEM 371A-B; GEOL 461, 491.
5. Structural Geology/Tectonics: GEOL 430, 460, 462; MATH 224, 370A.

### Minor in Geology (code 0-7664)

Twenty units in geology courses which must include:

Lower Division: GEOL 102, 104, 240.

Upper Division: At least 5 additional units of geology approved in advance by the appropriate undergraduate departmental advisor.

### Bachelor of Science in Earth Science (code 3-7663) (124-130 units)

The Earth Science program prepares students to understand the natural environment, earth resources, land and ocean use, pollution, geology of the sea floor, and other areas of critical importance to present and future world problems.

Career-oriented interdisciplinary emphases are offered in Geohydrology/Environmental Geology, Engineering Geology, Exploration Geophysics, and Marine Geology/Oceanography.

Earth Science majors must receive a grade of "C" or better in all courses required for the major. A grade of "C" or better is required in the laboratory portion of each geology course in order to pass that course. Also, before any geology course can be taken, all geology prerequisites for that course must be completed with a grade of "C" or better.

As outlined below a minimum of 124 units is required for the various emphases in Earth Science.

Lower Division: GEOL 102, 104, 240, 273; MATH 122, 123, 224; CHEM 111A; PHYS 151, 152.

Upper Division: GEOL 324, 343, 428, 433, 460.

1. Geohydrology/Environmental Geology: MICR 200; CHEM 111B; CE 205, 335, 336; GEOL 450, 451, 461, 477, 496 (1 unit devoted to hand specimen petrology which MUST be taken the same semester as GEOL 428); and a minimum of 5 units taken from an approved list, selected in consultation with the undergraduate advisor.
2. Engineering Geology: BIOL 200; CHEM 111B; CE 205, 345, 346, 445; ME 373; GEOL 431, 450, 451, 477, 496 (1 unit devoted to hand specimen petrology which MUST be taken the same semester as GEOL 428).
3. Exploration Geophysics: BIOL 200; MATH 247, 370A-B; PHYS 310, 340A, 402; GEOL 462, 467, 496 (1 unit devoted to hand specimen petrology which MUST be taken the same semester as GEOL 428), and a minimum of 5 units taken from an approved list, selected in consultation with the undergraduate advisor.
4. Marine Geology/Oceanography: BIOL 200; CHEM 111B; GEOL 321, 341, 364, 364L, 429, 452, 461, 465, 466, and a minimum of 6 units taken from an approved list, selected in consultation with the undergraduate advisor.

### Master of Science Degree in Geology (code 6-7664)

The Department of Geological Sciences offers a comprehensive program of courses coupled with appropriate thesis projects leading to the Master of Science in Geology. Within geology, students specialize in any of a number of sub-disciplines including engineering geology, environmental geochemistry, geology, hydrogeology, marine geology, mineralogy and petrology, paleontology, petroleum geology, sedimentology, stratigraphy, structural and field geology, and volcanology. In addition, a formal emphasis in geophysics is available. Students may include in their studies courses offered by other departments at CSULB, or courses at California State University Northridge and California State University Los Angeles; CSULB participates with both universities in a joint Master's program.

The objectives of the Master of Science in Geology are (1) to train individuals with the competence required by the geological profession for employment in industry and government agencies, (2) to enable promising students to attain a level of knowledge and research ability required for admission to Ph.D. programs at other universities, and (3) to provide course work and research experience necessary for students planning to teach geology at the community college level.

## Emphasis in Geophysics

The emphasis in geophysics is available for students wishing to specialize in the application of geophysical principles to the solution of problems in engineering geology, geohydrology, structural geology, tectonics, petroleum geology, and mineral exploration. Students following this Emphasis are expected to have completed the equivalent of coursework required for the B.S. in Earth Science, Geophysics emphasis, and additionally to complete M.S. requirements with a program of geophysical coursework approved in advance by both the graduate advisor and a geophysics advisor. Appropriate B.S. programs which provide training suitable for completion of the M.S. in Geology, Geophysics Emphasis, include Civil and Electrical Engineering, Physics, Mathematics, and Geology in addition to Geophysics, although some deficiencies will exist in these alternate programs. Students should confer with the graduate advisor about this program.

## Departmental Resources

Resources available for thesis research include atomic absorption, spectrophotometer, flame photometer, UV/visible spectrometer, carbon-sulfur analyzer, HEPA-filtered clean laboratories for inorganic and organic geochemistry sample processing, scanning electron microscope, transmission electron microscope, EG & G ES-1225 seismic unit with falling weight energy source, Wild theodolite and electronic distance measurement unit, LaCoste and Romberg gravity meters (D meter with electrostatic feedback device and G-level), surface resistivity/self potential apparatus, 6551 System 10 color-enhanced ground penetrating radar, total field proton magnetometer with gradiometer, cesium vapor magnetometer, X-ray diffraction and fluorescence units, hydrous pyrolysis pressure vessel, gas chromatographs, stable isotope vacuum lines, department computer network featuring PC's and Macintosh computers, a portable PC for interfacing with field geophysical instruments, a Hewlett-Packard Draft-Master plotter, several printers, a scanner, and access to the oceanographic research ship R/V Yellowfin with associated oceanographic equipment including a proton precession magnetometer and a high resolution seismic reflection and side-scan sonar mapping systems.

## Admission to the Program

The basic requirement for admission to the graduate program is possession of a bachelor's degree or equivalent in geology or earth sciences comparable to degrees offered at CSULB. The student normally will be expected to have completed as an undergraduate acceptable work in certain basic lower division and upper division subjects. Lower division subjects include calculus, calculus-based physics, chemistry, biology, computer programming and statistics. Upper division subjects depend on the degree emphasis and sub-discipline to be followed by the student, and generally include (but may not be limited to) courses required by the corresponding undergraduate emphases. Students who are missing some of this course work may be admitted to the program but will be expected to remove deficiencies or present acceptable alternatives.

In addition to the above course work requirements, students are required to take both the General (quantitative and verbal) and Geology subject tests of the Graduate Record Examination and to submit three letters of recommendation prior to entry.

Prospective graduate students in the geological sciences, including CSULB graduates, must formally apply for admission to CSULB as described previously in this Catalog and must also apply directly to the Department of Geological Sciences. All applicants must submit the following documents directly to the department no later than 15 April for the fall semester or 15 November for the spring semester to receive consideration for admission:

1. Department Application Form, available from the department office;
2. Official transcripts of all college level academic work including that done at CSULB, in addition to those transcripts required for general graduate admission to CSULB;
3. Three letters of recommendation from persons familiar with the applicant's academic performance and research potential;
4. Official reports of scores on both the General (quantitative and verbal) and Geology subject tests of the Graduate Record Examination.

A limited number of assistantships are available to fund graduate studies in the Department of Geological Sciences. Applicants wishing to be considered for assistantships must submit all application materials to the department office no later than 15 February for the Fall semester or 15 October for the Spring semester.

Students not meeting the Department's admissions standards or application requirements may be admitted on probationary status on a case-by-case basis. Those students will be expected to maintain the same high academic standards as fully admitted students. After two semesters, students admitted on probationary status will be re-evaluated for full admission to the department.

## Initiation of Graduate Study

Students are responsible for all University and Department regulations governing master's degrees as outlined in this Catalog. The regulations governing the degree are those in effect at the time of advancement to candidacy. Until that time, students are governed by the most current Catalog. The advising of incoming graduate students is carried out by the graduate advisor, who explains the requirements of the program and carries out initial academic advising. It is required that the student arrange for this initial advising before or during his/her first semester.

All entering students must take GEOL 500 (Introductory Graduate Seminar) during their first Fall semester. This course consists of faculty-given seminars that introduce new students to the department and to the faculty and their research. One purpose of this is to encourage the student to find a thesis topic and thesis advisor by the end of the second semester. This is done with the help of the graduate advisor once the student has chosen a sub-discipline or option in which to specialize.

Students are required to maintain a GPA of 3.0 or higher at all times. If at any time a student's GPA drops below 3.0, that student will immediately be placed on probation for a maximum of two semesters. If the student does not bring the GPA back up to 3.0 during the probationary period, he/she will not be allowed to continue as a graduate student in this department. In order for a student to regain status in the department after failing to maintain this academic standard, he/she must formally reapply for department admission.

## Advancement to Candidacy

A student must have been advanced to candidacy before initiating thesis research necessary to complete the M.S. degree. Students are expected to be advanced by the end of their fourth semester. Students may petition the department for an extension of the four semester time limit on a semester by semester basis. Students should be aware, however, that they are at risk of not receiving credit toward their graduate programs for research started or courses taken prior to advancement. Students must have completed the WPE and have advanced to candidacy before they apply for graduation. Requests to graduate must be received during the preceding May for Spring/Summer graduation or preceding December for Fall graduation. Filings after the deadlines are not accepted.

Before advancement can proceed, a thesis topic, committee, and graduate program consisting of at least 30 units (see below) must be established by the student and the prospective thesis committee chair. In addition the following requirements must be met:

1. Prior completion of all deficiencies or incompletes. This includes courses required in the undergraduate major for the emphasis in which the student is pursuing graduate research, as well as additional courses specified by the thesis advisor.
2. Completion of six units of graduate level courses with a 3.0 or higher grade point average and attainment of a 3.0 or higher grade point average in all upper division and graduate work attempted, as well as in courses to be listed in the student's graduate academic program (see below).
3. A passing grade in GEOL 500.
4. Completion of the Writing Proficiency Examination with a passing score.
5. Successful completion of an oral qualifying examination given by the student's thesis committee, and acceptance of a written proposal for the thesis research. The student's thesis topic will be the subject of the examination.

Once the above requirements are met, advancement to candidacy proceeds with approval of the committee, graduate advisor, department chair and Associate Dean for Graduate Accountability. After the student has been advanced, no coursework in addition to that specified in the graduate program may be required of the student. In order for a student to change thesis director, topic, committee members, or courses in the graduate program, approval must be obtained. Under some circumstances this may mean that additional courses are required.

## Requirements of Graduate Academic Program

The graduate academic program consists of at least 30 units of courses and is finalized when the student advances to candidacy. Although courses that will eventually become part of the student's academic program may be taken before advancement, it is strongly recommended that students make up any undergraduate deficiencies first, and then advance as early as possible. The program proposed by the thesis committee chair and the student must be approved by the thesis committee, graduate advisor, department chair,

Associate Dean for Graduate Accountability and Dean of Graduate Studies. Six units of GEOL 698 (Thesis) must be taken as part of the program. Directed Research, GEOL 697, may account for up to three units, but normally can not be taken before the student completes 12 units of the graduate program with a grade point average of 3.0 or higher.

A minimum of 18 units of 500 or 600 level courses, including Thesis, must be completed; the remaining units (12 or less) may be 300, 400, 500, or 600 level courses, although courses at 300 level in the department may not be used in the program. Units may be taken at other universities if suitable courses are not offered at CSULB. Appropriate courses from related areas in science, mathematics, or engineering may be substituted within limits with permission of the department.

## Thesis Defense

All M.S. students are required to submit a thesis that conforms to the University and Department guidelines. The thesis should document the systematic study of a significant geological problem; evidence originality and critical, independent thinking; and conform to appropriate and accepted organization, format, and writing style. Each student should discuss thesis format with his/her thesis committee chair.

All M.S. students are also required to present the results of their research orally. With prior approval, this presentation can take one of many possible formats, including a departmental seminar, a presentation at a regional or national meeting, or a formal thesis defense. The student must schedule his/her presentation at least two weeks in advance, and with the approval of the thesis committee chair and thesis director. The date of the presentation must precede the filing deadline for the semester in which the student plans to graduate.

## Courses (GEOL)

### Lower Division

#### 102. General Geology (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Broad based introductory study of geology. Includes the structure, composition, distribution, and modification of earth materials and also the elementary geologic history of the Earth. Not open to students with credit in GEOL 103 or 107. Concurrent enrollment in GEOL 104 or 105 recommended. (Lecture, demonstration 3 hrs.) (GEOL 102+104, CAN GEOL 2)

#### 104. Geology Laboratory (1)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent and concurrent or prior enrollment in GEOL 102 or consent of Geological Sciences Department Chair. Laboratory study of earth materials. (Laboratory 3 hrs.) A course fee may be required. (GEOL 104+102, CAN GEOL 2)

#### 105. Geology Field Laboratory (1)

Prerequisites: Concurrent or prior enrollment in Geology 102 or consent of Geological Sciences Department Chair. Field trips to areas of geologic significance and field study of earth materials. May be repeated for credit with consent of instructor to a maximum of three units. (Field trips, 6 days per unit.) A fee may be charged for bus trips.

#### 160. Introduction to Oceanography (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Origin and extent of the oceans; nature of the ocean floor, cause and effect of currents, tides and waves; and life in the sea. (Lecture, discussion 3 hrs.)

### 160L. Introduction to Oceanography Laboratory (1)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent; and previous credit or concurrent registration in GEOL 160. Field and laboratory study of the marine environment. Sea trips for experience in the use of oceanographic instruments. Analysis and interpretation of results. (Laboratory-field 3 hrs.) A course fee may be required.

### 163. Science of the Atmosphere and Weather (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Introduction to physical and chemical processes of the atmosphere, science of weather and weather disturbances. Emphasis on understanding the atmospheric environment rather than technical calculations. (Lecture 3 hrs.)

### 190. Environmental Geology (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Interrelationships of man and landslides, floods, erosion, subsidence, volcanism, earthquakes and seismic sea waves. Case histories will be discussed. (Lecture 3 hrs.)

### 191. Air and Water Pollution (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Survey course dealing with the causes and nature of pollution of the air, fresh water lakes and streams and the ocean. Effects of pollution on man's environment. (Lecture 3 hrs.)

### 240. Historical Geology (4)

Prerequisites: GEOL 102 and 104. History of the earth and evolution of animals and plants. (Lecture 3 hrs., laboratory 3 hrs., field trips.) A course fee may be required. (CAN GEOL 4)

### 273. Computer and Statistical Methods in Geology (4)

Prerequisites: GEOL 240, PHYS 151, MATH 123. An elementary background in computers is recommended. Introduction to statistical theory, computer programming, and the use of computer-based statistical and graphical packages as applied to problem-solving in the geological sciences. Traditional grading only. (Lecture 2 hrs., laboratory 6 hrs., field trips.) A course fee may be required.

### 280. Groundwater and Society (3)

Prerequisites: GEOL 102, 104. A grade of "C" or better in MATH 117; or four years of high school mathematics. Hydrologic, geologic, and other factors controlling groundwater occurrence, movement, quality, and contamination. Environmental effects of groundwater contamination. (Lecture 3 hrs.)

## Upper Division

### 300I. Earth Systems and Global Change (3)

Prerequisites: ENGL 100 and upper division status; CHEM 100 or CHEM 111A or GEOL 102 with a grade of "C" or better. An introduction to the interaction of the Earth's systems (biosphere, lithosphere, hydrosphere, cryosphere, and atmosphere). Exploration of the systematic links between life, oceans, climate, and the solid earth, and how these connections control climate change in the past, present, and future. We will use this Earth Systems approach to understand important current issues confronting society regarding local and global climatic and environmental change. (Lecture 3 hrs.) Traditional grading only.

### 303I. Coastal Systems and Human Impacts (3)

Prerequisites: ENGL 100 and upper division status; BIOL 200 or 201; GEOL 102 or 160. Defines and describes natural processes impacting human activities in the coastal zone and how human practices influence natural processes. Topics include global warming, sea level rise, El Nino, port development, ocean outfalls and water quality, fisheries, and coastal erosion. Same course as BIOL 303I. May not apply units towards elective requirements of Geology and Earth Science majors. (Lecture 3 hrs.)

### 321. Optical Mineralogy (3)

Prerequisites: GEOL 324, MATH 123, PHYS 151. Optical properties of crystals and minerals. Laboratory study of minerals in im-

mersion liquids and thin sections with polarizing microscope. Traditional grading only. (Lecture 1 hr., laboratory 6 hrs.) A course fee may be required.

### 324. Mineralogy and Crystallography (4)

Prerequisites: GEOL 102 and 104, CHEM 111A. Corequisite or prerequisite: PHYS 151. Morphological and structural crystallography; crystal chemistry; crystal structure; chemistry, classification, origin, occurrence and association of minerals. Megascopic, qualitative chemical, and instrumental analysis and identification of minerals in the laboratory. (Lecture 2 hrs., laboratory 6 hrs., field trips.) A course fee may be required.

### 341. Paleontology and Biostratigraphy (4)

Prerequisites: GEOL 240 and BIOL 200. Morphologic, systematic, and ecologic aspects of invertebrate fossils; methods and techniques in the collection, preparation, illustration, and description of fossils; uses of fossils in stratigraphic work; principles of biostratigraphy. (Lecture 3 hrs., laboratory 3 hrs., field trips.) A course fee may be required.

### 343. Stratigraphy/Sedimentology (4)

Prerequisites: GEOL 240, 324, 428, and 429. Introduction to sedimentology and stratigraphy, flow mechanics and sedimentary structures, depositional systems, seismic stratigraphy and sea level changes, sedimentation and tectonics, methods of description and classification of sedimentary rocks, and preparation of sedimentologic field reports (Lecture 3 hrs., laboratory 3 hrs., field trips.) A course fee may be required.

### 364. Introduction to Geological Oceanography (2)

Prerequisites: GEOL 102 or 160; and CHEM 111A or Math 122, or consent of instructor. Topography and structure of the ocean floor. Waves, currents, and tides as agents of sedimentation. Effect of geological processes on the sea floor environment. Tectonic and sedimentary history of ocean basins and continental margins. Ship-board techniques in marine geology. (Lecture 2 hrs.; sea trips.)

### 364L. Laboratory in Geological Oceanography (1)

Prerequisite or corequisite: GEOL 364. Analytical and data collecting techniques in marine geology. Chart reading and navigation. Bottom and subbottom profiling. Sample collecting methods and their applicability. Laboratory analysis of bottom samples. Interpretation of data from geologically significant localities visited by research ship. Traditional grading only. (Laboratory 3 hrs.; sea trips.) A course fee may be required.

### 370. Engineering Geology (2)

Prerequisites: ME 172, CE 225. Earth processes and materials which influence the design, construction and operation of engineering works, construction materials. Not open for credit to geology majors. (Lecture 2 hrs., field trips.)

### \*420. Geowriting (3)

Prerequisites: Upper division or graduate standing in the College of Natural Sciences and Mathematics, ENGL 100 or equivalent, passing score on WPE and a course in geology, and consent of instructor. Covers major types of scientific writing aimed at a scientific audience with emphasis on writing scientific content at an advanced level. Journal articles and abstracts will be covered in detail. Topics include handling descriptive scientific data, the distinction between data and interpretation, logic and argument, clarity of style, and writing for specific audiences. Requires extensive independent writing. Enrollment limited. Credit/no credit only. (Lecture 3 hrs.) Traditional grading only.

### \*424./524. Sedimentary Petrology (4)

Prerequisites: GEOL 321, 324, and 343. (Undergraduates register in GEOL 424; graduates register in GEOL 524.) Microscopic and macroscopic study of sedimentary rocks. Identification of grain types, textures, structures, and cements with emphasis on provenance, paleotectonics, paleoenvironmental reconstructions, and diagenesis. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

### 428. Igneous and Metamorphic Petrology and Petrogenesis (2)

Prerequisites: GEOL 102, 104, and 324, CHEM 111A and 111B, PHYS 151 and 152, MATH 122 and 123. Corequisite: GEOL 429 (Geology majors) or 1 unit GEOL 496 (hand specimen petrography lab, Earth Science majors). Characteristics of magmatic and meta-

morphic rock bodies and systems, including mineralogical and chemical aspects. Origin of fabrics; evolution of igneous and metamorphic rocks based on petrologic, isotopic, and geochemical evidence; selected research topics in other aspects of petrology. Traditional grading only. (Lecture 2 hrs., field trips.)

**\*429. Igneous and Metamorphic Petrography Laboratory (2)**  
Prerequisite: GEOL 273 and 321. Corequisite: GEOL 428. Microscopic and ancillary hand specimen analysis of igneous and metamorphic rocks, including fabric analysis and mineral identification and analysis. X-ray analysis of rocks, computer modelling of magma genesis. Topics will be closely tied to concurrent material in GEOL 428. Traditional grading only. (Laboratory 6 hrs.) A course fee may be required.

**430./530. Seminar in Structural Geology and Tectonics (3)**  
Prerequisite: GEOL 433. (Undergraduates register in GEOL 430; graduates register in GEOL 530.) Critical review of selected topics concerning the analysis, interpretation and origin of geologic structures, the mechanics of rock deformation and of large scale crustal deformation. Traditional grading only for Majors/Minors. (Lecture 2 hrs., laboratory 3 hrs.; field trips.) A course fee may be required.

**431./531. Geomorphology (3)**  
Prerequisite: GEOL 433. (Undergraduates register in GEOL 431; graduate students register in GEOL 531.) Nature and origin of land forms. Application of concepts by analyzing land forms displayed on maps and aerial photos in the laboratory and local field studies. (Lecture 2 hrs., laboratory 3 hrs., field trips.) A course fee may be required.

**433. Structural Geology (4)**  
Prerequisites: GEOL 240, 273, 324, PHYS 152. Introduction to structural geology, description of rock structures, graphical solutions to structural problems, computer manipulation of structural data, strain analysis, rock fabric analysis, field analysis of tectonic structures, analysis of structures from maps and cross sections, and structural geology and tectonics. (Lecture 3 hrs., laboratory 3 hrs., field trips.) A course fee may be required.

**442./542. Paleocology (3)**  
Prerequisite: GEOL 341. (Undergraduates register in GEOL 442; graduate students register in GEOL 542.) Environmental significance and age of occurrence of fossil assemblages. Understanding of fossil communities. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**450. Summer Field Geology (6)**  
Prerequisites: GEOL 343, 428, 429 or 496 (1 unit devoted to hand specimen petrology which MUST be taken concurrently with 428) and 433. Six weeks of geological field mapping at a selected area. Preparation of geological reports of the field problems. (Lecture as needed, daily field work.) A course fee may be required.

**\*451. Senior Field Study (3)**  
Prerequisites: GEOL 450. Advanced field studies in geology. Students pursue a field-oriented project of interest in a geographical area(s) and subject(s) agreed upon by instructor. Primary responsibility for design and implementation of project belongs to the student. Project will also involve laboratory work and writing of reports. Traditional grading only. (Lecture 1 hr., field trips.) A course fee may be required.

**452. Advanced Topics in Marine Geology (3)**  
Prerequisites: GEOL 364 and 364L. Corequisite or prerequisite: GEOL 460. Advanced course stressing field collection of data and samples, analysis of data in laboratory, and completion of report. Individual topics will be selected. Lectures on advanced topics in marine geology: structure and composition of oceanic lithosphere, continental margin structure and evolution, seismic stratigraphy, paleoceanography, critical events in world ocean history, and advanced sampling and geophysical techniques. Traditional grading only. (Lecture 1 hr., laboratory 3 hrs., 5 days of sea trips.) A course fee may be required.

**\*460. Introduction to Geophysics (4)**  
Prerequisites: PHYS 152, MATH 123, and GEOL 273. Introduction to geophysics; principles and processes; methods of investigation. (Lecture 2 or 3 hrs., laboratory 3 or 6 hrs., field trips.) A course fee may be required.

**\*461. Introduction to Geochemistry (4)**  
Prerequisites: CHEM 111B, MATH 123. Abundance and migration of elements in the earth; chemical processes in the evolution of the earth and its crust including geochemistry of organic compounds. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

**\*462. Physics and Chemistry of the Earth's Interior (3)**  
Prerequisites: GEOL 240, 428; PHYS 152. Structure and composition of the Earth's interior. Origin and evolution of the Earth. Review of geophysical data, petrologic analyses, and other types of evidence for Earth structure and compositional models. Traditional grading only for Majors/Minors. (Lecture 3 hrs.)

**465./565. Physical and Chemical Oceanography (3)**  
Prerequisites: CHEM 111B, PHYS 100B, and upper division standing in the College of Natural Sciences and Mathematics or Engineering. (Undergraduates register in GEOL 465; graduates register in GEOL 565.) Physical and chemical oceanography; the carbonate cycle; minor elements and micronutrient elements in sea water; water masses of the oceans; the physical concepts and interpretative theories related to ocean circulation. (Lecture 3 hrs.)

**\*466. Oceanography Laboratory and Ocean Studies (1)**  
Prerequisite: Concurrent or prior enrollment in GEOL 465. Instruments and techniques in physical and chemical oceanography; sea trips to areas of oceanographic significance, water quality analysis and interpretation of oceanographic data. Not open to students with credit in GEOL 462. (Laboratory 3 hrs., sea trips.) A course fee may be required.

**\*467. Petroleum Geophysics (3)**  
Prerequisites: PHYS 152, MATH 224, GEOL 240, 460. Applications of seismic reflection and potential field methods to petroleum exploration. Includes processing and interpretation of collected data, and integration of geophysical data with surface and subsurface geology. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**\*471. Petroleum Geology and Well Log Analysis (4)**  
Prerequisites: GEOL 240, 343, and 433. Application of geology to the exploration and production of petroleum, including the uses of both surface and subsurface techniques. Basic well logging techniques as employed in the petroleum (and other) industries, including data collection, reduction, interpretation, and integration among various logging methods as well as with surface geology and geophysical data. (Lecture 2 hrs., laboratory 6 hrs., field trips.) A course fee may be required.

**\*472. Regional Geology of North America (3)**  
Prerequisites: GEOL 240, 433. Regional stratigraphy, structure and geologic history of major provinces of North America, including theoretical concepts of the origin of these features. (Lecture 2 hrs., discussion session 2 hrs., field trips.) A course fee may be required.

**477./577. Hydrogeology (3)**  
Prerequisites: GEOL 102, 104; CHEM 111B; PHYS 152; MATH 123. (Undergraduates register in GEOL 477; graduates register in GEOL 577.) Hydrologic, geologic, and other factors controlling groundwater flow, occurrence, development, chemistry, and contamination. Elementary groundwater flow theory. Well hydraulics. (Lecture 2 hrs., laboratory 3 hrs.) Traditional grading only. A course fee may be required.

**\*478. Field and Laboratory Methods in Hydrogeology (1)**  
Prerequisite: Previous credit or concurrent registration in GEOL 477/577, or consent of instructor. Laboratory determination of porous media properties, and hydrogeologic field methods including water level measurements, aquifer (pump) tests, and chemical sampling. (Laboratory 3 hrs.) A course fee may be required.

**486./586. Engineering Geophysics (3)**  
Prerequisite: GEOL 460 (may be taken concurrently). (Undergraduates register in GEOL 486; graduates register in GEOL 586.) Applications of geophysical techniques to the solution of engineering geology and hydrogeology problems. Review of basic geophysical techniques, and identification and utilization of specialized techniques suitable for the solution of specific problems. Applications and case histories in hazardous waste site evaluations, actively subsiding areas, mapping of basement to-

pography, sea water intrusion problems, mapping of the water table, groundwater contamination, and detection of subsurface cavities. Reading and discussion of research articles; preparation of geophysical feasibility studies in selected engineering environments. Traditional grading only for Majors. (Lecture 2 hrs., laboratory 3 hrs.; field trips.) A course fee may be required.

**\*489. Current Topics in Geological Sciences (3)**

Prerequisite: Consent of instructor. Topics of current interest in the geological sciences selected for intensive development. Topics to be selected from such areas as (a) Volcanology, (b) Urban geology. May be repeated for a maximum of 6 units. Field trips may be required. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**\*490. Current Topics in Geological Sciences (1-3)**

Prerequisite: Consent of instructor. Topics of current interest in the geological sciences selected for intensive development. Topics to be selected from such areas as (F) Aerial Photo Interpretation, (K) Economic Mineral Deposits. May be repeated for a maximum of 6 units. Field trips may be required. A course fee may be required.

**491./591. X-ray Crystallography (3)**

Prerequisites: GEOL 324 or equivalent or consent of instructor. (Undergraduates register in GEOL 491; graduate students register in GEOL 591.) Theory of x-ray diffraction and its application to the analysis and identification of crystalline phases. Not open to students with credit in GEOL 490D. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**496. Investigations in Geology and Other Earth Sciences (1-4)**

Prerequisites: Senior standing in geology, earth science or related fields, completion of an upper division course in geology or earth science in the area of the topics chosen and approval of the topic chosen by the Geological Sciences faculty. Supervised research in geology or the other earth sciences. Field trips may be required. A course fee may be required.

## Graduate Division

**500. Introductory Graduate Seminar (1)**

Prerequisite: Graduate standing. An introduction to graduate policies and faculty research in Geological Sciences. Abstracts on faculty presentations will be required of all students. Course cannot be counted for program requirements for the M.S. degree in Geology. Credit/No Credit grading only. Course may be repeated for a maximum of 3 units. (Seminar 1 hr.)

**520. Advanced Stratigraphic Analysis (3)**

Prerequisites: Introductory course in stratigraphy, sedimentary petrology and paleontology or consent of instructor. Principles and techniques of stratigraphic analysis with emphasis on interpreting the stratigraphic record to aid in reconstruction of environment of deposition and paleogeography. Course will revolve around a field problem and include application of methods from physical stratigraphy, biostratigraphy and sedimentary petrology to solution of the problem. Traditional grading only. (Lecture 1 hr., laboratory 3 hrs., field work 8 days.) A course fee may be required.

**524./424. Sedimentary Petrology (4)**

Prerequisites: GEOL 321, 324, and 343. (Undergraduates register in GEOL 424; graduates register in GEOL 524.) Microscopic and macroscopic study of sedimentary rocks. Identification of grain types, textures, structures, and cements with emphasis on provenance, paleotectonics, paleo-environmental reconstructions, and diagenesis. Traditional grading only. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

**530./430. Seminar in Structural Geology and Tectonics (3)x**

Prerequisite: GEOL 433. (Undergraduates register in GEOL 430; graduates register in GEOL 530.) Critical review of selected topics concerning the analysis, interpretation and origin of geologic structures, the mechanics of rock deformation and of large scale crustal deformation. Traditional grading only for majors. (Lecture 2 hrs., laboratory 3 hrs.; field trips.) A course fee may be required.

**531./431. Geomorphology (3)**

Prerequisite: GEOL 433. (Undergraduates register in GEOL 431; graduate students register in GEOL 531.) Nature and origin of land forms. Application of concepts by analyzing land forms displayed on maps and aerial photos in the laboratory and local field studies. Traditional grading only. (Lecture 2 hrs., laboratory 3 hrs., field trips.) A course fee may be required.

**535. Remote Sensing (3)**

Prerequisite: GEOL 433. Remote sensing of the environment; different types of imagery (Landsat, radar, infrared) and digital image processing. Resource exploration, properties of rocks, land use and hazard applications. Traditional grading only. (Lecture 2 hrs., laboratory 3 hrs.)

**537. California Geology (3)**

Prerequisites: GEOL 433, GEOL 450. Examination of recent theories concerning the evolution of California's geological provinces; geological, geochemical, and geophysical evidence for these theories. Traditional grading only. (Lecture 3 hrs., field trips.) A course fee may be required.

**542./442. Paleocology (3)**

Prerequisite: GEOL 341. (Undergraduates register in GEOL 442; graduate students register in GEOL 542.) Environmental significance and age of occurrence of fossil assemblages. Understanding of fossil communities. Traditional grading only. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**554. Environmental Geochemistry (3)**

Prerequisites: Graduate standing in geology, a course in instrumental analytical methods, and consent of instructor. Geochemical cycles. Human interference with cycles. Trace elements, health and agriculture. Clay mineral reactions. Groundwater chemistry. Reading and discussion of research articles; projects in environmental geochemistry. Traditional grading only for Majors. (Lecture 3 hrs., field trips.)

**556. Organic Geochemistry (4)**

Prerequisites: CHEM 111B, GEOL 240. Exchange of organic matter among sediments, hydrosphere, and biosphere. Diagenesis and catagenesis and their effects on different types of organic matter. Origin of coal and crude oil. Thermal maturity of sedimentary rocks. Laboratory exercises in analytical techniques, artificial generation of crude oil, computer simulation of thermal maturation, and geochemical mapping. Traditional grading only. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

**565./465. Physical and Chemical Oceanography (3)**

Prerequisites: CHEM 111B, PHYS 152 or 100B, and upper division standing in the College of Natural Sciences and Mathematics or Engineering. (Undergraduates register in GEOL 465; graduates register in GEOL 565.) Physical and chemical oceanography; the carbonate cycle; minor elements and micronutrient elements in sea water; water masses of the oceans; the physical concepts and interpretative theories related to ocean circulation. Traditional grading only. (Lecture 3 hrs.)

**570. Special Topics in Geology (1-3)**

Prerequisite: Consent of instructor. Investigation of selected topics in geology. May be repeated for credit, with different topics, for a maximum of six units toward any single degree. Seminars with laboratories as appropriate. Traditional grading only. A course fee may be required.

**575. Advanced Topics in Sedimentology (1-4)**

Prerequisites: Consent of instructor. Investigation of selected topics in sedimentology such as depositional facies analysis, basin evolution, coastal processes, fluvial processes, advanced stratigraphic analysis, and tectonics and sedimentation. Course content varies from year to year. May be repeated for credit, with different topics, for a maximum of four units toward any single degree. Seminars with labs and/or field work as appropriate. Traditional grading only. A course fee may be required.

**576. Practicum in Geohydrology (3)**

Prerequisite: Consent of the instructor; the student should have a fundamental understanding of aquifer mechanics, organic chemistry, stratigraphy, and geohydrology. Solution of actual problems in the areas of water supply and resource contamination. A com-



bination of field techniques, problem approaches, and quantitative analysis will be used to solve comprehensive problems in a fixed period of time to simulate industry conditions. Traditional grading only. (Seminar and field trips, 3 hrs.)

**577./477. Hydrogeology (3)**

Prerequisites: GEOL 102, 104; CHEM 111B; PHYS 152; MATH 123. (Undergraduates register in GEOL 477; graduates register in GEOL 577.) Hydrologic, geologic, and other factors controlling groundwater flow, occurrence, development, chemistry, and contamination. Elementary groundwater flow theory. Well hydraulics. Traditional grading only. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**578. Groundwater Hydraulics (3)**

Prerequisites: GEOL 477/577, MATH 364A. Advanced treatment of groundwater flow through granular porous and fractured media: analytical solutions to groundwater flow problems; hydraulics of wells and aquifer parameter estimation. (Lecture 3 hrs.)

**579. Groundwater Modeling (3)**

Prerequisite: GEOL 578 or consent of instructor. Numerical solutions to groundwater flow and contaminant transport problems. Practical aspects of groundwater modeling. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**580. Special Topics in Geophysics (1-6)**

Prerequisite: Consent of instructor. Investigation of selected topics in geophysics such as Numerical Methods in Geophysics, Seismology, Seismic Migration, Physics of the Earth, Electrical Methods, and Geophysical Field Methods. May be repeated for credit, with different topics, for a maximum of six units toward any single degree. Seminars with laboratories and/or field work as appropriate. Traditional grading only. A course fee may be required.

**583. Advanced Seismic Data Processing (3)**

Prerequisites: GEOL 273, 467; MATH 370A-B. Mathematical principles underlying seismic data processing: Fourier transforms, sampling theorems, deconvolution and filtering. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**585. Advanced Gravity and Magnetics (3)**

Prerequisites: MATH 224, PHYS 152, GEOL 460. Advanced topics in the gravity and magnetic methods of geophysical prospecting. Traditional grading only for Majors. (Lecture 2 hrs., laboratory 3 hrs., field trips.) A course fee may be required.

**586./486. Engineering Geophysics (3)**

Prerequisite: GEOL 460 (may be taken concurrently). (Undergraduates enroll in GEOL 486; graduates enroll in GEOL 586.) Applications of geophysical techniques to the solution of engineering geology and hydrogeology problems. Review of basic geophysical techniques, and identification and utilization of specialized techniques suitable for the solution of specific problems. Applications and case histories in hazardous waste site evaluations, actively subsiding areas, mapping of basement topography, sea water intrusion problems, mapping of the water table, groundwater contamination, and detection of subsurface cavities. Reading and discussion of research articles; preparation of geophysical feasibility studies in selected engineering environments. Traditional grading only for Majors. (Lecture 2 hrs., laboratory 3 hrs.; field trips.) A course fee may be required.

**591./491. X-ray Crystallography (3)**

Prerequisites: GEOL 324 or equivalent or consent of instructor. (Undergraduates register in GEOL 491; graduate students register in GEOL 591.) Theory of x-ray diffraction and its application to the analysis and identification of crystalline phases. Not open to students with credit in GEOL 490D. Traditional grading only. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

**592. Clay Mineralogy (3-4)**

Prerequisite: Graduate standing in Geology or consent of the instructor. Crystallography, structure, classification, origin, occurrence, characterization, geologic significance and use of clay minerals. Laboratory identification of clay minerals by X-ray, SEM, EDS and microprobe analysis. Traditional grading only. (Lecture 2-3 hrs.; laboratory/problem session 3-6 hrs.) A course fee may be required.

**697. Directed Research (1-3)**

Prerequisite: Consent of instructor. Research on a specific subject in geology. Topic for study to be approved and directed by a faculty member in geological sciences. Traditional grading only. A course fee may be required.

**698. Thesis (1-6)**

Prerequisite: Consent of Graduate Committee and graduate advisor. Either laboratory or field investigations, or both, for a total of six semester units to culminate in an approved thesis. A course fee may be required.

# GERONTOLOGY

*College of Health and Human Services*

Director

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Wendy Reiboldt  
Susan Rice  
Pamela Roberts  
Thomas Roberts  
Madeleine Rose  
Lee Skov  
Ronald Vogel  
Barbara White  
Mary Wolfenbarger

An Advisory Committee composed of representatives of diverse University departments and community businesses, agencies and organizations advises the director.

## Gerontology Program Options

Gerontology is the scientific study of the processes and phenomena of aging, including biological, psychological, and sociological dimensions. At this time, aging-related courses are offered by 23 CSULB departments. These are Anthropology, Biology, Communicative Disorders, Communication Studies, Criminal Justice, Educational Psychology, Family and Consumer Sciences, Finance, Health Care Administration, Health Science, Human Development, Human Resources Management, Marketing, Nursing, Occupational Studies, Physical Education, Physical Therapy, Political Science, Psychology, Public Policy and Administration, Recreation, Social Work, and Sociology.

Approved gerontology options include the Certificate in Gerontology and a Master of Science Degree in Gerontology.

## Master of Science in Gerontology (code 6-1040)

The Master of Science Degree in Gerontology is designed (1) to prepare professionals concerned with enhancing the quality of life of older adults, and (2) to prepare persons who aspire to be administrators, researchers or educators with a thorough background in existing theory and research in gerontology, advanced principles of program management, and a supplement to their baccalaureate preparation for their professional discipline.

Students who complete the M.S. in Gerontology will accomplish the following objectives:

1. Develop the desired competencies necessary for success in administrative roles related to the aging population.
2. Acquire advanced education and professional training in gerontology in order to become administrators of state and federal programs, services such as senior centers and retirement homes, businesses, and intergenerational programs.
3. Enhance understanding of the concepts and application of administrative skills relative to various minority and ethnic populations.
4. Acquire expertise in planning, developing and implementing innovative programs to meet the needs of older persons.
5. Demonstrate the ability to conduct research focusing upon the myriad of problems in administration, design and evaluation of gerontological programs.
6. Acquire an understanding of the values and ethics pertinent to gerontology.

## Retention Criteria

1. Maintain a GPA of 3.0 in all work completed at CSULB or all graduate work transferred to meet graduate requirements.
2. Continued satisfactory progress toward the degree objective.

## Advancement to Candidacy

1. Satisfy the general university requirements for advancement to candidacy, and departmental criteria for admission.
2. Satisfactorily complete the CSULB Writing Proficiency Examination.
3. Maintain a 3.0 GPA in all Graduate work completed at CSULB and transfer courses.
4. Complete a minimum of six units of graduate work.
5. Enroll in the semester or summer session in which advancement takes place.
6. File the student program for the Master of Science Degree in Gerontology after completion of 4 above.
7. File a written program approved by the Director of Gerontology and the College of Health and Human Services Associate Dean of Graduate Studies.

## Requirements

1. A minimum of 37 units with at least 28 units of 500 and/or 600 series courses in Gerontology including GERN 563, 592, 600, 610, 696, 697, and 698 (thesis) of
2. A minimum of 37 units with at least 24 units of 500 and/or 600 series courses in Gerontology, including GERN 563, 592, 600, 610, 696, 697, and a written comprehensive examination.
3. With the thesis option, a maximum of six units may be elected outside the major. With the comprehensive option, a maximum of 10 units may be elected outside the area. Specified upper division courses completed after the Bachelor's Degree may be counted.

## Certificate Program in Gerontology (code 1-1080)

The Certificate program is designed to train individuals as gerontology specialists within a major area of study. Alumni work in community programs, health services organizations, government agencies and the private sector.

The Certificate in Gerontology may be earned in conjunction with a baccalaureate or awarded subsequent to earning a bachelor's degree. Courses offered for the gerontology certificate may be the same ones used to satisfy, where applicable, major, minor, or credential requirements.

## Requirements

1. A bachelor's degree (may be taken concurrently);
2. 24 units distributed as follows: Required courses (12 units): GERN 400I, ANTH 454, A/P 401, PSY 365 or HDEV 357I;
3. A minimum of six units chosen in consultation with the gerontology program director from a list of supporting courses;
4. Independent study on a topic related to gerontology (three units);
5. Approved field experience in adult service setting (three units);
6. Early consultation with and approval of the individual program by the Gerontology Program Director.

Certificate of successful completion of the Certificate in Gerontology will be recommended by the Director.

Students should apply to Dr. Jeanne Bader, 128 Family and Consumer Sciences, (562) 985-4056.

## Courses (GERN)

### 400I. Perspectives on Gerontology (3)

Prerequisites: ENGL 100 or equivalent and upper division status. Multidisciplinary approach to the study of middle age and aging including biophysiological, psychological, and sociological aspects. Exploration of the effects of culture and of environment on the aging of individuals and groups. Exemplary topics include history; demographics; normal and disease-based sensory, cognitive and health changes; housing and long-term care issues; work, retirement and income; frauds and scams targeting older adults; and public policy issues. (Lecture-discussion, 3 hours.)

### 420./520. Personal Finance for the Aging (3)

Prerequisites: 400-level course in Consumer Affairs or consent of instructor. Provides an understanding of operations of personal finance as applied to the aging population. Topics include public and private sources of income, living expense, public and private sources of assistance, personal budget systems, financial planning, legal rights of the aged affecting their personal finances, and financial counseling for the aging. Same course as FCS 420./520. (Lecture-discussion 3 hrs)

### \*424. Independent Living for Disabled and Elderly Persons (3)

Prerequisite: FCS 321 or 322 or GERN 400I or consent of instructor. Independent living concepts related to physically and/or functionally disabled adults. Personal, environmental and programmatic responses to disability and aging. Activities include individual and group projects and site visits to such locations as an adapted private home, an Independent Living Center, a "special clothing" manufacturer, and a multipurpose rehabilitation center. Same course as FCS \*424. (Lecture/Activity, 3 hours.)

### \*439. Nutrition and Aging (3)

Prerequisites: FCS 232 or A/P 207 or consent of instructor. Nutritional needs as related to physiological changes that occur during aging. Factors that influence food intake and nutritional status of the elderly. Diet adaptation for chronic diseases commonly found in older people. Same course as FCS \*439. (Lecture-discussion, 3 hours.)

### \*482. Physical Assessment and Aging (3)

Prerequisite: Upper division standing. The physical, emotional and social changes which accompany aging. Theory and practice in the assessment of these factors. Course is designed to prepare the average lay person and those in the helping professions to work with the aged and deal with own aging.

### \*485. Mental Health and Aging (3)

Prerequisites: GERN 400I, HDEV 357I or PSY 365, ANTH 454, and A/P 401, or consent of instructor. Variations in the mental health status of older adults over time and within subgroups. Discussion of changing societal responses (e.g., how and why diagnoses and assessments of competence shift over time). Exploration of the most frequent mental health issues of older adults. Comparison of medical and non-medical therapeutic approaches to older adults' mental health issues. Two off-campus site visits required. (Seminar 3 hours.)

### \*486. Communication Problems of Aging (3)

The physical, physiological, environmental and emotional factors of aging which affect the hearing and speaking processes; the administration and practice of a problem of rehabilitation. (Discussion 3 hours.) Traditional grading only.

### 492. Internship In Family and Consumer Sciences (3)

Student must be a Family and Consumer Sciences major, have senior standing or be a Gerontology Certificate student, a 2.5 GPA overall or a 3.0 GPA in the option major and approval of a faculty member.

Apparel Design and Merchandising: FCS 453, 454, 455 and 457.  
Child Development and Family Studies: FCS 414 or 415 and 412 or 413 or 419.

Consumer Affairs: FCS 321, 323 and 326.

Communication: Consent of advisor.

Fashion Merchandising: FCS 455 and 457.

Food Science: FCS 331A and 332; it is recommended that students take FCS 432.

Gerontology: GERN 400I; ANTH 454; PSY 365 or HDEV 357I and consent of program director.

Hospitality Foodservice and Hotel Management: FCS 333, 335 and 800 hours of approved work experience.

Nutrition and Dietetics: FCS 331B, 332 and 333.

Textiles and Clothing: FCS 453 and 454.

Each prerequisite course must be completed with a grade of "C" or better. A course in which a grade lower than "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than a "C" may proceed with other courses with approval of the Area Coordinator. Field experience of 120 hours in which the student assumes a pre-professional role in an agency, business or other community setting. Internship supervisors monitor and evaluate student work based on preestablished criteria stated in the internship contract. The preestablished criteria in the contract consist of objectives developed by the student in consultation with the supervisor. The objectives and the placement site must be approved by the student's faculty advisor and the internship coordinator. Students evaluate the internship at the end of the experience. The course may be repeated for a maximum of six units. Same course as FCS 492. (Seminar 3 hours.)

#### 497. Directed Studies (1-3)

Prerequisites: GERN 400I, ANTH 454, PSY 365, or HDEV 357I, upper-division standing and consent of program director. Independent study under the supervision of a faculty member. Exploration and experience supplementing and/or complementing regular courses. May be repeated for a maximum of six units.

#### \*499. Special Studies (1-3)

Group investigation of topics of current interest in gerontology. Topics to be announced in the Schedule of Classes. May be repeated for a max. of six units of credit with change of topic.

#### 520./420. Personal Finance for the Aging (3)

Prerequisites: 400-level course in Consumer Affairs or consent of instructor. Provides an understanding of the operations of personal finance as applied to the aging population. Topics include public and private sources of income, living expense, public and private sources of assistance, personal budget systems, financial planning, legal rights of the aged affecting their personal finances, and financial counseling for the aging. Same course as FCS 520./420. (Lecture-discussion 3 hours.)

#### 550. Aging and Social Policy (3)

Prerequisite: SOC 464 or equivalent. Major legislation and policies affecting administration of health and social gerontology programs for the aging, examination and analysis of policy making and political processes affecting development and implementation of programs. (Seminar 3 hours.) Traditional grading only.

#### 563. Evaluation in Gerontology (3)

Prerequisites: GERN 696, upper division statistics course. Principles, design, and methods of evaluation for use by professional gerontologists. Selection and development of instrumentation for data collection and interpretation, methods of reporting for purposes of accountability. (Seminar 3 hours.) Traditional grading only. Same course as FCS 563.

#### 592. Internship in Family and Consumer Sciences/ Gerontology (3)

Prerequisite: Graduate standing and consent of instructor. Field experience in which student assumes a self directed responsible role in an agency, business or other community setting. May be repeated to a maximum of six units. Same course as FCS 592. (Seminar 3 hours.)

#### 600. Seminar in Administration of Family & Consumer Sciences/Gerontology Programs (3)

Prerequisite: FCS 696 or GERN 696 or consent of instructor. Application of administration, management and leadership theories to family and consumer sciences/gerontology programs. Concepts include structure of organizations, leadership styles, management techniques, methods of analyzing and evaluating business systems, management philosophies and performance evaluation procedures. Activities and assignments focus on organization theory, planning, decision making and control tech-

niques, in relation to leadership and management skills needed for success as a family and consumer sciences/gerontology administrator. Same course as FCS 605. (Seminar 3 hours.)

#### 610. Seminar in Current Issues, Trends & Research in Gerontology (3)

Prerequisite: Completion of all core courses except GERN 696, 697 or 698 any of which may be taken concurrently. Students will undertake literature reviews and/or research to explore emerging issues, trends and research in the field of aging studies and/or update their information on the most current gerontological topics. (Seminar 3 hours.)

#### 696. Research Methods (3)

Prerequisite: Upper division statistics (may be taken concurrently). Methodological approaches to contemporary problems in gerontology; biographical techniques and research; critical evaluation of research (Seminar 3 hours.) Traditional grading only.

#### 697. Directed Research (3)

Prerequisite: Advancement to candidacy, GERN 500 level courses in area of study, and GERN 696. Independent investigation of research problems under the direction of a faculty member. (Seminar 3 hours.) Traditional grading only.

#### 698. Thesis (4)

Prerequisite: GERN 697: Advancement to candidacy. Planning, preparation and completion of a thesis under supervision of a faculty member. Approval of thesis committee. (Thesis). Traditional grading only.



# GRADUATE DEGREES AND OTHER POST BACCALAUREATE STUDIES

Associate Vice President, Academic Affairs  
Instructional Programs and Research

Keith Ian Polakoff

Associate Deans for Graduate Studies

Richard Birkemeier (Arts)

Kathleen Cohn (Education)

Mihir Das (Engineering)

William A. Sinclair (Health and Human Services)

Frank Fata (Liberal Arts)

Henry Fung (Natural Sciences and Mathematics)

Director of MBA Program

Jack Gregg (Business Administration)

## Graduate Studies

Graduate study is primarily designed to inspire independence of mind and originality in the quest for knowledge, truth, and useful application. Candidates for a master's degree are required to demonstrate mastery in their chosen field of study either through independent research culminating in an acceptable thesis and/or through successfully passing a final comprehensive examination.

Graduate curricula are designed to provide each student with advanced study in a discipline. All courses listed in a master's degree program, including those outside the major field, must be graduate or upper-division courses approved by the student's graduate committee and department graduate advisor.

Proficiency of a student in any and all parts of a curriculum is ascertained by the faculty of the University. A favorable vote of the faculty is required for a student to receive a master's degree.

A student who plans to become a candidate for a master's degree must hold a bachelor's degree from an accredited institution or have completed equivalent academic preparation at a foreign university as determined by the appropriate campus authority. The student must have completed undergraduate course work substantially equivalent to that required at California State University, Long Beach in the discipline of intended graduate study, or must be prepared to undertake additional work to make up any deficiency. Most graduate degree programs are based upon preparation in the discipline at the undergraduate level. Undergraduate preparation is considered adequate if a candidate has met the upper-division requirements of this University for a bachelor's degree in the subject matter area of the master's degree program. Refer to specific departments for detailed requirements of each degree program.

The following graduate degrees are offered:

### Civil Engineer Degree

### Master of Arts Degree in:

Anthropology

Art

Asian Studies

Communicative Disorders

Dance

Economics

Education

English

Family and Consumer Sciences

French

Geography

German

History

Interdisciplinary Studies

Kinesiology

Linguistics  
Music  
Occupational Studies  
Philosophy  
Political Science  
Psychology  
Spanish  
Speech Communication  
Theatre Arts

Master of Business Administration

Master of Fine Arts Degree in:

Art  
Creative Writing  
Dance  
Theatre Arts

Master of Music

Master of Physical Therapy

Master of Public Administration

Master of Public Health

Master of Social Work

Master of Science in Nursing/Master of Public Health

Master of Science Degree in:

Aerospace Engineering  
Biochemistry  
Biology  
Chemistry  
Civil Engineering  
Computer Science  
Counseling  
Criminal Justice  
Electrical Engineering  
Engineering  
Geology  
Gerontology  
Health Science  
Health Care Administration  
Interdisciplinary Studies  
Kinesiology  
Mathematics  
Mechanical Engineering  
Microbiology  
Nursing  
Nutritional Science  
Physics  
Psychology  
Recreation Administration  
Special Education

Ph.D. in Engineering and Industrial Applied Mathematics  
(awarded jointly with Claremont Graduate School)

## Certificate Programs and Graduate Study

Students, whether graduates of CSULB or another accredited institution, may complete requirements for and be awarded certificates while in graduate standing. The department of each certificate is shown in parentheses.

When certificate programs so provide, 500/600-level courses (except 698) may be used toward the requirements of such certificates. Prerequisites for these courses must be completed prior to registration in 500/600-level courses.

Courses used to meet requirements for the master's degree may also be used to meet certificate requirements when the certificate programs so permit, but such overlap shall not exceed 15 units. Any certificate program that requires or permits graduate courses must receive approval of the University Graduate Council.

## Certificates

Arts Management (College of the Arts)

Career Guidance Specialist (Educational Psychology, Administration, and Counseling)

Industrial Plastics Processing and Design (Mechanical Engineering)

Language Development Specialist (Linguistics)

Leisure Counseling (Recreation and Leisure Studies)

Museum Studies (Art)

Public Management Analyst (Public Policy and Administration)

Public Sector Employer-Employee Relations and Personnel Management (Public Policy and Administration)

Public Sector Financial Management (Public Policy and Administration)

Systems Engineering (College of Engineering)

Teaching of Reading and Language Arts (Teacher Education)

Transportation Policy and Planning (Public Policy and Administration)

Urban Executive Management (Public Policy and Administration)

## Post-Baccalaureate Studies

Students with a baccalaureate degree who wish to continue their education for personal enrichment or to meet professional needs may do so at CSULB either as a post-baccalaureate student or as a graduate student. A post-baccalaureate student is one who has not declared a master's degree or a credential as an objective but who is nevertheless attending class and participating in academic work at the University beyond the baccalaureate degree. Post-baccalaureate students may only enroll through University College and Extension Services. A graduate student is one who has requested and received formal admission to a specific field of study that will lead to a graduate degree in one of the many disciplines available at CSULB.

Candidates for public school service credentials at the University are advised to familiarize themselves with the requirements for these programs. Descriptions of credential programs appear in the Credential Programs section of this Catalog and in the separate departmental sections of this Catalog.

## Graduate and Post-Baccalaureate Admission Requirements

Graduate and credential applicants may apply with the objective of completing a degree, a credential, or a certificate program. Depending on the stated objective, CSULB will consider an application for admission in one of the three categories:

### Graduate Standing — Conditionally Classified

To qualify for admission in conditionally classified graduate standing, a student must:

1. Hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation in a foreign university as determined by an appropriate campus authority;
2. Have attained a grade-point average of at least 2.5 (A = 4.0) in the last 60 semester (90 quarter) units attempted;
3. Have been in good standing at the last college attended; and
4. Be accepted into a graduate degree curriculum on a conditional basis, subject to the requirement that any deficiencies must be remedied by additional preparation.

### Graduate Standing — Classified

A student who meets the minimum requirements for admission as a graduate student, as specified in the preceding paragraph, may be admitted as a fully classified graduate student pursuing an authorized degree curriculum if the appropriate program authorities determine that he or she satisfactorily meets the professional, personal, scholastic, or other standards for admission to the graduate degree curriculum, including qualifying examinations that the appropriate program authorities may prescribe. Only those applicants who show promise of success and fitness will be admitted to graduate degree curricula, and only those who continue to demonstrate a satisfactory level of scholastic competence and fitness shall be eligible to proceed in such curricula.

### Post-Baccalaureate Standing — Classified

In this status a student is eligible to enroll in a credential or certificate program, provided that such additional professional, personal, scholastic, and other standards, including qualifying examinations, as may be prescribed for the particular credential or certificate program by the appropriate campus authority, are satisfied.

### Admission to the University

In order to be admitted to CSULB as either a post-baccalaureate classified student or as a graduate student, the applicant must meet the following requirements:

1. Have earned a baccalaureate degree from an accredited university or college;
2. Have been in good standing at the last institution attended;
3. Have at least a 2.5 grade-point average in the last 60 semester units attempted, independent of when the baccalaureate was granted. The entire semester or quarter in which the 60 units began will be used in this calculation. Lower-division courses or courses taken in

extension (except in adjunct enrollment at CSULB in the upper-division level), after obtaining the bachelor's degree, will be excluded from the calculation.

Students wishing to enroll in the University must follow the instructions supplied by the Office of Enrollment Services in the Admissions section of this Catalog.

NOTE: Graduating undergraduate CSULB students do not automatically continue as graduate students. They must apply under the same conditions as non-CSULB students. Once applications are received, they will be evaluated at appropriate offices. To be admitted to the University, a student must also be admitted to a specific program. The University does not admit post-baccalaureate students who do not have a degree, certificate, or credential objective. Provisional admission is granted to applicants anticipating their baccalaureate degree prior to registration but subsequent to filing the application. Proof of the baccalaureate is mandatory (final transcript must be on file) prior to the student's second semester of attendance. If it is not, provisionally admitted students will be prohibited from future enrollment until such proof is on file.

The student must request all institutions of higher learning attended (including CSULB) to send an official copy of transcripts directly to the Office of Enrollment Services and to the department advisor of graduate studies. Transcripts presented to the Office of Enrollment Services by the student are not acceptable. Graduates of California State University, Long Beach must follow these same procedures when making application to a graduate degree program.

All graduate and postbaccalaureate applicants, regardless of citizenship, whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who possess a bachelor's degree from a postsecondary institution where English is not the principal language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Some programs may require a higher score.

### Admission to a Department as a Graduate Student

In order to pursue a credential or master's degree, students must be accepted by the department or college offering the degree program. In some instances (see specific department listing) this process may require making a separate application to the department or college. Following review the department or college will determine whether or not a student meets its requirements for admission to its degree program. Departments or colleges that receive more applications from qualified students than the number of graduate spaces they have available will admit students in priority order based on the strength of candidates' qualifications.

On the other hand, if space is available, a student who is admissible to the University but who does not meet program requirements for admission may nevertheless be accepted as a conditionally classified graduate student by the department or college offering the program, subject to the proviso that all remaining admission requirements of the program must then be fulfilled after enrollment. Only the Dean of Graduate Studies is authorized to grant conditional admission to a student who does not meet University requirements, and such action will be taken only in rare and compelling circumstances.



## Special Action

In rare and compelling circumstances, an applicant who doesn't qualify for admission under the previous provisions may be admitted by special action if on recommendation of the appropriate faculty of the department/college concerned and in the judgment of the Dean of Graduate Studies there exists acceptable evidence that the applicant possesses sufficient academic, professional, and other potential pertinent to her/his educational objectives to merit such action, as shown through aptitude scores, recent academic performance, and experiential background.

## Requirement in Writing Proficiency

All students must demonstrate competency in writing skills. This is done by passing the Writing Proficiency Examination (WPE). Information on this requirement may be obtained from Testing and Evaluation Services.

Master's and doctoral-seeking students must take the Writing Proficiency Examination during the first semester they are in residence, or a hold is placed on all future registration privileges. Students must satisfactorily complete the test and obtain approval of their graduate degree program prior to being advanced to candidacy. Students who have met the WPE requirement during their baccalaureate degree program at CSULB or at another CSU campus are exempt from retaking the WPE as a graduate student.

## Second Master's Degree

A graduate student who holds a master's degree from this or any other accredited institution but desires to become a candidate for a second master's degree in a different field is subject to the following regulations:

1. All admission requirements of the University and college or department must be met (all general regulations listed in the Catalog apply to the second master's degree);
2. Enrollment and approval of candidacy for the second degree will be granted only after the first degree has been completed and awarded;
3. All requirements for the new degree must be completed;
4. After awarding of the first master's degree, a minimum of 24 units of graduate residence credit must be earned at this University including the minimum of 500/600-series units mandated by the major department in which the student is earning the second master's degree;
5. No more than six units earned on the first degree may be applied to a second master's degree;
6. Prerequisites for an advanced course must be completed prior to enrollment in the advanced course. An instructor may disenroll a student who does not provide evidence of adequate preparation;
7. All prerequisites must be completed prior to application for candidacy;
8. Two master's degrees cannot be awarded concurrently;
9. The area or discipline in which the second degree is earned shall be designated on the transcript and a second diploma awarded.

## Graduate Study in the International Programs

Students planning to participate and receive unit credit toward a master's degree in an International Program should

consult with the graduate advisor in the department of their major and college dean or director of graduate studies before entering the degree program.

Graduate students who have not been admitted to candidacy for a master's degree and who participate in the International Programs may, upon their return to California State University, Long Beach, petition to have six units earned as resident credit in the International Programs included on their official student program for the master's degree. In no case may excess grade points earned in the International Programs be used to bring a grade-point deficiency at California State University, Long Beach to the required 3.0 (B) average.

Students admitted to candidacy for a master's degree who plan to participate in the International Program of Studies must obtain permission, prior to beginning their study abroad, to have units earned abroad applied toward satisfaction of their degree requirements. A candidate's petition to apply units earned abroad must be reviewed and recommended by the department offering the degree. The specific courses to be taken on the foreign campus, thesis research which is to be done abroad, or any other requirements such as examinations to be taken upon the student's return must be listed on the official student program. Usually no more than six units of credit may be transferred to apply toward the minimum 30 units for an advanced degree as a result of participation in the International Program of Studies, but a maximum of 12 units may be allowed by the Dean of Graduate Studies in consultation with the University Graduate Council in a special case.

A copy of the candidate's graduate student program must be forwarded to the Resident Director for the foreign area, who must certify that any credit earned abroad is appropriate to meet graduate degree requirements.

Pending the faculty's evaluation of the student's work, a Report Delayed (RD) grade will be assigned in all courses in which work was completed abroad and which are offered to satisfy requirements toward an advanced degree.

## Change of Objective

Evaluation of credits transferred to the University is based in part upon the objective indicated on the application for admission. Candidates desiring a change in graduate objective from that indicated on the original application must follow these procedures:

1. Obtain a Petition to Change Objective form from the Office of Enrollment Services;
2. Obtain the signatures of the faculty advisor, the graduate advisor and/or the chair of the department in which registration will occur; and
3. Submit a graduate student program in the new discipline.

## Withdrawal from the Degree Program

Students who have been admitted to candidacy for an advanced degree and who complete no courses at this University within a calendar year without filing an approved request for educational leave will be withdrawn from the graduate degree program.

If a student wishes to resume graduate study after withdrawal, the student must reapply to the University and request that the department or college initiate a petition to the Dean of Graduate Studies to reinstate the student in his or her former graduate program. In the absence of an approved petition for

reinstatement, the student must be readvanced to candidacy and the department or college may determine that the student's graduate program should be changed.

## University Regulations Governing the Master's Degree

### General

The following regulations apply to all graduate degree programs. Specific academic and curricular requirements of individual degree programs are given in the departmental listings of this Catalog.

All regulations involving a calculation of grade-point average subsequent to admission to the University as a graduate student shall be based on the following common practices and standards.

"Overall Graduate Grade-Point Average" shall be calculated on all upper-division and graduate-level coursework attempted by a student at this University after completion of a baccalaureate degree.

Grade-point average standards calculated on the basis of a smaller range, grouping, or set of upper-division and graduate-level courses, for example, "courses in the major" or "courses taken since admission to the degree program," presuppose that the student has met the minimum standard for any larger range, group, or set, including the Overall Graduate Grade-Point Average.

1. A student pursuing the master's degree must maintain an Overall Graduate Grade-Point Average of 3.0 (B). Exceptions to the 3.0 (B) Overall Graduate Grade-Point Average may be made only on the recommendation of the departmental faculty offering the degree, the college dean or designee, and approval by the University Graduate Council.
2. At least a 3.0 (B) average must be maintained in the major.
3. No course with a grade lower than "C" may be applied toward the fulfillment of degree requirements.
4. The individual course of studies (student program) for the master's degree must contain a minimum of 30 units in upper-division and graduate courses.

Some degree programs require additional units. Please consult individual degree program requirements.

A minimum of sixty percent of the units required for the degree shall be in the 500- and 600-level series and these shall be completed at this University, consistent with departmental requirements. Student teaching cannot be included in any master's degree program. All upper-division courses marked with an asterisk may be included in the master's degree programs of the department listing the course. With permission of the student's department graduate advisor, asterisk-marked courses may also be used on other graduate degree programs, when appropriate. Normally, other non-marked courses are not used.

5. A thesis and/or final comprehensive examination must be completed. A minimum of four and a maximum of six semester units shall be allowed for a thesis. Failure of the comprehensive examination or thesis requirement is failure of both options. Thus, a student failing the comprehensive examination may not proceed to the thesis option or vice

versa. Once a student has completed a semester of enrollment towards fulfillment of either the comprehensive examination or thesis option, the student may not change from one option to the other without the approval of the faculty concerned, the department chair, and the appropriate dean or designee.

6. No fewer than 24 semester units shall be completed in residence at the University. The Dean of Graduate Studies may authorize department/college approved substitution of credit earned by alternate means for a part of the residence requirement. Units, including continuing education or extension units, accepted by transfer for application toward the minimum units required for a master's degree cannot be used to fulfill the minimum unit requirements in the 500/600 series. This 500/600 unit requirement must be completed in the major discipline and in residence at this University.
7. All requirements of the degree program must be completed within seven years of the date the student program was initiated, i.e., the date (semester) when the first course appearing on the student program was completed. An extension of time beyond the limit may be granted by the Dean of Graduate Studies if warranted by individual circumstances and if the outdated work is validated by comprehensive examination in the relevant course or subject field work, or such other demonstration of competence as may be prescribed by the department and/or college.
8. A graduate student who expects to receive a degree at the end of any semester or summer session must be enrolled during that semester or session and must complete the Request to Graduate Form well in advance. The appropriate request for Spring or Summer candidates must be filed by the preceding September 15; for Fall candidates, by the preceding February 1 at the Office of Admissions and Records. The names of candidates who file within these deadlines will appear in the Commencement Program published each Spring. Note: Graduate Studies 700 may be used to fulfill the enrollment requirement if the applicant has completed all degree program courses prior to the semester of graduation. An incomplete grade not otherwise resolved prior to graduation will automatically revert to the letter grade indicated on the "Requirements for Assigning an Incomplete Grade" form. A course with an unresolved grade of SP (Satisfactory Progress) will remain on the transcript but will be removed from the student's program of study. Incomplete grades may not be resolved following graduation.
9. Proficiency of a student in all parts of a curriculum is determined by the faculty of the University. A favorable vote of the faculty is required for a student to receive the degree.

### The Program

A student must consult with the graduate advisor of the department or college to prepare a tentative degree program. After completing prerequisites and other requirements, the student must formulate an official student program and apply for advancement to candidacy.

The department will assign the student a faculty advisor who must be consulted about preparing a degree program. The advisor should have an official evaluation of the student's previous work from the Office of Enrollment Services, although transcripts provided by the student may be used to develop a tentative student program and discuss degree requirements. When the Office of Enrollment Services' evaluation and the results of tests are available, the faculty advisor can assist the student in drawing up a student program. This student program must be approved by the student's faculty advisor, the departmental graduate advisor, and college dean or director of graduate studies or, for Interdisciplinary Studies, the Dean of Graduate Studies. The student program must list the following:

1. Courses required for removal of undergraduate deficiencies;
2. All courses taken prior to advancement to candidacy which are to apply toward the 30-unit minimum;
3. Required courses;
4. Elective courses.

The official student program, when approved, serves as the basis for the Office of Enrollment Services' graduation check which is required before the degree can be granted. Students who have not been advanced to candidacy are subject to all changes as published in the Catalog, Policy Statements, and certifications.

Graduate student programs may be revised as the student advances toward the degree. Such revisions must be recommended by the faculty advisor and approved by the departmental graduate advisor and the college dean or director of graduate studies or, for Interdisciplinary Studies, the Dean of Graduate Studies.

#### Advancement to Candidacy

Advancement to candidacy is the next step after achieving classified status and signifies approval of a plan of study by the student's major department and college or, for Interdisciplinary Studies, the Dean of Graduate Studies. The prerequisites to advancement to candidacy are:

1. Classified status;
2. Satisfactory completion of the CSULB Writing Proficiency Examination. Information is available in Testing and Evaluation Services (SS/A-216);
3. A minimum 3.0 overall grade-point average and a 3.0 grade-point average in all units undertaken for the student program (at least 6 units);
4. Completion of all qualifying examinations;
5. Enrollment in regular session.

Advancement to candidacy is to occur at least one semester or summer session prior to the semester (session) in which the student expects to graduate. It must occur prior to a student filing the Request to Graduate form with the Office of Enrollment Services. Filing deadlines are the same as for baccalaureate degree candidates.

An approved graduate student program remains in effect as long as a candidate is making satisfactory progress. To insure minimum satisfactory progress toward the degree objective, the student must enroll in at least one session during any 12-month period and complete all degree require-

ments within seven years after completion of the first course on the student program. See also information about Graduate Studies 700 later in this section. The student may not change the graduate major without filing a new student program.

A student entering military service after having been advanced to candidacy will not be considered as having withdrawn from candidacy, provided that the student is inducted, enlisted, or called to active duty during a semester in which enrolled or not more than one semester thereafter, and provided that the student enrolls for work toward a degree within one calendar year of the date of release from service.

Students who have been advanced to candidacy and absent themselves from the University on educational leave will be considered as not having withdrawn from candidacy for an advanced degree, provided the terms of the educational leave are fulfilled. Such students must reapply when returning to the university, but the application fee will be waived.

A department or college recommends a student for advancement to candidacy by forwarding a graduate student program for approval to the college dean or director of graduate studies or the Dean of Graduate Studies. After the student's program has been processed and approved, a copy of the completed student program and a letter advancing the student to candidacy will be mailed to the candidate, with copies filed with the department or college and the Office of Enrollment Services.

A student must be enrolled in the semester or summer session in which advancement to candidacy takes place, and this must occur no later than one semester or summer session prior to completion of course requirements. Normally, a student is eligible and should file for advancement to candidacy after completing six units of graduate coursework for the graduate degree program with a 3.0 grade-point average.

#### Election of Regulations

Graduate students advanced to candidacy will be held responsible for the regulations governing master's degrees in effect at the time of advancement or at the time the last requirement for the degree is met, whichever is more conducive to the student's course of study. A change in master's degree objective or readmission to a graduate degree program following withdrawal requires that a new student program be filed under the current graduate policies as published in the latest edition of the Catalog.

#### Educational Leave

Any registered student, undergraduate or graduate, in good academic standing may request an Educational Leave. Students requesting an Educational Leave shall complete an Educational Leave Form in the semester before the leave is effective, including an explanation of their reasons for seeking the leave and a statement of when they intend to resume academic work. The completed form is to be submitted for approval to the student's department chair (undergraduate) or graduate advisor.

The minimum initial leave will be one full semester; the maximum will be one calendar year. A student may request, in writing, in advance, an extension of the leave. Under no

circumstances shall the total number of approved educational leaves exceed two, nor shall the duration of approved educational leaves extend beyond two calendar years.

Students returning from an approved educational leave are required to submit an application form but will not be required to pay another application fee. Students returning from an absence for which an educational leave was appropriate but not approved, in advance, must pay another fee.

Graduate students who plan to enroll for credit at another institution of higher education during the leave period must obtain prior approval from the department graduate advisor, department chair, and the college dean or designee for the transfer of course credit to the student's program.

The period of an educational leave is counted in the calculation of elapsed time under the regulations governing the maximum period for completion of degree requirements (seven years for graduate students).

For the period of an educational leave the student's rights under the Election of Regulations rule are preserved, maintaining the right of students to elect regulations as if they had maintained continuous attendance.

Students who fail to enroll in two or more consecutive semesters place themselves in jeopardy under the continuous enrollment provisions of the election of regulations rules. This includes the automatic loss of "advanced to candidacy (candidate)" status. Moreover, students who break residency and lose candidate status do not have a presumptive right to reinstatement of their candidacy. These students will be required to go through the process of readvancement.

An educational leave presupposes no expenditure of University resources or faculty and staff time in behalf of the student during the period of the leave. In addition, no computer facilities, no library privileges, and no student services are available to a student on educational leave.

### Comprehensive Examination

Each department or college requiring a final comprehensive examination determines the content of the examination. Such examinations may be written or oral or both. A faculty committee shall represent the department in preparing questions, administering, and reading the examination. Through the comprehensive examination, the faculty provides an opportunity for the master's degree candidate to demonstrate analytic ability and knowledge of the discipline. Working with the department chair or dean of the college and the appropriate committee, the departmental graduate advisor usually assumes responsibility for scheduling the examinations and for selecting the other faculty members to participate.

Students may not enroll for courses in preparation for the comprehensive examination or take the comprehensive examination unless they have been advanced to candidacy for the master's degree or unless advancement to candidacy will occur in the semester in which the enrollment takes place.

During the first semester of residence, the graduate student should ascertain from the faculty advisor what preparation will be expected. Early in the final semester of study for the degree, the candidate should contact the departmental graduate advisor to make arrangements for taking the examination. The department or college will notify the Office of

Enrollment Services whether the student has passed or failed the final comprehensive examination. A candidate who has failed will usually be allowed to take the final comprehensive examination a second time, and the departmental graduate advisor should be contacted for specific procedures for the second attempt. To award a candidate the master's degree for a particular semester, the results of the comprehensive examination must be reported to the Office of Enrollment Services prior to the end of the semester.

### Theses and Projects

A student may enroll for Thesis (course 698 or 699) only when that student has been advanced to candidacy for the degree or when advancement to candidacy will occur in the semester of initial enrollment in Thesis.

Theses and projects submitted in partial fulfillment of the requirements for a graduate degree at this University shall meet the following definitions established by the Trustees of the CSU.

A thesis is a written product of the systematic study of a significant problem. It clearly identifies the problem, states the major assumptions, explains the significance of the undertaking, sets forth the sources for and methods of gathering information, analyzes the data, and offers a conclusion or recommendation. The finished product evidences originality, critical and independent thinking, appropriate organization and format, and thorough documentation. Normally, an oral defense of the thesis will be required.

A project is a significant undertaking appropriate to the fine and applied arts or to professional fields. It evidences originality and independent thinking, appropriate form and organization, and a rationale. It is described and summarized in a written abstract that includes the project's significance, objectives, methodology, and a conclusion or recommendation. An oral defense of the project may be required.

Students are responsible for understanding the definition of a graduate thesis as outlined above and must follow the format guidelines prescribed by the department in which the thesis is completed.

### Thesis Committees

A student's thesis committee shall consist of at least three members qualified in the areas relating to the thesis. At least two shall be full-time faculty members at CSULB, one of whom must be tenured or tenure-track. The chair of the thesis committee, including the chair of a committee for an interdisciplinary studies degree, must be a tenured or tenure-track faculty member from a department authorized to offer a graduate degree. The thesis committee must be approved by the appropriate department graduate advisor and the college associate dean or director of graduate studies. Normally the chair of the committee also serves as thesis director, but this is not necessarily so. The thesis director must be a person qualified in the specific area of the thesis, but need not be a tenured or tenure-track faculty member. The committee shall be responsible for the guidance of the student throughout the thesis effort. Any change in the composition of the committee requires justification and must be approved by the appropriate department graduate advisor and college associate dean or director of graduate studies.

Before agreeing to serve on a thesis committee, the prospective members will review the thesis topic and determine that they possess the requisite expertise to serve on such a committee, and that sufficient resources and materials exist and are reasonably available to the student to support such a study.

Thesis committee members will review the research competence of the thesis student before approving a thesis proposal.

Thesis committee members will advise and direct students in their thesis work and ensure that the thesis meets the standards and definition of a thesis specified above.

Thesis committee members will determine the grade to be awarded for completion of the thesis; and by signing the thesis signature page, thesis committee members certify that they have determined that the thesis meets the required standards of scholarship, format, and style of the discipline.

When the thesis committee includes a thesis director who is not the chair of the committee, this person may be identified on the thesis approval page as "Thesis Director."

#### Thesis Committee Chairs

Thesis committee chairs will determine that the student has the proper preparation in terms of course work and research skills to pursue the proposed thesis.

In departments where this function is not carried out by graduate advisors, thesis committee chairs will advise the student in the selection of other members for the thesis committee, ensuring that the other members are appropriate to the proposed thesis effort.

Thesis committee chairs will be the major contact point with the student and will oversee the other committee members' work with the student.

Thesis committee chairs will assure that the editorial and format standards appropriate to the mechanical preparation of a thesis are followed.

Thesis committee chairs will establish guidelines for the student and timetables to be followed to ensure completion of the thesis in a reasonable time.

Thesis committee chairs will arrange for the oral defense of the thesis when required.

The thesis committee chair is responsible for canvassing the committee and reporting the grade agreed upon by its members. After the completed thesis has been reviewed by the University thesis reviewer for conformance with prescribed format criteria and the approval page has been signed by the committee and by the dean, the final grade will be submitted.

#### Thesis Reviewer

All theses must be acceptable for deposit in the University Library. The thesis reviewer in the University Library will verify that each thesis meets the format criteria prescribed by the department or degree program and by the University and that it meets all University procedural requirements for theses. Students should consult the University thesis reviewer for information, advice, and assistance on the mechanics of preparing a completed thesis and should purchase a copy of Master's Theses and Projects: Guide to Style and Format (copies of this guide can also be checked out from the reserve desk in the University Library). The thesis reviewer also conducts periodic workshops on how to prepare a thesis at CSULB.

## Academic Probation and Disqualification

### Graduate Students

For purposes of determining eligibility to remain at the University, both quality of performance and progress toward the student's objective will be considered. Eligibility will be determined by use of grade points and grade-point average.

Students who are enrolled in a graduate degree program in conditionally probation or classified standing will be subject to academic probation if they fail to maintain an overall grade-point average of at least 3.0 (as defined earlier under General Regulations Governing the Master's Degree) in all units attempted subsequent to admission to the degree program.

Every graduate student who has been advanced to candidacy must maintain an overall grade-point average of 3.0 and a grade-point average of 3.0 in all courses applicable to the degree. Candidacy for an advanced degree may be revoked if a student's overall grade-point average falls below 3.0 at any time. Students who become subject to dismissal from an advanced degree program will be notified of the action taken by the college associate dean for graduate studies or the Dean of Graduate Studies.

Graduate or post-baccalaureate students will be subject to disqualification if while on probation they fail to earn sufficient grade points to be removed from probationary status. Disqualification will bar a student from any further enrollment at the campus.

### Other Post-Baccalaureate Students

A post-baccalaureate classified student who fails to maintain a cumulative grade-point average of 2.5 on all units attempted at the University will be placed on probation.

A student on probation who, prior to the beginning of the next term, fails to attain a cumulative grade-point average of 2.5 on all units attempted at the University will be disqualified.

A student who is disqualified because of scholastic deficiency may petition the appropriate program authority for readmission only after an absence of two semesters or upon successful completion of summer session courses which remove the grade-point deficiency.

Petitions for readmission must indicate the reason for requesting readmission and must include a statement of any academic work successfully completed since disqualification or of any other activity which gives evidence in support of the petitioner's belief that readmittance is warranted. An application for admission and required transcripts, as well as the petition, must be submitted to the Office of Enrollment Services before the dates established by the University for filing applications.

### Grievance Procedures

#### I. Statement of Governing Principles

A. A graduate student may only file a grievance based on an alleged violation of specific University regulations or policies or accepted principles of due process and only if another specified remedy (such as the University Grade Appeal Policy in the case of all course grades) does not exist.

B. A grievance may not be filed on the basis of a graduate student's judgment of an instructor's or administrator's

competence; such judgments are solely the province of the academic department involved or of the administrator's supervisor.

C. A grievance must be initiated within one calendar year of the alleged violation.

D. Graduate programs should make every effort to obviate the possible causes of a grievance in advance by developing clearly written statements of procedures and standards governing decisions that affect graduate students, such as admission into a program, dismissal from a program, administration of comprehensive examinations, selection for field experience, et cetera. Graduate programs should also have in place a mechanism, such as an appeals committee, to provide due process review at the local level when a graduate student so requests. Due process review is an evaluation of the procedures and standards followed in arriving at a decision; it should be conducted by qualified members of the faculty who were not involved in making the original decision. The purpose is not to second-guess the original decision, but rather to make certain that the appropriate procedures and standards were applied in a manner free of arbitrary, prejudicial, or capricious behavior.

E. Final decisions affecting graduate students should be made only on substantive grounds by the personnel who are most qualified professionally, namely the faculty offering a particular graduate program. When subsequent review shows that appropriate procedures or standards have not been followed in arriving at a decision affecting a graduate student, the preferred remedy is to remand the case back to the faculty of the graduate program for their reconsideration. An error in procedure should not become grounds for reversing a substantive decision. In the event that the faculty of a graduate program persist in a failure to follow appropriate procedures or standards, the Graduate Council will consider that situation as an indication that the program should be reviewed for suspension or discontinuance.

## II. Informal Resolution

A formal grievance may be filed by a graduate student only after the student has first sought to resolve the grievance by informal means. The graduate student should begin by contacting the chair or director of the program offering the degree, explaining the nature of the perceived problem, and requesting reconsideration of the decision. If the chair or director was directly involved in the original decision or denies the student an opportunity for due process review at the local level, then the student should seek informal resolution through the college's Associate Dean for Graduate Studies.

## III. Formal Resolution

A. If an attempt at informal resolution is unsuccessful, a graduate student may file a formal grievance with the Associate Vice President for Academic Affairs and Dean of Graduate Studies. The grievance must be filed in writing within 30 calendar days of the time when informal resolution was unsuccessful. The grievance must include a full statement of the graduate student's evidence that a University regulation or policy or an accepted principle of due process was violated, as well as an explanation of

the efforts made to seek informal resolution. The Associate Vice President for Academic Affairs and Dean of Graduate Studies will verify that a good-faith effort at informal resolution was attempted by the graduate student and that no more than one year has elapsed since the alleged violation occurred.

B. If these conditions have been satisfied, the Associate Vice President for Academic Affairs and Dean of Graduate Studies will forward the grievance to the Steering Committee of the Graduate Council.

1. If a member of the Steering Committee is a faculty member of the graduate program involved in the grievance, that member of the Steering Committee shall be replaced by another member of the Graduate Council, elected for that purpose, whenever the committee considers any matter related to the grievance.

2. The Steering Committee will forward a copy of the grievance to the chair or director of the graduate program, requesting that a written response be submitted to the committee within 20 working days of receipt of the grievance.

C. When the Steering Committee receives the written response to the grievance, it will determine whether there is sufficient evidence to render a summary judgment or whether the grievance merits further review. The Steering Committee may decide:

1. That there is not sufficient evidence of a violation of a University regulation or policy or an accepted principle of due process and dismiss the grievance; such a decision shall be final, unless further review is granted by the President.

2. That there is sufficient evidence of a violation of a University regulation or policy or an accepted principle of due process to warrant immediate remanding of the grievance to the graduate program, with explicit instructions concerning the violation that must be corrected during the graduate program's reconsideration of the case.

3. That the evidence in the case is such that further review is required; in such an instance the Steering Committee shall notify both the grievant and the graduate program in writing of the additional evidence the committee wishes to see and whether that evidence should be provided in writing or in personal testimony before the committee.

D. If the Steering Committee seeks evidence by means of personal testimony, the meeting at which such testimony is presented shall be conducted in the manner of any other academic committee meeting and not as a formal hearing; both the grievant and the graduate program shall be given appropriate opportunities to present their views, but the meeting shall be conducted as an inquiry by the committee members, and not as an adversarial proceeding; there shall be no cross-examination.

E. All meetings at which the Steering Committee considers a grievance shall be closed to the public; the committee shall keep minutes of the meeting, but it need not tape-record its proceedings, nor shall a transcript be prepared.

F. When the Steering Committee is satisfied that it has obtained sufficient evidence to make a determination in the case, it shall make its decision in accordance with the provisions of Paragraph III.C.1 or III.C.2 above.

G. The Steering Committee shall report to the Graduate Council on the issues involved in the grievance and on its determination of the case, without identifying the graduate student who filed the grievance.

## Academic Credit

### Credit/No Credit Grading

A graduate student may take courses at the 100/200/300/400 levels under the Credit/No Credit grading policy; however, no course in which a grade of "CR" has been assigned may be used to fulfill the requirements for a master's degree, except that the grade of "CR" may be permitted for master's theses or projects to a maximum of six units when the individual department has specifically designated Credit/No Credit grading for the thesis/project course in the department and for field work, practicum, and/or internship courses.

For graduate students, courses at the 300/400/500/600/700 levels require "B" level proficiency to merit award of the "CR" grade; at the 100/200 levels "C" level proficiency or better is required for award of the "CR" grade.

The option of Credit/No Credit grading for graduate students on 100/200/300/400-level courses is subject to specific regulations of the individual departments regarding their graduate students and regarding the authorization for this option intrinsic to the approved course. Otherwise, no limitation exists as to the number of courses taken under this policy.

### Waiver of Course Requirement and Credit by Examination

No waiver of course requirements or credit by examination may be used to satisfy master's degree requirements. However, the following rules govern course waivers or credit by examination in satisfying prerequisites for admission to candidacy in any master's degree program.

Any candidate for a master's degree who believes that previous training has provided adequate preparation in a certain area may request a waiver from the department concerned.

A candidate may also apply for course credit by examination, but only for prerequisite courses and not to satisfy any of the requirements for the master's degree. Requests for such examinations must be made to the department concerned and approved by the department chair. Credit by examination is restricted to courses published in the current CSULB Catalog. Please see Credit by Examination in the General Regulations section of this Catalog.

All course credit by examination will be recorded as CR (Credit) and will not be included in calculation of grade-point averages; such credit may not be used to remove a grade of D or F in a course already attempted, nor may course credit by examination be granted for any course which is a prerequisite to one for which credit has already been received.

### Graduate Transfer Units by Extension

At the option of the college or department offering an advanced degree requiring a total of thirty units, up to six units of approved extension/continuing education or transfer credit is acceptable on graduate student programs. At the option of

the college or department offering a graduate degree requiring a total of 30 units, this limit may be raised to 9 units of extension/continuing education credit if taken at CSULB. These limits may be increased further for graduate degrees requiring more than 30 units provided that (1) no graduate degree may be awarded by CSULB unless at least 24 units are taken in residence, and (2) no graduate student program may use either extension/continuing education or transfer credit to satisfy the requirement that at least 60 percent of the total units be taken at the 500 and 600 levels. Extension courses completed at campuses including California State University, Long Beach shall be acceptable within the six-unit transfer limit, provided the work can be properly evaluated and the course is acceptable as graduate work for an equivalent graduate degree on the campus where taught. Extension/continuing education and transfer course material shall be evaluated and approved by CSULB faculty teaching in the topic area in conjunction with the department graduate advisor and college associate dean or director of graduate studies. Final approval/disapproval shall be the responsibility of the Dean of Graduate Studies.

Extension/continuing education credit may not be used to reduce the minimum units required in a discipline for a master's degree, that is, extension credit may be used to complete coursework required outside the discipline. Excess grade points earned in extension classes may not be used to offset a grade-point deficiency in the total graduate record.

Grades earned at another institution may not be used to offset grade-point deficiencies in courses taken at this University. However, grades of "C" earned at another institution in courses transferred to satisfy subject matter requirements for an advanced degree at this institution must be balanced by grades of "A" at this University to meet the required 3.0 (B) overall average.

Credit earned by correspondence or by examination cannot be used to satisfy master's degree requirements.

### Graduate Studies 700

Registration in Graduate Studies 700 (GS 700) is restricted to graduate students who have completed all other course work and who have been advanced to candidacy, have departmental and college approval, and require additional utilization of University facilities to complete their thesis or comprehensive examination. Although no unit credit is added to the student's program or transcript, the course is considered as one unit of concurrent enrollment credit for fee payment purposes. Students must be registered either in a course or in GS 700 for every semester in which they plan to use University facilities or consult members of the faculty. Registration is also required in winter or summer session if that is when a student plans to graduate. Application forms are available from and must be signed by department graduate advisors. Students must be familiar with the rules governing residency (see previous section on Advancement to Candidacy).

### Academic Load

Nine units per semester is a normal academic load for a full-time graduate student engaged in study toward a master's degree. If a candidate wishes to exceed this limit, it should be discussed with the departmental graduate advisor. The maximum load for graduate students working toward a master's degree is 16 units per semester. Students who are employed full-time should not exceed six units per semester.

Graduate students who wish to register for more than one unit of credit per week of attendance during the summer session must secure advance approval from the college associate dean or director of graduate studies. Petition forms and information may be obtained in the college offices.

## Honors

### The Graduate Dean's List of University Scholars and Artists

The Graduate Dean's List provides for University recognition of its most outstanding graduate students. Candidates for this honor will normally have completed the coursework applicable to their graduate student programs at the University. The annual list is limited to one percent of the University's graduate enrollment. Those honored will be named in the Commencement Program and will receive a certificate from the Dean of Graduate Studies.

### Departmental Graduate Student Honors

In recognition of outstanding graduate student achievements, departments may honor graduating master's degree candidates by special recognition in the annual commencement ceremonies. Departmental graduate student honors are reserved throughout the University to two students (or a maximum of ten percent) from a department. Departmental graduate student honors are usually restricted to students not otherwise recognized by University or college awards. These honors are normally conferred for excellence in and contributions to the discipline, including outstanding seminar papers, artistic exhibitions, special achievements in field work and in University committees and functions, as well as participation in scholarly and professional organizations resulting from student research.



# HEALTH CARE ADMINISTRATION

*College of Health and Human Services*

Program Director

Harold R. Hunter

Department Office

ASFOA - 14

Telephone

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Faculty

Professor

Connie J. Evashwick

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Associate Professor

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Advisory Council

Marika Bonner, Executive Director, Orange County Medical Association  
Robert Boyd, Medical Center, Director, Veteran's Administration Hospital  
Thomas Collins, President and CEO, Memorial Medical Center  
Jefferey Davis, Executive Vice President, Universal Care  
Sam Ervin, CEO and President, SCAN Foundation  
Jonathan Fuchs, Chief Operating Officer, Preferred Health Network  
George Goldstein, CEO, United Health Care, Southern California and Nevada  
Ron Gray, Vice President, Operations, ADMAR  
Dan Heslin, Director of Employee Benefits, Boeing  
Mark Laret, CEO, UC Irvine Medical Center  
Suzanne Merkur, Manager, Employee Health Services, Southern California Edicson Co.  
Robert Nelson, Senior Vice President, UniHealth (retired)  
Carmen Ness, Vice-President, Government Relations, Pacificare  
Mak Nakayama, President and CEO Community Hospital, Long Beach  
Peter Pellerito, Manager, Southern California Permante Medical Group, Kaiser-Permanente  
MCP  
Robert Perkins, Client Executive, CompuCare  
Randy Stone, Vice President - Finance, Talbert Medical Management Corp.  
Jeremiah Tilles, MD, Associate Dean, UCI College of Medicine  
David B. Tillman, M.D., Associate Administrator, St. Mary's Medical Center  
Tom Uram, Director, Health Care Agency of Orange County  
Gustavo Valdespino, Executive Director, Los Alamitos Medical Center  
Kate Whitehouse, Administrator, Buena Vista Care Center

The Health Care Administration program has four major objectives: (1) to provide course work and related experience in order to prepare administrators, skilled in the application of organizational and managerial techniques, for the health care system; (2) to provide continuing education for health administrators in practice as well as others in administrative and leadership positions in the administration of the delivery of health services; (3) to consult and to participate in community service activities which complement the instructional and research functions of the faculty and provide appropriate learning experiences for students; and (4) to conduct studies in the administration and operation of the health care delivery system which will contribute to development of faculty teaching abilities and overall professional growth.

The program is designed for the professional administrator or those who wish to become administrators within organizations which deliver personal health care services. Three patterns of preparation are offered:

1. Master of Science in Health Care Administration;
2. Certificate in Health Care Administration.
3. Bachelor of Science in Health Care Administration

The schedule of graduate and undergraduate courses offerings is in the regular Schedule of Classes.

## Bachelor of Science in Health Care Administration (code 3-1205) (124 units)

### Requirements for Admission

#### Prerequisites

All students must complete a minimum of 12 semester units or the equivalent in prerequisite preparatory courses for the major: ACCT 201, ECON 201, MATH 114, and BIOL 200. An introductory statistics course is recommended, and computer literacy is expected.

An overall grade point average of 2.0 or higher is required for entrance into the program. A minimum grade of "C" is required for each prerequisite course.

#### Requirements

1. Complete the requirements for General Education;
2. Complete the prerequisite courses;
3. Complete the major core course requirements (18 units required): HCA 341, 353, 402, 410, 416, and 480.
4. Upper Division (Continued) : A minimum of 12 additional units; students should select 12 units from one of the two emphases:
  - I. Health Policy Emphasis  
HCA 340, 422I, 470I, 450, 451\*, 465.
  - II. Health Management Emphasis  
HCA 312, 314, 320, 340, 450, 451\*, 465.
5. Complete the electives as needed, to total 124 semester units (a minimum of 40 units in the upper division), 30 units must be earned in residence, of these, 12 units in the major and 24 units in upper division course work;

6. Successfully complete the University Writing Proficiency Examination;
7. Each major course must be completed with a grade of "C" or better. A course in which a grade lower than in "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite. A student receiving a grade lower than a "C" may proceed with other courses with approval of the Undergraduate Advisor.

### Certificate in Health Care Administration (code 1-1205)

The Certificate Program in Health Care Administration is comparable to a minor of 18 semester units and, with prerequisite course work, may require a maximum of 21 semester units for completion. Components of the program include the forms of organization and operation of health care systems, administration personnel, leadership and development, financial management, and marketing. The Certificate may be combined with major programs from a variety of fields including, but not limited to, behavioral and natural sciences, humanities, health professions, business and public administration, and social work and is conferred as a post-baccalaureate certificate (or concurrently with the BS/BA). The courses included in the MS curriculum (with a grade of "B" or better) may apply toward the MS at the discretion of the Program Director.

Health care administrators are usually prepared at the masters' degree level for job entry into upper management. There is however, increased emphasis to prepare health care professionals to function as managers at other levels as well. Increasingly, physicians are also seeking preparation in the elements of management. These diverse groups use management skills in the health services and related fields. These include hospitals, nursing homes, health departments, health maintenance organizations, health planning and regulatory agencies, health management and review companies, group medical practices, health insurance firms, pharmacy and medical companies.

#### Requirements

1. A bachelor's (conferred or expected) or advanced degree;
2. Consultation with the Director of the program;
3. A minimum of eighteen units are required and may include: HCA 312, 314, 341\*, 353+, 402/502, 410 or the equivalent graduate course if applicable (i.e., HCA 402/502, 500, 505, 510, 515, 530).

\* Prerequisite: ACCT 210, 3 units.

+ Prerequisites: ECON 201.

Course substitutions may be made with the consent of the Director.

### Master of Science in Health Care Administration (code 6-1205)

The goal of the M.S. in Health Care Administration program is to prepare men and women to enter administrative positions in hospitals and ambulatory, long-term care, and mental health settings as well as in multi-institutional system central offices, governmental health agencies, and other health related organizations. Students completing the M.S. in Health Care Administration will achieve the following objectives: (I) Demonstrate knowledge of the U.S. health care system and fundamental

issues affecting the administration of health care services, (2) Demonstrate organizational and managerial knowledge and skills essential to administrative positions in health care services, (3) Demonstrate specialized knowledge and skills in one of a variety of functional areas in health care administration, including financial management, marketing, job analysis, compensation management, or public policy analysis, (4) Use ethical principles within administrative positions of responsibility in health care services, and (5) Demonstrate the ability to conduct studies in the organization, financing, administration, and operation of health care delivery systems in operational settings. The program is designed for persons with a variety of undergraduate experiences who give evidence of interest and potential success in health care management or research.

#### Admission Requirements

Each applicant should request that a copy of all college course work and GMAT scores be sent to the graduate adviser, Health Care Administration Program, in addition to the copies required by the Office of Admissions and Records. In addition, a current resume should be sent to the Program along with three letters of recommendation.

#### Admission Criteria

1. Baccalaureate degree from an accredited institution;
2. Baccalaureate degree with a minimum of 18 units of course work to include: accounting, financial management, economics, information systems, statistics, and health care systems;
3. An applicant must have an overall undergraduate grade point average of 3.0 or better. Those applicants with less than 3.0, but with acceptable evidence of professional potential shown through recent academic performance and experiential background, may be admitted by special action of the Program Graduate Committee.
4. Interview with member of faculty or preceptor may be required.
5. A current and complete resume including references.
6. Submission of scores on recent Graduate Management Admission Test (GMAT).

#### Prerequisites

The following courses or their equivalent:

1. ACCT 201,
2. ECON 201 or 300,
3. C/ST 200,
4. IS 310

Students should contact the Program Director for a determination of deficiencies and required remediation.

#### Requirements

1. Completion of graduate level course work in Health Care Administration. HCA 502, 505, 506, 508, 510, 515, 524, 530, 535, 695, and 451.
2. Completion of any one of the courses in site specialization: 536, 537, or 538.
3. Completion of two approved courses within one of the functional specializations.
4. Completion of an approved project and internship (HCA 698 and 685).

## Advancement to Candidacy

Students will be instructed to apply for advancement to candidacy after:

1. Completion of 6 units of course work that applies to the degree with an average grade of "B" or better,
2. Passing the Writing Proficiency Examination and submit evidence of same to Department Office, and
3. Approval of Program Director.

## Courses (HCA)

### Upper Division

#### 312. Health Personnel Management (3)

The management of human resources in health care settings. Content includes principles and methods of personnel work such as employee recruitment, selection, retention, training, evaluation, wage and salary administration, and labor-management relations. (Lecture)

314. Leadership and Development in Health Services (3)  
Concepts of leadership essential to interacting effectively with individuals, groups and organizations, as well as the application of these concepts to the management functions of the health care professional. Principles of behavioral sciences, group dynamics, organizational behavior, approaches to conflict resolution, and the planning and implementation of change. (Lecture)

320. Operations Management in Health Administration (3)  
Prerequisite: MATH 114. The application of the concepts and methods of operations management to the health care organizational setting. Emphasis on planning and control in the management process.

340. Legal Aspects of Health Administration (3)  
Focus on the nature, perspective and objects of the legal and legislative process. Provides skill in understanding legal terminology, legal reasoning and the tools of the law, with practical application of these principles and concepts to health care management and health policy decisions.

341. Financial Management of Health Care Institutions (3)  
Prerequisite: ACCT 201. Application of the concepts of financial management within health care organizations, to include financial planning principles, reimbursement procedures, governmental regulation, and legal restraints. (Lecture)

353. Marketing for Health Services Organizations (3)  
Prerequisite: ECON 201. Development of marketing strategies and analyses in a health care setting. Design of services to include pricing, communication, distribution channels, and client motivation and services.

402./502. The Health Care System (3)  
The course focuses on the contemporary health care system to include its historical beginnings and the underlying social and biological forces which influence its organizational forms, financing and manpower requirements; issues and concerns molding its future such as the assurance of the quality of patient care and the regulation and control of the system. (Lecture)

\*410. Health Management and Organization (3)  
Concepts of organizing activities to achieve the goals of health care institutions. Effects of environment, technology, and human behavior on organizational design. Managerial processes including planning, decision-making, influencing, and controlling required to operate and change health care organizations. (Lecture)

416. Management and Information Systems (3)  
Prerequisite: Demonstrated Computer Literacy. Evaluation of concepts, analysis and design of management information systems; management decision models, strategies for implementing system changes.

422I. Global Issues in Health Services Administration (3)  
Prerequisites: ENGL 100 and upper division status. Contemporary problems in health services developed as an interrelated system. Rural health problems, issues of the elderly, rising costs and new technology presented with reference to industrialized and non-industrialized countries (e.g., Europe, Asia, North America, Africa, and Latin America). Geographic, political, economic, historical and anthropological aspects of health problems and issues will be analyzed. Traditional grading only. (Discussion, 3 hours)

450./550. Quality Assurance of Health Care (3)  
Designed for the health care professional or administrator who is involved in or concerned about assurance of quality in health care. Course includes historical beginnings, state-of-the-art, voluntary and governmental effort and proposed means to quality assurance. Traditional grading only.

\*451. Economics of Health (3)  
Prerequisites: ECON 201 or 300. Analysis of health as an economic good. Health services as scarce resources. Use of tools of economic theory in study of special problems of health resources, markets, manpower shortages, non-profit enterprises, insurance programs and Medicare. Procedures stress individual studies and reports. Not open to students with credit in ECON 345 or ECON 445. Same course as ECON 445.

465. Analysis and Evaluation of Health Care Services (3)  
Prerequisite: Introductory course in statistics or demonstrated competency. Techniques of analysis and evaluation applied to health services with respect to organizing, staffing, financing and utilization. Emphasis on the analytic process, program evaluation, and report of findings.

470I. Latinas/Latinos: Health Status and Health Care Access (3)  
Prerequisite: Upper division status and ENGL 100. This course is a critical interdisciplinary examination of the health status and health care access of Latinas/Latinos in the United States. The primary objective of the course is to provide an overview of the policies, epidemiologic, and cultural factors that influence the etiologies of diseases within Latina/Latinos subpopulations. This cross disciplinary approach will also be used to analyze the health care access problems faced by Latina/Latino subpopulations that constrain efficient management of services and equitable delivery of health care. Traditional grading only. Same course as CHLS 470.

480. Internship in Health Care Administration (3)  
Prerequisites: HCA 402/502, or consent of instructor. A supervised internship in an approved health care organization or related agency under the joint supervision of university and institutional personnel. May be repeated once to a maximum of six units.

490. Special Topics in Health Care Administration (1-3)  
Topics of special interest in health care administration selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

499. Directed Studies (1-3)  
Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member. May be repeated to a maximum of four units. In exceptional cases, may be repeated to a maximum of six units when approved by the Director of Health Care Administration Program.

### Graduate Division

500. Administrative Behavior and Leadership in the Health Care System (3)  
Prerequisites: The goal of this course is to develop skills in analyzing administrative problems. This includes evaluation and improvement of organization management in health care institutions with special emphasis on concepts of leadership, group dynamics, communications techniques and processes, motivation, and performance appraisal techniques.

502./402. The Health Care System (3)

The course focuses on the contemporary health care system to include its historical beginnings and the underlying social and biological forces which influence its organizational forms, financing and manpower requirements; issues and concerns molding its future such as the assurance of the quality of patient care and the regulation and control of the system. (Lecture)

505. Organization and Systems of Health Care (3)

The analysis of operational activities and managerial functions essential to the health care delivery system will be examined and discussed. Special emphasis will be placed on the manager's role in developing and maintaining an effective system for providing health care services. The organizational aspects and managerial approaches of delivering health care services within various institutional arrangements will be discussed.

506. Epidemiology for Managers (1)

Analysis of patterns of health and disease and how these impact on health delivery in the U.S. and abroad. Planning health services based on distribution of acute and chronic disease in populations. (Seminar) Traditional grading only for majors.

508. Ethics in Health Care Delivery (1)

Prerequisites: None. A review of ethical issues in business, medicine and health care delivery with emphasis on the role of the manager. Theoretical religio- philosophical underpinnings and practical applications will be discussed. (Seminar) Traditional grading only for majors.

510. Human Resources Management in Health Care (3)

Management of human resources in the health care system including human resource planning and staffing, training and development, performance appraisal, job design and analysis, and compensation.

515. Advanced Financial Management in Health Care (3)

Prerequisites: ACCT 201 or 500. Examination of the principles and practices of managing financial resources in health institutions. Evaluation of trends in the financing of health care and the influence of third-party payers on the financial decisions of health care administrators. Traditional grading only for Majors.

524. Advanced Legal Aspects of Health Administration (3)

Examination of the federal and state regulations of health care facilities and their personnel, patients, and programs. Identification of the legal rights, privileges, and duties of the health care facility to its employees and the patients. There will be special emphasis on malpractice, government control, infection control, liability, contracts, informed consent, medical records, planning, reporting and the health practitioner as an expert witness. Current case laws are reviewed as appropriate.

530. Strategic Planning and Marketing in Health Care (3)

Course activities lead to a basic understanding of strategic planning and marketing concepts and methods applicable to the organization and delivery of health care services. It is expected that students will gain an appreciation of the strategy-oriented management planning process, achieve knowledge of basic approaches and methodologies employed in strategic planning and health care marketing, and become sensitive to those economic and political forces which give form and shape to the health care marketplace.

535. Quantitative Methods for Health Administration (3)

Prerequisites: Statistics. Identify and apply appropriate quantitative and operations research techniques to problems in health care settings. Students will receive intensive exposure to decision theory and control systems, and have practical experience solving problems in resource allocation, procedural decisions, scheduling, forecasting, measurement, and cybernetic control.

536. Hospital Management (3)

Prerequisites: HCA 505. The goal of this course is to develop familiarity with the internal operations of acute care hospitals and skills in solutions of hospital operational problems. Hospitals will be analyzed by broad function and by specific departments. Cases, simulations and visits may be used. (Seminar 3 hours.) Traditional grading only for Majors.

537. Alternative Health Delivery Systems Management (3)

Prerequisites: HCA 402 or 502. The purpose of this course is to prepare people to enter the managed care field and to orient managers to the organization and administration of Health Maintenance Organizations, Preferred Provider Organizations and related enterprises. Both relationships to the health care marketplace and operational aspects of managed health systems will be covered. Guest lecturers from managed care organizations will participate in the course and students will be expected to develop an operational plan based on a real world situation. (Seminar 3 hours.) Traditional grading only for Majors.

538. Long Term Care Management (3)

Prerequisites: HCA 402 or 502. Long term care facilities, offering services to the aged and disabled, pose unique problems for managers within this industry. With the "graying" of America, emergence of debilitating illnesses such as AIDS, and focus on cost containment as a major health policy issue, managers in this sector of health must assume leadership roles in planning and adapting to this dynamic and expanding environment. This survey course will analyze the forces influencing the development of long term care in the U.S. and address specific organizational aspects that affect outcomes of services provided in long term care settings. Traditional grading only for Majors.

550./450. Quality Assurance of Health Care (3)

Designed for the health care professional or administrator who is involved in or concerned about assurance of quality in health care. Course includes historical beginnings, state-of-the-art, voluntary and governmental effort and proposed means to quality assurance. Traditional grading only.

599. Special Topics by Directed Study (1-3)

Directed study of a special topic to be taken under supervised independent study. May be repeated for a maximum of 9 units, but the topic must not be repeated.

685. Internship (3)

Prerequisites: All 500-level courses and consent of instructor. The purpose of the course is to provide candidates for the master's degree an opportunity to observe and participate in the operations of a health care institution. The student will also study in-depth the organizational structure, philosophy, problems, and personnel relationships of the institution, under the guidance of an approved on-site preceptor and a faculty advisor. Credit/No Credit grading only.

695. Integrative Seminar: Critical Analysis of the Health Care System (3)

Prerequisites/Corequisites: HCA 685, 698. The health care system will be critically analyzed within its organizational, financial, and personnel components to include the socioeconomic and political forces which bind the system. A systematic, ecological approach will be employed with emphasis on an advanced and critical analysis of the U.S. system. Special consideration will be given to the public policy determinations which have influenced the development of the system and relevant problems and issues. Traditional grading only.

698. Project (3)

Prerequisites: All 500-level courses, and consent of instructor. The student will investigate what is considered a major problem to the health care institution identified in the student's residency, research it in accordance with an accepted methodology, consider the characteristics of the organization, and recommend potential courses of action for the organization to take. Course may be repeated for a maximum of 6 units. Traditional grading only.

# HUMAN DEVELOPMENT

*College of Liberal Arts*

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## Faculty

Associate Professors  
Pamela Roberts

Katherine Van Giffen

Department Secretary  
Jennifer Seo

The Human Development Program is designed to provide students with a fundamental interdisciplinary understanding of human growth and development throughout the life cycle. The program of study concentrates on the sociocultural, psychological, and biological dimensions of human development and on the underlying processes and structures which support that development. In addition internship experiences in community agencies and/or educational settings enable students to integrate knowledge with career goals in a variety of human service fields. The curriculum is flexible and designed to help students meet a variety of educational needs through a wide selection of courses appropriate to individual interests and goals. For example, students can earn a Gerontology certificate through appropriate course selection in this major. In addition, a BA and Multiple Subjects credential can be secured with appropriate course selection within this major. For all students, courses are selected in consultation with the program advisor.

Students desiring information should contact the department office for referral to the faculty advisor. Advising is a two step process: initial advisement orientations are presented in the Student-Faculty Resource Center (FO2-219) for all new students and any student seeking more information about the major or concentration. (Schedules are posted outside the center FO2-219 and in the Program office FO2-229.) The orientation is mandatory for all students before they are accepted into the program. Following orientation, students meet with the advisor to develop individual plans, file graduation check sheets, and obtain other advisement information, as needed.

Students interested in Human Development may choose one of two options: B.A. in Human Development or Liberal Studies Major with Human Development Concentration.

Brochures, course sequence plans, listings and descriptions of specific courses within each area may be obtained from the Human Development program offices. Students can plan a program geared to specific career requirements (e.g., Gerontology certificate, Child Development certificate, Children's Center Credential, Multiple Subjects Credential, or graduate work in human development and its related disciplines). Early advisement is strongly recommended.

The Human Development Student Association is an active group open to all students enrolled in Human Development classes. The HDSA has regularly scheduled meetings and sponsors diverse activities including: community service, speakers, films, and student-faculty parties. HDSA activities are announced in the HDSA Newsletter also available in the Program office.

## Bachelor of Arts in Human Development (code 2-8014) (124 units)

### Requirements

Lower Division: ANTH 120 or SOC 100, A/P 107 or 207, PSY 100.

Core Courses (27-28 units):

1. HDEV 250, 307I, 320, 357I, 401, 402, 434B and 470;
2. Three units from each foundation area ( 9 units total):  
Biological: ANTH 318, 319, A/P 308I, 401; W/ST 440;  
Psychological: C/D 361, ED P 302, 305, GERN 400I, FCS 311, 314, 411, PSY 331, 332, 333, 336, 337, 341, 345, 351, 356, 370, 438, 463;  
Sociocultural: ANTH 454, ASAM 340, B/ST 410, FCS 312I, 412, 413, CHLS 350, SOC 320, 345, 464, GERN 400I;
3. Specialization: A minimum of 6 units of upper division secondary specialization coursework selected in consultation with the program advisor.

### Courses (HDEV)

#### Lower Division

#### 250. Elementary Statistics in the Social and Behavioral Sciences (4)

Prerequisites: Knowledge of mathematical procedure usually covered in elementary high school algebra, eligibility for GE math. Not open to students with credit in ANTH 202, C/ST 210, MATH 180, PSY 210, SOC 250 or 255, or C/LA 250. Introduction to descriptive and inferential statistics and their applications in social and behavioral science research; performance of statistical exercises by interactive computer. Emphasis upon knowledge of which statistical tests to use and how to interpret their results. (Lec 3 hrs, lab 2 hrs.) Same course as C/LA 250.

#### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 307I. Human Development: Childhood Through Adolescence (3)

Prerequisites: ENGL 100 and upper division status, PSY 100 and SOC 100 or ANTH 120 plus A/P 107 or 207. Biological, psychological, and sociocultural aspects in the growth of the individual from conception through early adolescence will be considered. Relevant topics and theoretical issues will be treated in an interdisciplinary manner. Not open to students with credit in NRSG 307.

#### 320. Research Methods in Human Development (4)

Prerequisites: ANTH 120 or SOC 100, A/P 107 or 207, PSY 100, HDEV 250, HDEV 307I or 357I or concurrent enrollment. Research methods in human development. Includes methods and models from anthropology, biology, psychology and sociology as applied to research. (Lec 3 hrs, lab 2 hrs). Traditional grading only for Majors/Minors.

#### 357I. Human Development: Adulthood Through Aging (3)

Prerequisites: ENGL 100 and upper division status, PSY 100 and SOC 100 or ANTH 120 plus A/P 107 or 207. Biological, psychological and sociocultural aspects in the development of the individual from late adolescence or youth until death will be considered. Relevant topics and theoretical issues will be treated in an interdisciplinary manner. Not open to students with credit in NRSG 357.

#### 400I. Death and Dying (3)

Prerequisites: ENGL 100 and upper division status; HDEV 357I or PSY 365 or equivalent. This course will explore the social, cultural and individual aspects of the death experience. Death will be examined from historical, biological, legal, religious and ethical perspectives. In addition, death work, aspects and meaning of the dying experience, survivorship, ritual and grief will be studied. All topics will be examined in light of life-span, cultural and gender diversity.

#### 401. Cultural Influences on Human Development (3)

Prerequisites: HDEV 307I, 357I. Study of how an individual's ethnic membership relates to various aspects of growth and development; the effects of culturally related influences on total development. Discussion and selected observations of individuals from diverse cultural backgrounds.

#### 402. Development of Thought: Structure, Process and Cultural Influences Across the Life Span (3)

Prerequisites/Corequisites: HDEV 307I, 357I, 250 and 320; or, PSY 361, 365, 200 and 210. Readings and discussion focus on the examination of theories and current research on the development of thought focusing on biological underpinnings, psychological process and sociocultural constraints. Specific topics include memory, intelligence, cognition, problem solving, language and thought, literacy and educational implications. All issues will be examined from an interdisciplinary perspective across the life span.

#### 434B,C. Interpersonal Skills in Human Resource Development (3,4)

Prerequisites: HDEV 307I and 357I. Designed to develop interpersonal skills identified as necessary to have effective human relations and staff resources development. It includes a presentation of theory and research applicable to processes in interpersonal functioning and human relations. Didactic and experiential learning approaches. (Same course as ED P 434B,C.)

#### 470. Seminar/Practicum (4)

Prerequisites/Corequisites: HDEV 250, 307I, 320, 357I, 401, 402, 434; and permission of instructor. The course provides for a sequence of observations and supervised participation with individuals in a variety of community agencies and/or educational settings. Practicum is supplemented by topical seminar discussions for two hours each week. (Seminar 2 hr, practicum 4 hrs). Traditional grading only.

#### 490. Special Topics in Human Development (3)

Prerequisites: HDEV 307I, consent of instructor. Topics of current interest in human development selected for intensive study. May be repeated with different topics for a maximum of six units. Topics for a given semester will be announced in the Schedule of Classes.

#### 499. Independent Study (1-3)

Prerequisite: Consent of instructor and Program Director. Student will conduct independent laboratory, field, or library research and write a report of the research. May be repeated for a maximum of six units.

# COLLEGE OF HEALTH AND HUMAN SERVICES

Dean

Donald P. Lauda

Associate Dean

William A. Sinclair

Senior Director, Development and Grants

Nan Roberts

Administrative Services Manager

Linda McConnell

Assistant to the Dean

Anna Behar-Russell

Administrative Services Assistant

Elizabeth Martin

Facilities Coordinator

Denysia O'Connell

Director, Student Life and Development

Cindy Hale

Faculty Support Assistant

Vacant

Receptionist

Mary Harris-Robinson

Office

Engineering Technology Building (E-Tec), Room 200

Telephone

(562) 985-4194

The College of Health and Human Services offers a wide range of programs at the undergraduate and graduate levels. Included within the College are eleven diverse departments, four programs, and ten centers:

## *Departments*

Communicative Disorders

Criminal Justice

Family and Consumer Sciences

Health Science

Kinesiology and Physical Education

Nursing

Occupational Studies

Physical Therapy

Graduate Center for Public Policy and Administration

Recreation and Leisure Studies

Social Work

## *Programs*

Gerontology

Health Care Administration

Military Science (Army ROTC)

Radiation Therapy

## *Centers*

Bureau of Governmental Research and Services

Center for Career Studies

Center for Criminal Justice Research and Training

Center for Disability Studies Scholarship

Center for Health Care Innovation

Center for Successful Aging

Child Welfare Training Center

Institute for CSULB/VA Joint Studies

Physical Therapy Assessment Center

Senior University

## *Goals*

The College of Health and Human Services, as a professional College, is united by the following purposes:

The academic and professional preparation of students for careers in their chosen field of specialization;

The development and maintenance of high standards of academic achievement for students;

The encouragement of critical thinking through rigorous academic and professional preparation; and

The conduct of ongoing research, training, and community involvement by faculty and students.

To achieve these goals, the College seeks to create an environment at both the undergraduate and graduate levels that encourages student growth by providing:

A broad educational experience in the liberal arts;

Specialized instruction leading to professional development and competence; and

Integration of academic and professional course work to develop the whole person.

## *Degrees Offered*

### Bachelor of Arts:

- Communicative Disorders
- Family and Consumer Sciences
- Kinesiology
- Recreation
- Social Work

### Bachelor of Science:

- Criminal Justice
- Dietetics and Food Administration
- Health Care Administration
- Health Science
- Kinesiology
- Nursing
- Occupational Studies

### Bachelor of Vocational Education

### Master of Arts:

- Communicative Disorders
- Family and Consumer Sciences
- Kinesiology
- Occupational Studies

### Master of Science:

- Criminal Justice
- Gerontology
- Health Care Administration
- Health Science
- Kinesiology
- Nursing
- Nutritional Science
- Recreation Administration

### Master of Physical Therapy

### Master of Public Administration

### Master of Public Health: Community Health Education

### Master of Social Work

## *Certificates Offered*

- Administration of Outdoor Recreation Resources
- Administration of Travel and Tourism
- Administration of Volunteer Services
- Child Development
- Community Physical Fitness
- Corrective Therapy
- Food-Service Systems Administration
- Gerontology
- Health Care Administration
- Leisure Counseling (Graduate Certificate)
- Nurse Practitioner
- Pre-Athletic Training
- Public Management Analyst (Graduate Certificate)
- Public Sector Employer-Employee Relations and Personnel Management (Graduate Certificate)
- Public Sector Financial Management (Graduate Certificate)
- School Nursing Credential
- Therapeutic Recreation
- Transportation Policy and Planning (Graduate Certificate)
- Urban Executive Management (Graduate Certificate)
- Wilderness Studies

## *College Facilities*

The College of Health and Human Services is characterized by perhaps the greatest diversity of programs in the University. The ten departments, four programs, and five research centers are housed within eleven buildings on campus. During the period 1992-94, the primary facilities received \$21,000,000 worth of renovation, including the addition of new equipment in laboratories. As a result, students now have access to state-of-the-art classrooms, laboratories, and clinics with equipment matching that of business/industry. As a student, for example, you could visit our Communicative Disorders Speech and Hearing Clinic, Nursing Simulation Lab, or Physical Therapy Labs and Clinic. You could participate in a discussion on the importance of recreation in your life and the lives of others, in a Recreation and Leisure Studies course; or a discussion of diet and nutritional needs in Family and Consumer Sciences; or a seminar on AIDS awareness in the Health Science Department. You may choose to swim in our Olympic size pool or be tested in the underwater weigh tank, while enrolled in a Physical Education class. The Department of Criminal Justice may walk you through the forensic investigation of a crime. Public Policy and Administration courses will offer you the opportunity to apply new knowledge, skills, and leadership techniques to the solution of public problems, while Occupational Studies could provide you with the competencies requisite for successful employment in secondary schools, community colleges, and adult programs.

As the second largest of the University's seven colleges, Health and Human Services is comprised of over two-thirds laboratory facilities which accommodate its many lab-intensive programs. These programs combine theory with exciting practical application in the campus laboratories, as well as many off-campus facilities through field work and internships.

## *Professional Accreditation*

Programs in the College have been accredited by the following state and national accrediting agencies:

American Association of Colleges of Nursing, American Dietetic Association, American Public Works Association (APWA) American Speech Language and Hearing Association, Association of University Programs in Health Administration, Council on Education for Public Health, American Home Economics Association, American Physical Therapy Association, California State Board of Registered Nursing, National Association of Schools of Public Affairs and Administration (NASPAA), National Athletic Trainers Association, National League for Nursing, California Council on Parks and Recreation, National Recreation and Park Association Council on Accreditation, Western Institute of Nursing.

The College maintains an active involvement in the following organizations:

### Special Interest Clubs

Archers, Army ROTC Association, Army ROTC Rangers (AROTC), California Nursing Student Association, Child and Family Associated Students (CAFAS, Family & Consumer Sciences), Criminal Justice Student Association, Health Care Administration Forum, Health Science Graduate Student Association, Health Science Student Association, Kinesiology & Physical Education Majors Club, National Student Speech & Hearing Association (Communicative Disorders), Pershing Rifles (AROTC), Peer Health Educators, Physical Therapy Student Association, Public Policy & Administration Student



Association (PASA, Public Policy & Administration), Recreation and Leisure Studies Alumni Association (RALSAA), Recreation Society (Recreation & Leisure Studies), Social Dance Club, Sports Medicine Club (Kinesiology & Physical Education), Student Affiliates of the American Kinesiotherapy Association (Kinesiology & Physical Education), Student Association for Family & Consumer Sciences, Student Dietetic Association (Family & Consumer Sciences), Student Food Science Society (Family & Consumer Sciences), Students in Fashion (Family & Consumer Sciences).

#### Professional and Honorary Organizations

Alpha Phi Sigma (Criminal Justice), American College of Healthcare Executives, California Association for Health, Epsilon Pi Tau (Occupational Studies), Eta Sigma Gamma (Health Science), International Food Service Executives Association (Family & Consumer Sciences), Kappa Omicron Nu (Family & Consumer Sciences), National League for Nursing, Omicron Tau Theta (Occupational Studies), Pi Alpha Alpha (Public Administration), Phi Epsilon Kappa (Kinesiology & Physical Education), Recreation and Dance (CAHPERD), Sigma Theta Tau (Iota Eta Chapter) Nursing Honorary Society (Nursing), Society of Consumer Affairs Professionals (Family & Consumer Sciences), Student Chapter of the American Association of Textile Chemists and Colorists (Family & Consumer Sciences).

#### College and Departmental Organizations

Army ROTC Association, California Nursing Students' Association, Child and Family Associated Students (CAFAS, Family & Consumer Sciences), College of Health & Human Services Student Council, Criminal Justice Student Association, Food Science Society (Family & Consumer Sciences), Health Care Administration Forum, Health Science Student Association, Health Science Graduate Student Association, International Food Service Executives Association (Family & Consumer Sciences), Kappa Omicron Nu (Family & Consumer Sciences), Kinesiology & Physical Education Majors Club, National Student Speech & Hearing Association (Communicative Disorders), Physical Therapy Student Association, Public Administration Student Association (PASA, Public Policy & Administration), Recreation and Leisure Studies Alumni Association (RALSAA), Recreation Society (Recreation & Leisure Studies), Sports Medicine Club (Kinesiology & Physical Education), Student Association for Family & Consumer Sciences, Student Chapter of the American Association of Textile Chemists and Colorists (Family & Consumer Sciences), Student Dietetic Association (Family & Consumer Sciences), Students in Fashion (Family & Consumer Sciences).

## Courses (HHS)

### 374. Psychosocial Aspects of Disability (3)

Prerequisites: PSY 100 and consent of instructor. Survey of the psychosocial, emotional, and cultural reactions to disease and disability. Traditional grading only. (Lecture/discussion 3 hours.)

### 401. Applied Anatomy (4)

Prerequisites: A/P 208 and consent of instructor. Advanced study of the structure and function of the neuromusculoskeletal systems with emphasis on the surface contour, myology and joint structure, and neurovascular supply. Includes dissection laboratory and provided materials. Traditional grading only. (Lecture/discussion 3 hours, laboratory 3 hours.)

### 460. Neuroanatomy (4)

Prerequisites: HHS 401, AP 341, AP 441 (concurrent) and consent of instructor. Investigation of human neuroanatomy with emphasis on the structure and function of the central nervous system (CNS), cranial nerves, and their connecting neural pathways, relative human function and movement. Neuroanatomical and vascular lesions will be discussed and correlated to common clinical conditions. Laboratory experiences will integrate brain and spinal cord specimens and models, and imaging techniques to lecture material. Traditional grading only. Traditional grading only. (Lecture/discussion 3 hours, laboratory 3 hours.)

### 471. Pathology (3)

Prerequisites: A/P 208 and consent of instructor. Advanced study of abnormal function as a result of disease. Including general pathology and selected pathologies, encompassing cardiovascular, pulmonary, musculoskeletal, peripheral and central nervous system and integumentary. Traditional grading only. Traditional grading only. (Lecture/discussion 3 hours.)

### 492. Field Studies and Career Exploration (1-3)

Prerequisites: Consent of the instructor and a minimum GPA of 2.0. This course provides students with career-related experience by allowing them to participate in fieldwork assignments relating to their majors and intended professions. Students who qualify will participate in volunteer or paid assignments in private industries, non-profit organizations, or public agencies. In addition to this practical experience, students will attend a series of seminars designed to complement their field assignments by focusing on issues common to the work setting.

# HISTORY

## *College of Liberal Arts*

Department Chair

Sharon L. Sievers

Department Office

Faculty Offices 2 (FO2), Room 106

Telephone

(562) 985-4431

Faculty

Professor

Rifaat A. Abou-El-Haj

Dorothy Abrahamse

Stephen E. Berk

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Augustus Cerillo, Jr.

Keith E. Collins

David A. Cressy

Edward A. Gosselin

Albert F. Gunns

David C. Hood

Arnold P. Kaminsky

Keith I. Polakoff

Gary Reichard

Donald Schwartz

Sharon L. Sievers

Arnold R. Springer

Jack M. Stuart

William A. Weber

Associate Professors

Xiaolan Bao

Patricia Cleary

Kenneth R. Curtis

Troy Johnson

Assistant Professor

James Green

Nancy Quam-Wickham

Department Secretary

Karen Lau

Advising in the Department of History is available to all students interested in a major, minor, a teaching credential, or a special major combining History with another discipline. Students are strongly encouraged to see History Department advisors at an early stage in the development of their programs. Undergraduate majors should see the Department Secretary to fill out a work sheet before meeting with the Undergraduate Advisor (Patricia Cleary). Students interested in the M.A. program should contact the Department Secretary for application information. Graduate students should see the Graduate Advisor (David Cressy). Applicants for the Social Science Credential Single Subject Program must see Credential Advisors (Donald Schwartz or Arlene Lazarowitz). All advisors maintain extended hours during the semesters and are available at other times by appointment. The Department of History also hosts open advising days in the week prior to each new semester; call the Department for information.

### *History*

History is a discipline at the core of the liberal arts tradition. It seeks to preserve, extend, and reevaluate our study of the past, and to connect it with the present. Students who specialize in History are typically those who plan to teach, practice law, or enter government service; but History students also go into business, librarianship, foundation work, management of local history projects, and fundraising. Some history alumni have become successful writers.

Students contemplating graduate work in History on this campus or elsewhere should get advice early in their undergraduate careers from faculty in their fields of interest, and should also give serious consideration to developing proficiency in a foreign language during their undergraduate tenure.

The History Department awards scholarships and prizes to outstanding undergraduate and graduate students, among which are:

- The Douglas McNeally Award
- The Stuart Bernath Award
- The Ebell-Heimberger Scholarship
- The Jack Chinski Award
- The Elayne Meir Breslaw Scholarship
- The Elizabeth Neilsen Award
- The Hardeman Graduate Student Award

For further information about these awards, given annually, students should inquire at the Department office no later than the beginning of the spring semester. Undergraduate and graduate students are eligible for the Department's facilitator program for which they may earn units in the major; see Department staff for applications. Graduate assistantships and readerships are also frequently available to qualified graduate and undergraduate students. The Department also recruits outstanding students for Phi Alpha Theta, the national honor society for History students.

The Department of History offers graduate study leading to the Master of Arts degree. The candidate is responsible for observation of the general requirements stated in this Catalog as well as specific departmental requirements listed in the M.A. brochure, available on request from the Department office.

### *General Education Requirement in United States History*

To fulfill State of California requirements, students must take three (3) units of U.S. history. This requirement can be met by HIST 162A and 162B, or 172 or 173. Students who have taken U.S. history at another institution should check with the History Department before enrolling.

## Bachelor of Arts in History (code 2-8525) (124 units)

### Requirements

Majors must take 48 units of history: 12 lower division and 36 upper division.

Lower division: 12 units. Note: History majors may not take classes which have overlapping content; that is, majors may not take both 162A and 172, or both 162B and 173.

Upper division: 36 units.

1. Core: 12 units. All majors must take HIST 301, 302, 495 (or, with approved petition, 501), and one history course that fulfills the ethnicity, gender, and race requirement (list of approved courses available from the Undergraduate Advisor).
2. Fields of emphasis: 18 units. All majors have the option of specializing in two or three fields. Option one: two fields of nine units each. Option two: three fields of six units each. The fields are: (a) Africa and the Middle East, (b) Ancient and Medieval Europe, (c) Asia, (d) Britain, (e) Latin America, (f) Modern Europe, and (g) United States.
3. Breadth: 6 units. Majors must take six units in a field (or fields) of history outside of their fields of emphasis.

Note: History majors are strongly encouraged to include the study of foreign language and literature in their programs. Students working for a single-subject credential in secondary education must consult with the College's secondary education advisor as to the applicable credential major requirements.

## Bachelor of Arts in History with Honors

Students with a major in history may be admitted to the History Department honors program (option of the University Scholar's Program) provided they have:

1. Completed at least 30 semester units of college- or university-level courses, including at least two history courses;
2. A minimum cumulative GPA of 3.3, and a 3.5 in history courses;
3. Submitted to the department honors committee chairperson two letters of recommendation from faculty members;
4. Received admission approval from the departmental honors committee.

Students who have the minimum GPA requirements established by the University Scholars Program (3.0 overall and 3.3 in the major, but who do not meet History departmental GPA requirements above may petition the department honors committee for conditional admission to the Department Honors Program).

In order to graduate with Honors in history a student must:

1. Complete all regular requirements for the history major;
2. Complete 3 units in HIST 497H: Honors Colloquium, or HIST 501;
3. Complete 3 units in HIST 498H: Honors Research;
4. Complete 3 units of HIST 499H: Honors Thesis;
5. Complete 6 units of additional course work chosen in consultation with the Department Honors Advisor; such courses normally will require two analytical papers or a research paper on a honors level of performance;
6. Complete USP 499 Synthesis, as partial fulfillment of the University's requirement of 6 upper-division units;
7. Have at the time of graduation a cumulative GPA of at least 3.3 and a GPA of at least 3.5 in history.

Students admitted to the program must maintain a file in the University Scholars Program which will include copies of proposals for 498H and 499H.

## Oral History Program

This Program, housed in the Department of History, is designed to teach and train history students in the use of materials that focus on largely unwritten sources. History majors, and social science credential students with a history concentration, are urged to take the one-unit workshop. Students in these workshops learn how to design an oral history project, and to conduct interviews. Workshops are especially helpful for students interested in local history, the history of the family, and communities whose written records have not been included in traditional historical materials.

## Minor in History (code 0-8525)

A minimum of 21 units which must include:

Lower Division: A minimum of six units, which must include a six-unit sequence from the following: HIST 112 or 111, 131 and 132, 151 and 152.

Upper Division: A minimum of 12 units, which must include at least six units in each of two areas as defined for the major.

## Master of Arts in History (code 5-8525)

### Prerequisites

1. A bachelor's degree with a major in history, or
2. A bachelor's degree with 24 units of upper-division courses in history. These courses must be comparable to those required of a major in history at this University. Deficiencies will be determined by the graduate advisor after consultation with the student and after study of transcript records.

Advancement to Candidacy is a statement of how the student plans to complete all courses and requirements for the degree, including setting a date and a committee for the thesis or comprehensive examination. It is best done as early as possible and it must take place before the end of the semester preceding the examination. Students writing a thesis are advanced to candidacy at the time that they begin their thesis work.

## Requirements

1. A minimum of 30 units of upper division and graduate courses including at least 18 units from 500 and 600-level courses. Six units may come from other departments if they suit the student's program and are approved by the graduate advisor. All students must take HIST 501 and HIST 590. Twelve of the remaining units must come from among the following area offerings: 510A, 510B, 510C, 510D, 510E, 611, 631, 673, 682.
2. The student may select one or two fields of specialization distributed as follows:  
Alternative I. Single-field option. Fifteen units, including at least one class in the 510 series, in one of the following fields: Africa and the Middle East, Ancient/Medieval Europe; Asia; Britain; Latin America; Modern Europe (including Russia); United States. Those who take the single-field option must also take at least one 500-level course in a second field.  
Alternative II. Two-Field Option. A minimum of 9 units in each of two of the above geographical areas, including at least three units of 510 in each.  
The courses for Directed Study (695), Directed Research (697), and Thesis (698) may be applied to the 18 unit total only with the permission of the graduate advisor. A student may propose a field other than those cited above with the consent of the Graduate advisor and her/his graduate committee.
3. A reading knowledge of German, French, or other foreign language may be required, depending upon the candidate's program of study as recommended by her/his graduate committee.
4. A comprehensive written examination on two periods or a thesis.

## Courses (HIST)

### Lower Division

#### 111. World History: Origins to 1500 (3)

A survey of the development of world civilization and major cultures from the Neolithic Revolution until the eve of the European conquest of the Americas. The civilizations of the Ancient, Classical and Post-classical periods will be studied, emphasizing interaction between civilizations and major cultures. Topics will include: the origins and role of universal religions; the examination of political, social and gender structures in relation to economic and demographic development; and the diffusion of culture and technology via migration, commerce and the expanse of empire.

#### 112. World Since 1500 (3)

A survey of the origin and development of the modern world, tracing both regional histories and global interactions. Major themes include: economic aspects of globalization; intellectual and cultural adjustments to modernity; modern imperialism, resistance to empire and the birth of nations; and the historical origins of the contemporary world.

#### 131. Early Western Civilization (3)

The history of western civilization from its origins through the 16th century. Stresses society, culture and political institutions of ancient Near East, classical world, the medieval West and renaissance and reformation Europe. (CAN HIST 2)

#### 132. Modern Western Civilization (3)

European society from the 16th century to the present. Stresses events and phenomena which reshaped the political, economic and social structures of the West and their impact throughout the world. Emphasis on the intellectual, social and psychological transformation of modern life. (CAN HIST 4)

#### 151. England: Earliest Times to 1688 (3)

This course deals with the changing peoples, cultures, territories, economies, rulers, religions, and politics of the British Isles over more than two thousand years. In addition to covering the narrative of British history from its beginnings to 1700, this class requires students to read original historical sources, evaluate historical evidence, and write short analytical reports.

#### 152. Britain in Modern Times (3)

British history from the late seventeenth century to the present, including state formation, political development, industrial revolution, elite and popular culture, social and gender relations, imperial expansion, modern wars, and post-imperial adjustment. In addition to tracing the changing relationship of England, Ireland, Scotland and Wales, this class requires students to read original historical sources, evaluate historical evidence, and write short analytical reports.

#### 162A,B. Comparative History of the United States and Latin America (3,3)

The history of the Western hemisphere from European contact to the present, with emphasis on institutions and traditions. (These two courses together meet the State of California requirement in U.S. History.)

#### 172. Early United States History (3)

Survey of the political, social, economic and cultural development of the United States from discovery through reconstruction. Attention to the colonial era, establishment of the new nation, sectional problems, national growth, disunion and reconstruction. Material may be covered chronologically or topically. Fulfills the general education requirement for U.S. history. Not open to students with credit in HIST 162A. (CAN HIST 8)

#### 173. Recent United States History (3)

Survey of the political, social, economic, intellectual, and cultural development of the United States from Reconstruction to the present. Focuses on different social groups and examines the experiences of both the powerful and those who want power in American society. The course may be chronological or topical, and covers such themes as: immigration and movements of people; work and the economy; the emergence of women's and minority issues; politics, protest and war; and society and culture. (CAN HIST 10)

#### 201. Facts, Evidence and Explanation (3)

This course is intended to help broaden students' awareness of the necessity of critical thinking when dealing with facts, evidence, and explanation in both the study of history and daily life. The course addresses the following questions: What is a fact? What can be made of a fact? How do we judge the legitimacy of historical inference/ interpretation? What is the role of theory in history? What is the role of popular culture in critically thinking about history? How do images fit in? Can history be objective? What are the implications of a critical analysis of history and everyday life?

#### 290. Special Topics in History (1-3)

Topics of current interest in history. May be repeated with different topics to a maximum of six units. Applicability to major requirements will be specified in description of individual topics, as announced in the Schedule of Classes.

#### A. World War II

### Upper Division Areas

NOTE: General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

Course titles listed with an asterisk (\*) are available for graduate as well as undergraduate credit.

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### GENERAL

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Course titles listed with an asterisk (\*) are available for graduate as well as undergraduate credit.

### 301. Methodology of History (3)

Required of all history majors in the first semester of upper-division work. How historians ask interpretive and methodological questions and how these questions are answered intellectually and technically (including bibliography, structure and writing). Practice in the use of primary sources, reconstruction of events and presentation of findings. Preparation and analysis of written student exercises. Credit/No Credit grading only.

### 302. Theory and History (3)

Examination of the ways in which theory shapes historical writing and research. Will focus upon case studies, significant historical works, major schools of historical interpretation and recent scholarly trends. Traditional grading only.

### 309I. Men and Masculinity (3)

Prerequisites: ENGL 100 and upper division status. Exploration of male roles from an interdisciplinary perspective focusing on men as workers, friends, lovers and fathers. Consideration of the choices available to men under the impact of tradition, feminism and a changing job market. Gender-oriented social and political movements. Traditional grading only.

### 408./508. The History of the Family (3)

History of the family from medieval period to 20th century. Emphasis on changing economic, social and emotional functions. Historical development of women's roles, childhood, marriage patterns, domestic labor and extended family relations will be considered, with special attention to contrasting developments during different historical periods and within different civilizations. Emphasis will vary between Europe, the U.S. and East Asia but with special attention to the early modern era. Students will have the opportunity to work on a family history project.

### 490. Special Topics in History (1-3)

Prerequisite: Consent of instructor. Topics of current interest in history selected for intensive development. May be repeated with different topics to a maximum of six units, but no more than three units may be used to satisfy the requirements for the major. Topics will be announced in the Schedule of Classes.

### \*494. Practicum in History (1-3)

Prerequisites: Consent of instructor and department chair. Field work in History, supplemented by reading and tutorials under the direction of a faculty member. Internships, small group discussion/teaching, and other assignments directed by a supervising faculty member. Course may be repeated for a maximum of 6 units. No more than three units may be applied to the major in History.

### \*495. Colloquium (3)

Prerequisite: Consent of instructor. Analysis and interpretation of significant documents and works of history. Individual works discussed will center about a general theme selected by the instructor. May be repeated with different topics to a maximum of six units, but no more than three units may be used to satisfy the requirements for the major.

- A. Colloquium
- B. The Enlightenment
- D. The 1960s
- E. Hitler
- F. Russian Revolution Thought
- G. Readings in Ancient History
- J. Sports History of the U.S.
- K. Latin American Dictators
- L. E. Europe Since 1848
- M. Public History
- N. U.S. Workers and Unions
- O. U.S. in Vietnam
- P. American Social Criticism
- Q. Historical Gender Relations
- R. Evangelism and American Culture and Politics

### 497H. Honors Colloquium (3)

The development of History as a discipline, major schools of historical interpretation, and recent developments in analysis and theory. Emphasis on the interrelationship of History to other disciplines in the social sciences and humanities.

### \*498. Directed Studies (1-3)

Prerequisite: consent of instructor. Independent study under the supervision of a faculty member. May be repeated up to six units.

### 498H. Honors Research (3)

Research for and writing of a senior thesis under the direction of a departmental advisor.

### 499H. Honors Thesis (3)

Prerequisite: HIST 498H. Research, writing, and presentation of a senior honors thesis under the direction of departmental faculty advisor.

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## INTERDISCIPLINARY COURSES

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### 303I. Rebels and Renegades (3)

Prerequisites: ENGL 100 and upper division status. The 1930s and 1960s were decades noted for their political, social and cultural creativity and turmoil. This course investigates youth involvement in social change, and focuses on the following topics in US history: labor activity, civil rights, student action, issues of war and peace, the evolution of the women's movement and the emergence of minority voices. The course looks at culture (particularly music, literature, and movies) in defining and reflecting these issues, and addresses the question of why some decades are filled with social protest while other periods appear to be more politically passive. The class addresses the importance of these questions for the 1990s. Not available for credit in the minor.

### 306I. Legal Responsibility (3)

Prerequisites: ENGL 100 and upper division status. Exploration of how society does and should hold people responsible for their acts toward society (crimes) and toward other people (torts). Emphasis on how law has evolved, its variety and principles and policies upon which it is or should be based. No previous study of law required.

### 307I. Modernization in Global Perspective (3)

Prerequisites: ENGL 100 and upper division status. Exploration of the ways in which current psychological and material problems in modern society (both Western and Third World) can be traced to a process of accelerating change which began with the advance of technology, rise of capitalism, abandonment of "old values," increasing complexity of bureaucracy, and a lowering of social barriers. Exploration of all facets of modernization utilizing films, discussions and readings (fiction and non-fiction). Same course as ANTH 307I and GEOG 307I. Not available for credit in the minor.

### 308I. Law and Civilization (3)

Prerequisites: ENGL 100 and upper division status. Exploration of law as an intellectual effort to define, direct, and administer human experience. Examination of theories of knowledge, language, meaning, mental processes, social organization, personal responsibility and freedom underlying legal analysis and decision-making in courts as well as in administrative/bureaucratic settings. Not available for credit in the minor.

### 309I. Men and Masculinity (3)

Prerequisites: ENGL 100 and upper division status. Exploration of male roles from an interdisciplinary perspective focusing on men as workers, friends, lovers and fathers. Consideration of the choices available to men under the impact of tradition, feminism and a changing job market. Gender-oriented social and political movements. Traditional grading only.

### 310I. The Greek World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major events and ideas in society and culture of ancient Greece with an emphasis on literature, the arts, and the historical forces at work. Topics include foundations of Greek culture, Minoan civilization, Homer and the Trojan War, mythology and religion, lyric poetry, the Persian Wars, the "Golden Age" of Athens, the Peloponnesian War, Hellenistic culture and contributions of the Greeks to the modern world. Same course as C/LT 310I.

### 312I. Roman World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major events and ideas in the society and culture of ancient Rome with an emphasis on literature, the arts, and the historical forces at work. Topics include genesis and

growth of the Roman world, transition from Republic to Empire, imperial maturity, decay and decline, and the contributions of the Romans to the modern world. Same course as C/LT 312I.

### 323I. The Renaissance World (3)

Prerequisites: ENGL 100 and upper-division status. An interdisciplinary view of selected topics of Renaissance culture and society, emphasizing the arts and literature within the historical context of the era. Topics span social, economic, intellectual, institutional, religious, and cultural issues and their influences on music, art, literature, and philosophy. Not available for credit in the major. Same course as MUS 365I.

### 400I. History of Western Scientific Thought (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary introduction to the history of science for both scientists and non-scientists. Evolution of the scientists' views of the means and ends of their own activities; the ways in which science is affected by and affects contemporary cultures. Same course as PHYS 400I.

### 404I. Social History of Musical Life (3)

Prerequisites: ENGL 100 and upper division status. Social history of musical life, music publics, institutions, professions, and taste in Europe and the U.S. Not available for credit in the major.

### 407I. Japan and the United States in the 20th Century (3)

Prerequisites: ENGL and upper division status. Examination of relationships between Japan and the United States, emphasizing cultural, economic and political conflict and cooperation.

### 411I. Early Christianity and Society (3)

Prerequisites: ENGL 100 and upper division status. Development of Christianity from the New Testament period to the Renaissance with emphasis on the growth of doctrine, church institutions and the role of Christianity in ancient and medieval society. Same course as R/ST 471I.

### 414I. Medieval World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major themes in medieval society and culture with emphasis on literature, the arts, and the historical forces at work. Topics will include the Roman heritage of the middle ages, barbarian culture, Romanesque and Gothic worlds, crusades and pilgrimages, commerce and cathedrals, and late medieval problems. Not available for credit in the major. Same course as C/LT 349I.

### 474I. The Urbanization of Modern America (3)

Prerequisites: ENGL 100 and upper division status. Survey of urban America from the colonial period to the present. Emphasis on the process of urbanization, urban problems and politics.

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## AFRICA AND THE MIDDLE EAST

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### \*391. The Making of Modern Africa, 1800-1939 (3)

This course surveys the history of sub-Saharan Africa from the early 19th through the mid-20th centuries. We will study the rapid changes which destabilized many 19th century societies, the European conquest which followed, and the entrenchment of a colonial situation which robbed generations of Africans of their ability to control their own political and economic destinies. Our emphasis will be on how Africans themselves perceived these processes, how they adjusted to them, and the continuing relevance of these experiences today.

### \*392. Contemporary Africa, 1940-Present (3)

The challenges facing Africa today can seem bewildering in their variety and complexity. In this course we will examine the political, economic, social, and ecological conditions of the African continent by studying their historical genesis in the second half of the twentieth century. The main focus will be the difficulties that have been encountered in overcoming the legacies of colonialism in Africa.

### \*431. Arab and Islamic Civilization (3)

History and culture of the Arab and Islamic world from early origins in Arabia, and the establishment of the early Arab empires with emphasis on the recent period.

### \*491. Modern and Contemporary Africa (3)

Conquest of Africa by European states, contrasting colonial systems as they evolved, anti-colonial movements and progress towards self-government or independence, problems of economic and political development, and race tensions in areas of white settlement.

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## ANCIENT AND MEDIEVAL

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### 310I. The Greek World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major events and ideas in society and culture of ancient Greece with an emphasis on literature, the arts, and the historical forces at work. Topics include foundations of Greek culture, Minoan civilization, Homer and the Trojan War, mythology and religion, lyric poetry, the Persian Wars, the "Golden Age" of Athens, the Peloponnesian War, Hellenistic culture and contributions of the Greeks to the modern world. Same course as C/LT 310I.

### 312I. Roman World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major events and ideas in the society and culture of ancient Rome with an emphasis on literature, the arts, and the historical forces at work. Topics include genesis and growth of the Roman world, transition from Republic to Empire, imperial maturity, decay and decline, and the contributions of the Romans to the modern world. Same course as C/LT 312I.

### \*313. Ancient Greece (3)

History of the Greeks and the Greek world from the earliest times to the Roman conquest.

### \*314. Roman History (3)

History of Rome and the Roman world from the Eighth Century B.C. to the Fifth Century A.D.

### \*316. Early Middle Ages (3)

History of Western Civilization from the fall of the Roman Empire in the West to the Crusades. Germanization of the West, evolution of Christian institutions, Slavic expansion, Byzantinization of the Eastern Empire, Islamic civilization, Carolingian age, feudal and manorial institutions.

### \*317. High Middle Ages (3)

History of Western Civilization from the Crusades to the end of the Middle Ages. Revival of trade, growth of towns and of capitalism; origins of modern political institutions; and medieval learning and art.

### \*318. Byzantine Empire (3)

Political and social development of the Byzantine Empire from the 4th century A.D. to the fall of Constantinople in 1453; the cultural heritage of the Roman Empire in the eastern Mediterranean; religious controversies and the development of eastern Christianity; relations with Islam and medieval Europe.

### 323I. The Renaissance World (3)

Prerequisites: ENGL 100 and upper-division status. An interdisciplinary view of selected topics of Renaissance culture and society, emphasizing the arts and literature within the historical context of the era. Topics span social, economic, intellectual, institutional, religious, and cultural issues and their influences on music, art, literature, and philosophy. Not available for credit in the major. Same course as MUS 365I.

### \*351. Medieval England (3)

Analysis of English political institutions, society, religion and economy in the Anglo-Saxon, Norman, Plantagenet and late medieval eras.

### 411I. Early Christianity and Society (3)

Prerequisites: ENGL 100 and upper division status. Development of Christianity from the New Testament period to the Renaissance with emphasis on the growth of doctrine, church institutions and the role of Christianity in ancient and medieval society. Same course as R/ST 471I.

### 414I. Medieval World (3)

Prerequisites: ENGL 100 and upper division status. An interdisciplinary examination of major themes in medieval society and culture with emphasis on literature, the arts, and the historical forces at work. Topics will include the Roman heritage of the middle ages, barbarian culture, Romanesque and Gothic worlds, crusades and pilgrimages, commerce and cathedrals, and late medieval problems. Not available for credit in the major. Same course as C/LT 349I.

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## ASIAN

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**\*382A. Imperial China (3)**

Introduction to the classical civilization stressing the evolution of imperial institutions, the Chinese world order and China's traditional cultural heritage.

**\*382B. Modern China (3)**

Chinese society since 1800. Impact of imperialism, reform and revolutionary movements, the background of Chinese communism. Not open to students with credit in HIST 482B.

**383A. Japan to 1850 (3)**

Japan from prehistory to the nineteenth century; emphasis on social and cultural developments, the evolution of political institutions, and the development of early modern society.

**383B. Modern Japan (3)**

Japan from 1850 to 1945; collapse of Tokugawa bakufu and rise of the Meiji state; industrialization; social change and protest; "Taisho democracy," the Pacific War.

**\*384. Contemporary Japan (3)**

Japan since 1945; impact of Hiroshima and Nagasaki; American occupation of Japan; Japan's "economic miracle," social change and social criticism in literature and film; Japan's role in the contemporary world; conflict with the U.S.

**\*385. History of India (3)**

This is a survey of the history of the South Asian subcontinent from its historic roots, through the founding and consolidation of the great Mughal Empire, to the beginnings of Western imperialism and the establishment of the British Raj, ending with nationalism and the course of events in post-independence India, Pakistan and Bangladesh.

**\*386. History of Modern Southeast Asia: Colonial Era to the Vietnam War (3)**

This is a survey course in the political and cultural history of the peoples of modern Southeast Asia. After an overview of traditional civilizations, the history of modern Southeast Asia (from roughly 1815) will emphasize expansion of European influence in the political and economic spheres, the growth of nationalism and the process of decolonization in Southeast Asia, and the post-WWII configuration of the area. Both mainland Southeast Asia (Vietnam, Cambodia/ Kampuchea, Laos, Burma, Malaysia) and insular Southeast Asia (Indonesia, Philippines) will be surveyed.

**405./505. Classical Japan (3)**

Japan from prehistory to the fifteenth century. Connections to other Asian cultures, the influence of Buddhism, and development of Japanese esthetics exemplified in literature and art; dynamics of centralized vs. regional power; civil vs. military authority.

**\*406. Asian Women (3)**

Historical experience of women in Asia, with emphasis on Chinese and Japanese societies; links with the experience of Asian-American women. Same course as A/ST 406 & W/ST

**407I. Japan and the United States in the 20th Century (3)**

Prerequisites: ENGL and upper division status. Examination of relationships between Japan and the United States, emphasizing cultural, economic and political conflict and cooperation.

**409./509. Early Modern Japan (3)**

Japan from the mid-16th century to the end of the Tokugawa period in 1868; reunification, the growth of urban centers and transportation, economic growth; blossoming of political theory, and of popular culture.

**\*488. The Chinese Revolution (3)**

Prerequisite: HIST 382B or consent of instructor. Theory and practice of revolutionary socialism in the People's Republic of China, historical and ideological background of the Chinese revolution, Mao and Maoism, politics, culture and society in China.

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## BRITISH

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**\*353. Tudor and Stuart England (3)**

Social, cultural, religious, political, and dynastic history of England from 1485 to 1714. Renaissance and Reformation; Crown and

Parliament; civil war and revolution; the pre-industrial economy; relations with Scotland, Ireland, Europe, and America.

**\*356. Georgian and Victorian Britain (3)**

Social, cultural, religious, political, and constitutional history of Britain from 1714 to 1901. Changes in agriculture, commerce, industry, and population; Parliamentary democracy; Irish problems; relations with America, India, Europe, and the world.

**\*357. Recent Britain (3)**

Social, cultural, economic, and political history of 20th century Britain. Governments and people; labor, party politics, and the welfare state; two world wars; problems with Ireland and Europe; the end of Empire; race relations; mass media and popular culture; contemporary developments.

**\*451. Special Topics (3)**

Topics in British Empire and Commonwealth history in two basic formats: (1) comparative studies of major Commonwealth nations, South Africa and Canada; (2) the rise and fall of the British Empire examined in the light of various theories of imperialism, neo-colonialism and economic development. May be repeated for a maximum of six units if topics dealt with are different.

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## LATIN AMERICAN

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**\*362. Colonial Latin America (3)**

Iberian preparation for overseas expansion; discovery and conquest in America; evolution of colonial institutions; dynamic 18th century developments; wars of independence.

**\*364. The Latin American Nations (3)**

Political, economic, social and intellectual evolution of Latin America in the 19th and 20th centuries.

**\*366. Latin American History and Literature (3)**

Latin American history through the novel and film; will integrate literature and the cinema with traditional historical materials in order to provide the student with a deeper understanding of the development of Hispanic America.

**461. History of Precolumbian Mexico (3)**

History of Meso-America from prehistoric times to the Spanish conquest, emphasizing the study of the societies and the religious and intellectual life of people of ancient middle America. Same course as CHLS 380.

**\*462. Mexico (3)**

Spanish conquest of Indian Mexico; settlement and exploration; colonial life and institutions; the achievement of independence from Spain; reform, foreign intervention, dictatorship in the 19th century; the Revolution of 1910 and after; contemporary Mexico.

**\*463. The Caribbean and Central America (3)**

History of the Caribbean Islands and Central America from European colonization to the present, with emphasis on Cuba and Central America. Economic, political and cultural development and relations with the United States.

**\*466. Topics in Latin American History (3)**

Selected topics in Latin American History, including: (a) Revolutionary Latin America analyzing various 20th-century revolutionary movements, their social, political and cultural causes, and their international impact; (b) Slavery, Peasantry and Aristocracy analyzing examples of black slavery, peasant societies, and elites from the 16th century to the present; (c) Comparative History: Argentina and Brazil, or other pairs of states; colonial beginnings, with emphasis on geographical, economic, social, ethnic, and vital institutional elements. May be repeated, with different topics, for a maximum of nine units.

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## MODERN EUROPEAN

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**\*304. The Holocaust (3)**

This course examines the attempted destruction of European Jews by Nazi Germany during the Second World War. Students will trace the roots of anti-Semitism in European history, the origins of Hitler's anti-Jewish assault, and the process from ghettoization to extermination. Other topics include the Jewish resistance inside Europe, the Western response during the war, and the world reaction fifty years after the Holocaust. Students will also explore how the Jewish

tragedy is related to other crimes against humanity, including the massacre of Armenians, mass killing in Cambodia and Indonesia, and the issue of ethnic cleansing in Bosnia.

**\*332. The Italian Renaissance (3)**

Examination and analysis of intellectual, cultural, political and economic features of 14th, 15th, and 16th-century Italian civilization. Particular emphasis on interplay between new configurations and notions of power and their unique Italian cultural manifestations.

**\*333. Reformation Europe (3)**

Examination and analysis of the "long 16th century," from the beginning of the Italian Wars (1494) to the Peace of Westphalia (1648). Emphasis on economic, institutional, intellectual and religious crises, and on their resolutions in the post-Reformation period.

**\*335. The Shaping of Modern Europe (3)**

European political, social, economic and intellectual life from the Treaty of Westphalia (1648) to the French Revolution (1789). Emphasis on the rise of statism, the triumph of science and mechanistic philosophy, absolutist monarchs (e.g., Louis XIV), enlightened despots (e.g., Frederick the Great), and philosophers (e.g., Voltaire), and the crisis of traditional society.

**\*336. The French Revolution and Napoleon (3)**

End of the Old Regime and the French Revolution. Decline of the feudal monarchy, failure of enlightened despotism, the rise of revolutionary thought, French Revolution, and Napoleonic imperialism.

**337. Europe in the Nineteenth Century (3)**

This course focuses on a tumultuous century of revolution and reaction from the French Revolution to the outbreak of World War I. Topics included are: industrialization and its repercussions; popular protest and mid-century revolutions; the rise of the bourgeois and liberal world and the political and social opposition to it; nationalism, including the unification of Germany and Italy; feminism, imperialism and daily life.

**338. European Women's History (3)**

European Women's History is an upper division course which investigates how European history has impacted on women and how women and women's issues have shaped historical events. Issues that the course will address include: the nature, methodology and approaches of women's history; the significance of the Enlightenment and French Revolution for women and the role women played in these events; the work women of all classes did, and how industrialization affected the position of women; women's role in and their relationship to 19th and 20th century wars and revolutions; women's health and sexuality; the role of the women in the family; women's socialization and education; the "Women Question" and attempts to remedy women's position; recent feminist theory; and a speculative look at the future of European women. Same course as W/ST 384.

**339. Europe Since 1914 (3)**

World War I; outstanding changes in Europe after the First World War with particular stress on the rise of Fascism in Italy, Nazism in Germany, Communism in Russia, and Social Democracy in Scandinavia and Great Britain; the failure of the League of Nations and the collapse of collective security; World War II; the United Nations; postwar problems.

**\*340. Europe Since 1945 (3)**

This course examines the political, social, economic, and cultural development of Europe since the end of World War II. Themes will include the development of the Cold War, economic recovery, the rise of the welfare state, Eurocommunism, Gaullism, student unrest, national security and arms control, terrorism, the fall of communism and the transformation of East and Central Europe.

**400I. History of Western Scientific Thought (3)**

Prerequisites: ENGL 100 and upper division status. An interdisciplinary introduction to the history of science for both scientists and non-scientists. Evolution of the scientists' views of the means and ends of their own activities; the ways in which science is affected by and affects contemporary cultures. Same course as PHYS 400I.

**\*437. History of Germany 1871 to Present (3)**

History of Germany from unification: the First World War, the Weimar Republic, the National Socialist Reich and the post-war recovery.

**\*438. History of Marxist Thought (3)**

Survey of Marxist thought from the mid 19th century to the present. Intellectual precursors of Marxism; basic concepts of Marx and Engels; divergent paths of Marxism in the 20th century. No previous study of Marxism will be assumed but students will benefit from having some background in the history of Western industrial societies.

**\*483. Women in Eighteenth-Century England and America (3)**

Prerequisites: ENGL 100 and upper/division status. Study of representations and realities of women's lives, 1688-1800, from an international and interdisciplinary perspective. Critical methodology of history and literature; analysis of literary and historical texts to explore women's experiences of law and economics; religion; education and culture; marriage, sex, and health; politics and revolution. Same course as W/ST 483.

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## ORAL HISTORY PROGRAM

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**402. Oral History Methods (1)**

Through a series of workshops and through field experience, skills in oral history will be developed which will enable students to use oral history either for their own personal use in family history or for class projects. Credit/No Credit grading only. Same course as C/LA 485.

**\*484. Topics in Women's Oral History (3)**

Using oral history, focus on women's experience in different periods in the 20th century. Different topics will be emphasized each semester, including a study of women's changing history through a comparison of generational groups; the "feminine-mystique" of 1920 and 1950; Rosie the Riveter; women during World War II. May be repeated with different topics for a total of 6 units. Same course as W/ST 405.

**4980. Directed Studies in Oral History (1-6)**

Permission of faculty required. Directed study on a research topic using the methodology of oral history. May be repeated for a maximum of 6 units. (Same course as C/LA 498.)

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## RUSSIAN

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**341A. Foundations of Russia (3)**

Evolution of the state structure, diverse cultural patterns, and social structures associated with ancient Kiev Russia: rise of Moscow, origins of autocracy and serfdom; westernization and modernization as problems during the imperial period to 1801. Particular emphasis on social history.

**341B. Modern Russia (3)**

Interaction with the West from 1801; era of great reforms and revolutionary movements; downfall of imperial Russia; establishment of the Soviet regime; chief political, social, economic and cultural developments in the Soviet era; role of the Soviet Union in world affairs.

**\*441. Russian and Soviet Cultural History (3)**

Cultural development of Russia from the beginning of massive westernization to the present; emphasis on values, attitudes and society as seen through literary sources, major developments in painting, music, social thought.

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## UNITED STATES

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**300. The United States Past and Present (3)**

Concentrating on the rise of the U.S. to its present position as a world power, this course will explore the contributions of various racial and ethnic groups and of both men and women to that process, as well as the effects of developing political, economic, and social institutions and values upon that process. (This course is an upper-division survey and may not be taken for credit in the United States field. It is for upper-division transfer students in lieu of HIST 172 and 173.)



**370. Chicano History (3)**

Chicanos in the settlement and development of the Southwest and in contemporary U.S. society; Chicano experience as a U.S. minority group; emerging civil rights movement of La Raza. Traditional grading only. Same course as CHLS 300.

**371. Religion in American History (3)**

A survey of the main currents of religion in the development of American civilization from the beginning of the colonial period to the present. Themes of Judeo-Christian heritage, proliferation of denominations and new religions in an open environment. Awakenings and revivals, sectarian, communal, ecumenical and social action movements are among the topics explored.

**\*372. United States: Colonial Period (3)**

Discovery and settlement of the new world; European institutions in a new environment; development of colonial government, economy and social institutions; European dynastic rivalry and colonial America.

**\*373. United States: Age of Revolution (3)**

Clash between British attempts to control and tax the colonies and colonial distaste for both; growth of an independent spirit; the American Revolution; problems of the new nation; the constitution.

**\*374. Poverty, Madness and Substance Abuse in American History (3)**

Traces the changing definitions of poverty and deviance in American history along with changing treatment of the poor and persons considered deviant. Beginning with private, informal responses to poverty and deviance in the colonial era, the expanding number and kinds of behavior considered deviant in the 19th and 20th centuries along with growth of poverty will be traced. Rise of public and private efforts to relieve and reform treatment of the poor and deviant will be a special focus. Historical antecedents of contemporary welfare policies, mental health policies and drug policies will be examined in depth.

**\*375. The United States Emerges as a Nation (3)**

An analysis of the political, economic, social, and intellectual forces from the adoption of the constitution through the 1840s.

**\*376. United States: Civil War and Reconstruction (3)**

Sectional rivalry, manifest destiny, mid-century divisive forces, Civil War and reconstruction.

**377. The United States at War (3)**

Since the discovery of "the new world," until the present time the United States has been engaged in a sequence of conflicts, wars, and military police actions. This course is designed to address and answer a variety of questions regarding how and why the United States goes to war. Topics for exploration include: Who were the Presidents going into and during each war? What were their political parties? What was the economic impact or impetus? What part did manifest destiny, the Monroe doctrine, and the cold war (the domino theory) of communism play? What about the issue of American nationalism? Do we go to war to protect ourselves, our image as a world power, as the result of an insult to our "national image," or for economic reasons? Is it the responsibility of the U.S. to be the watchdog for the world?

**\*378. United States History: 1877-1920 (3)**

The development of the U.S. as an urban, industrial, multicultural society; progressive reform movements at the city, state, and national level; rise of U.S. as a world power; WWI.

**\*379. United States: Twenties, Depression, and World War II (3)**

The conflict-ridden 1920s; the Depression years, and the beginnings of welfare democracy; the United States in World War II.

**\*380. United States Since 1945 (3)**

The United States in the nuclear age: the development of the Cold War and its domestic ramifications, the "post-industrial" economy, the civil rights revolution, the rise of political dissent, the Watergate affair, the Reagan revolution, and after.

**381. Asian American Women (3)**

This course will explore the largely unwritten history of Asian American women. Using an inter-disciplinary perspective, we will look at not only secondary sources but also autobiographical, literary, and journalistic writings; oral histories, diaries, anthropological studies,

psychological/clinical reports, and film to reconstruct the lives of Asian American women. We will examine how having been burdened by the triple oppression of gender, race, and class, Asian American women have been actively pursuing equality and dignity. Same course as ASAM 381 and W/ST 381.

**482. Recent American Environment History (3)**

This course examines the interaction between humans and the natural world in the United States from the late nineteenth century to the present. It considers such diverse topics as the impact of industrialization and urban growth on the American environment, the emergence of ecological consciousness and green politics, and the creation of the idea of Nature in American culture.

**\*468./568. Local History: Communities (3)**

Description and analysis of selected communities within the greater Los Angeles-Long Beach area from an historical perspective, with emphasis on population and migration patterns, the development of economic forces shaping the area and techniques of local history.

**\*469. Ethnic Groups in Urban America: An Historical Examination (3)**

An examination of the origin, migration, settlement and the assimilation problems of the various ethnic groups in major American cities since the late 19th century. Emphasis will be upon the economic, social, political and educational problems encountered by different groups attempting to adjust to urban life.

**\*471. History of the Westward Movement (3)**

Examination of the impact of American expansion on the West: Euro-American exploration and migration, ethnic conflict and conquest, gender and family roles on the frontier, environmental changes in the West, development of economic institutions, and urbanization of the region.

**\*472. History of the South (3)**

The first half of the course offers a general examination of the Antebellum culture, traditions, and societal crisis. The second half offers an analysis of the modern South (post World War II) from the standpoint of political, economic and social change. Definite emphasis on roles and interactions of racial minority groups and women; insights into solidarity and conflict, and possible resolution of conflict.

**\*473. California History (3)**

Survey of California from the 1500s to the present. Emphasis on migration, cultural diversity, and significant social, political, and economic developments.

**474I. The Urbanization of Modern America (3)**

Prerequisites: ENGL 100 and upper division status. Survey of urban America from the colonial period to the present. Emphasis on the process of urbanization, urban problems and politics.

**477A./577A. American Cultural History (3)**

Development of American way of life treated in terms of values, behavior and institution, themes of individualism, community, ethnic diversity and social reform.

**477B./577B. American Cultural History (3)**

Development of American way of life treated in terms of values, behavior and institutions, themes of individualism, community, ethnic diversity and social reform.

**\*478. Foreign Relations of the U.S. (3)**

The course incorporates a global perspective and considers the influence of such issues as domestic politics, bureaucratic rivalry and decision-making, economics, ideology, race, and the role of special interest groups in the making of foreign policy. Same course as I/ST 478.

**\*479. U.S. Constitution: Origins and Early Development (3)**

European sources of constitutional thought, colonial background, impact of the American Revolution, the framing period and the rise of a judicial approach to constitutional interpretation under the Marshall and Taney Courts. Emphasis throughout is on the evolution of constitutionalism as a working ideal in American thought and institutions.

**\*480. Law and Fundamental Rights in American History (3)**

Selected variable topics on civil liberties issues addressing the historical development of constitutional guarantees in the areas of freedom of expression, privacy, church and state, due process, and equal protection.

**\*481. The Environmental History of Early America:1500-1860 (3)**

Prerequisites: ENGL 100 and upper division status. This course will explore the economic, social, and cultural developments of early America, from the eve of colonial settlement through 1860, from the perspective of environmental history. It will examine how different groups of people occupying the North American continent - Native Americans, Europeans, Africans (and the descendants of these groups) - defined their relationship with the natural world and how they attempted to manipulate it according to their economic needs and cultural values.

**485A. History of Women in the U.S. Early Period (3)**

Provides a survey of the roles and activities of American women from colonial period to 1850; variety of female life experiences; slavery, immigration; relationships to the family, economy and political movements. Only 3 units of 485A,B may be applied to a field of concentration in U.S. history for the major. Same course as W/ST 485A.

**485B. History of Women in the U.S. Since 1850 (3)**

Changing roles and status of women in economic and social change; suffrage movement; women in union movement and WW II; the decade of the sixties and the "second wave" of feminism. Only 3 units of 485A,B may be applied to a field of concentration in U.S. history for the major. Same course as W/ST 485B.

**\*486. History of Afro-Americans in the United States (3)**

Course offers the students a historical examination of the roots and culture of Afro-Americans from the Colonial era to the present. This upper division course is designed to study the transformation from slavery to freedom; segregation and racial conflict; emigration patterns, societal interactions, and participation of other ethnic groups and women.

**\*489. Topics in Legal History of the United States (3)**

Case studies in American law from colonial times to the present: English common law heritage, puritan and frontier influences, the legal profession, judicial traditions, formative stages in criminal law, torts and contracts, and modern trends in legal thought. May be repeated with different topics to a maximum of six units.

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**WORLD HISTORY**

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**396. Contemporary World History (3)**

A global approach to the study of the twentieth century, with an emphasis on the historical origins of the contemporary world. Key themes include the changing nature of the global economy; the advance and retreat of empires; contending ideologies: liberalism, fascism, communism and nationalism; the role of the United States in world history; colonialism and post-colonialism; and the legacies bequeathed to a new millennium.

**492./592. Proseminar in World History (3)**

Prerequisite: Consent of the instructor. Discussion and analysis of recently published historical works and materials from a world history perspective. May be repeated to a maximum of 6 units.

**Graduate Division**

**501. Theories and Methodologies of History (3)**

The development of history as a discipline, major schools of historical interpretation, and recent developments in analysis and theory. Emphasis will be placed on the interrelationships of history with other disciplines in the social sciences and humanities. Required of all graduate students.

**505./405. Classical Japan (3)**

Japan from prehistory to the fifteenth century. Connections to other Asian cultures, the influence of Buddhism, and development of Japanese esthetics exemplified in literature and art; dynamics of centralized vs. regional power; civil vs. military authority.

**508./408. The History of the Family (3)**

History of the family from the medieval period to the 20th century, with emphasis on its changing economic, social and emotional functions. The historical development of women's roles, child-

hood, marriage patterns, domestic labor and extended family relations will be considered, with special attention to contrasting developments during different historical periods and within different civilizations. Emphasis will vary between Europe, the U.S. and East Asia but with special attention to the early modern era. Students will have the opportunity to work on a family history project.

**509./409. Early Modern Japan (3)**

Japan from the mid-16th century to the end of the Tokugawa period in 1868; reunification, the growth of urban centers and transportation, economic growth; blossoming of political theory, and of popular culture.

**510. The Literature of History (3)**

Reading and discussion of major works and intensive study of bibliography and bibliographical aids. Includes a comparative history component. (a) Ancient and Medieval, (b) Asia, (c) Latin American, (d) Modern European (including Britain and Russian), (e) United States. Traditional grading only. Course may be repeated to a maximum of 6 units.

**568./468. Local History: Communities (3)**

Description and analysis of selected communities within the greater Los Angeles-Long Beach area from an historical perspective, with emphasis on population and migration patterns, development of economic forces shaping the area and techniques of local history.

**577A./477A. American Cultural History (3)**

Development of American way of life treated in terms of values, behavior and institutions, themes of individualism, community, ethnic diversity and social reform.

**577B./477B. American Cultural History (3)**

Development of American way of life treated in terms of values, behavior and institution, themes of individualism, community, ethnic diversity and social reform.

**590. Topics in Comparative History (3)**

Prerequisite: Consent of instructor. Selected themes in history involving cross-cultural and comparative approaches. May be repeated for a maximum of six units.

**592./492. Proseminar in World History (3)**

Prerequisite: Consent of the instructor. Discussion and analysis of recently published historical works and materials from a world history perspective. May be repeated to a maximum of six units.

**595. Special Preparation (3)**

Prerequisite: Graduate standing. Special preparation for the M.A. examinations under faculty direction. May be repeated for a maximum of 6 units. Permission of Graduate Advisor required.

**611. Seminars in Ancient and Medieval History (3)**

Prerequisites: Six units of upper division ancient or medieval history or consent of instructor. Selected topics in ancient or medieval history. May be repeated for a maximum of six units.

**631. Seminars in European History (including Britain and Russia) (3)**

Prerequisite: Consent of instructor. Directed reading and research in the political, economic, social and cultural history of Europe. May be repeated for a maximum of six units.

**673. Seminars in United States History (3)**

Prerequisite: Six units of upper division United States history. Selected topics in domestic or international affairs from colonial times to the present. May be repeated for a maximum of six units.

**682. Seminars in East Asian History (3)**

Prerequisites: Six units of upper division Asian history or consent of instructor. Selected topics in East Asian history. May be repeated for a maximum of six units.

**695. Directed Readings (1-3)**

Prerequisites: Consent of instructor. Readings on an individual basis. May be repeated for a maximum of six units.

**697. Directed Research (1-3)**

Prerequisite: Consent of instructor. Research on an individual basis.

**698. Thesis (1-4)**

Planning, preparation and completion of non-curricular work in history for the master's degree.

# UNIVERSITY HONORS PROGRAM

## *University Academic Programs*

Associate Vice President, Academic Affairs and  
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The University Honors Program exists to provide a selected group of qualified students with a unique educational experience. It unites the committed student and faculty member in a learning relationship in which each has the highest expectations of the other. The Program seeks to accomplish these goals in two ways: first, it broadens students' intellectual horizons by encouraging them to explore areas of thought not closely related to their major fields of study; and second, it allows students to work in their major fields in greater depth than would be possible in a conventional course pattern. The work of the first two years satisfies, in part, the University's General Education Requirements and is directed toward the first objective. The work of the Junior and Senior years, which includes independent study experiences and a senior thesis, is directed toward the second objective.

The University Honors Program is designed so that students will not only master a substantial amount of knowledge, but will also develop the capacity for balanced intellectual judgment and the powers of abstraction and conceptualization. Students will be immersed in the learning process and therefore must have both the ability and willingness to do intense and often self-directed intellectual work as well as a desire to make the most of the opportunities available in the University.

Students who successfully complete the requirements of the University Honors Program will receive a Certificate and an annotation on their transcript which mark the graduate as a person of intellectual accomplishment, one who has demonstrated a disciplined curiosity and dedication to the pursuit of knowledge.

Available within the University Honors Program are three alternatives designed to meet the varying needs of students.

1. General Honors;
2. Honors in the Major or in a Special (Interdisciplinary) Major;
3. A combination of the above for which both the course work prescribed for General Honors and the departmental requirements for Honors in the Major are successfully satisfied.

### *General Honors*

General Honors is a special approach to the General Education Requirements of the University which enhances and builds on them. It is a program of carefully selected courses and specially designed, multi-disciplinary seminars from which a student chooses a minimum of 30 units, most of which are applied toward the 51 units of General Education courses required for graduation of all students. Those courses designated for General Honors credit encourage student participation on an academic level not generally possible in the usual curricular offering.

### *Objectives*

- to provide highly motivated students an exceptional educational opportunity to challenge and expand their intellectual capacities, especially in terms of increased breadth and depth;
- to deepen the students' intellectual experiences by stimulating and guiding their own curiosity;

- to encourage freedom of initiative;
- to provide an academic and cultural environment that inspires creative activity through close working relationships with distinguished faculty;
- to advise students in their academic planning to meet the University's General Education requirements through a cohesive and unified program of study;
- to prepare students to write an Honors Thesis that is a genuine contribution to human knowledge, a preparation for advanced study, and a demonstration that the student has acquired the intellectual confidence and academic independence that are indicative of the maturely educated person.

### Admission Requirements

There are three ways a student may qualify for General Honors in the University Honors Program:

- **By invitation:** incoming students are invited to participate in General Honors on the basis of high school class standings, ACT composite score, and/or SAT scores. Normally, students should be in the upper ten percent of their high school classes, and have a composite ACT score of at least 24, and/or a SAT score of at least 1090, and a GPA of 3.3 or better. Students who meet the requirements for the Program must submit an application to the Director. However, if not all of these criteria are met, a combination of them may be evaluated in addition to a letter of recommendation and a personal interview with the Honors Program Director.
- **By university achievement:** Any student who maintains a 3.3 or better overall GPA at California State University, Long Beach in 12 or more units of coursework is eligible to participate in General Honors with a letter of recommendation from one of her/his instructors and a personal interview with the Honors Program Director. Students with a GPA of 3.3 or above in 12 or more units at California State University, Long Beach normally will be granted automatic acceptance into the Program upon application.
- **By petition:** Students not meeting the designated criteria may petition for admission to General Honors. Students are required to submit letters of recommendation from two instructors familiar with their work (or in the case of incoming freshmen, from two high school teachers of their senior year). These exceptional cases will be reviewed by the Director and the University Honors Council. Students are encouraged to petition if they have a good explanation for not meeting the basic requirements and/or a strong motivation to participate in the Program.

### General Information

Transfer students may enter General Honors in any of these three ways provided they have a minimum equivalent of a 3.3 average in all course work at the accredited institution from which they are transferring.

Qualified students may enter General Honors as late as the junior year. A waiver of some of the required Honors credits (not more than 6) may be granted by the Director and the University Honors Council.

A minimum overall GPA of 3.0 and of 3.3 in the major at graduation. Check with individual departments for special variations;

Students who have failed to enroll in courses for Honors credit for two consecutive semesters will normally be withdrawn from the program;

A University Honors student who withdraws from the University during any semester will also be withdrawn from the program. A student may apply for readmission at the beginning of any semester in which he/she plans to enroll.

## Certificate in General Honors in the University Honors Program

### Requirements

Every student electing General Honors in the University Honors Program must complete all university-wide graduation requirements, and the requirements for a major. General Honors is itself not a major. A student becomes a University Honors graduate by fulfilling the following specified requirements:

A student must be enrolled as a member of the University Honors Program for a minimum of four consecutive semesters and a minimum of 30 units taken specifically for Honors credit;

A student must maintain an overall GPA of 3.00 or better in Honors and in all University courses attempted;

Freshmen may earn not less than 2.85 their first semester, and must meet the 3.0 average by the end of their second semester to remain in the program;

Students will normally be withdrawn from General Honors who have failed to enroll in courses for Honors credit for two consecutive semesters;

A University Honors student who withdraws from the University during any semester will also be withdrawn from the program. The student may apply for readmission at the beginning of any semester in which he/she plans to enroll;

Students who attain a minimum GPA of 3.54 will graduate with "Distinction in the University Honors Program."

A University Honors student who chooses General Honors would normally complete a minimum of 30 units in the Program's offerings distributed as follows: USP 100 (Angles of Vision-3 units); USP 200 (Fireside Forum-1,1,1 units); USP 300 (Junior Colloquium-3); USP 496 (Undergraduate Research Participation-3 units) and USP 498 (Senior Thesis-3); and at least 15 additional units chosen from the Program's course offerings as listed in the Schedule of Classes each semester under "University Honors Program."

### Honors in the Major

A few departments at California State University, Long Beach offer Honors programs for outstanding majors. These programs are designed for students admitted to the University Honors Program who have indicated a particular desire to pursue Honors in the Major.

In consultation with a Departmental Honors Faculty Advisor, a University Scholar can plan an enriched course of study in an academic major. This opportunity for program flexibility makes it possible for a University Scholar to elect the most relevant, exciting and enriched experiences offered by the department. Although students will construct programs which satisfy standard requirements for the major, they also may choose alternative courses especially suited to their interests, needs and abilities. Such flexibility is as valuable to professional and pre-professional students as it is to those primarily interested in a liberal arts degree.

Program styles and requirements may vary; usually they entail independent study, seminar courses, high levels of performance, senior projects or theses culminating in a broad knowledge of subject matter. Information concerning Honors in the Major is available in the University Honors Program Office and in participating departmental offices.

### Admission Requirements

Please contact the department office or the University Honors Program Office for information regarding admission. Normally, a student must be a declared major with at least sophomore (30 units) standing.

### Requirements

1. Completion of the requirements for the major. (The approval of the department chair and the Departmental Faculty Honors Advisor must be obtained to change any of the general major requirements);
2. Completion of 15 hours of courses in the major for which Honors credit has been designated, including: 12 units which may include 3 units of Honors Research participation or 3 units of Honors independent study; and 3 units of work for an Honors Project or Thesis or its equivalent;

### Interdisciplinary Honors Majors

This alternative within Honors in the Major is open to students who have been admitted to full-time status in the University Honors Program before their junior year. A course sequence leading to a major not routinely offered in the University may be arranged through the Interdisciplinary Studies Program. In some cases the student may design an interdisciplinary combination of courses to define a major area which could be unified by a chronological, geographical, or thematic rationale, or any other logical, pedagogically sound, and cohesive program of study.

A proposal for an Interdisciplinary Honors Major should give careful consideration to adequate coverage of the modes of inquiry, methods, theoretical perspectives, research, and literature, etc., from the disciplines within which the interdisciplinary theme is broadly cast. The interdisciplinary major is not a mechanism to achieve a double major.

After consultation with the Interdisciplinary Studies Advisor and faculty willing to sponsor an Interdisciplinary Honors program, interested students should submit a written proposal to the Honors Program Director at least two months before the pre-registration period for the second semester of the junior year. This will ensure that all proposals will be acted on in time for pre-registration. The proposal must contain the following five items:

1. Title of the Interdisciplinary Honors Major;
2. A two- or three-page statement which includes:
  - A. a definition of intended major and explanation of how it brings together the resources of two or more departments into a unified course of study;
  - B. explanation for the validity of the proposed major;
  - C. description of the kind of synthesizing senior project under consideration;
  - D. description of possible future plans once the major is completed.
3. A tentative list of all courses planned for completion of the major;

4. A copy of all University transcripts;
5. Statements signed by advisors from two different departments in which they state that they have read and approved the Interdisciplinary Studies proposal. Final approval of an Interdisciplinary Honors major resides with the University Honors Program director and University Honors Council.

### Graduation Requirements

The General Education Requirements for the Interdisciplinary Honors Major are the same as for the other major programs; however, in satisfying General Education Requirements, the student should, whenever possible, choose those courses that are most appropriate as background for the courses in the major concentration. The GPA and other requirements for the Interdisciplinary Honors Major are the same as those for "Honors in the Major."

### Combination General Honors and Honors in the Major

Students who qualify for General Honors and who enjoy the challenge of attending classes with other highly qualified and motivated students may wish to continue this unique experience into their work in the major field by applying for admission to Honors in the Major.

### Courses (UHP)

#### 100. Angles of Vision — Honors (3)

This course emphasizes the kind of analytical and critical approaches that lead to original and creative thinking. The course concentrates on the development of seminar skills: the open exchange of viewpoints in discussion, close reading of major texts, preparation of analytical essays and oral presentations, extensive examination of explicit models and techniques of reasoning, conceptualization of research problems, and writing a documented paper. This course will be taught by at least two instructors from two separate disciplines. The course will confer credit in GE Category A.3. Required of all USP students.

#### 200. Fireside Forum — Honors (1)

Students must take this course for a total of 3 units consecutively during the first three semesters in the Program. Students meet with guests who lecture and lead discussion on topics of special interest. The course will confer credit in GE Category E.

#### 300. Junior Colloquium — Honors (3)

Studies of selected interdisciplinary topics, problems or issues with a view toward integration of the areas of study involved in lower-division courses.

#### 496. Research Participation — Honors (3)

Prerequisite: Permission of the Director of the Program and the supervising faculty member. Students assist faculty in the conduct of research projects, participating in the development of experimental design and the accumulation and verification of evidence.

#### 497. Directed Studies — Honors (3)

Prerequisite: Permission of the Director of the Program and the supervising faculty member. Independent study under the supervision of a faculty member.

#### 498. Senior Thesis — Honors (3)

Prerequisite: Permission of the Director of the Program. Presentation of a thesis proposal to the USP Governing Committee and, upon approval, writing and presentation of the thesis.

### Other

Special honors sections of regular GE courses in various departments as listed under "University Honors Program" to be found in the current Schedule of Classes.

# HEALTH SCIENCE

*College of Health and Human Services*

## Department Chair

Robert H. Friis

## Department Office

Health Science (AS 2), Room 115

## Telephone

(562) 985-4057

## Faculty

### Professors

Dale W. Evans

Connie J. Evashwick

Gail Farmer

Mohammed R. Forouzesh

Robert H. Friis

Sarath Gunatilake

Alan Henderson

### Assistant Professors

Veronica Acosta-Deprez

Britt K. Rios-Ellis

### Director, Community Health Education

Britt K. Rios-Ellis

### Liaison, CSULB/VA Joint Studies Institute

Robert H. Friis

### Director, Graduate Studies

Mohammed R. Forouzesh

### Director, Undergraduate Studies

Sally Champlin

### Director, Radiation Therapy

Stephanie Eatmon

### Advisor, Single Subject Credential

Dale W. Evans

### Office Manager

Sharon Jean

The Department offers undergraduate and graduate study in Health Education, and an undergraduate option in Radiation Therapy. For program information, students should contact the department office for referral to one of the faculty advisors: Director of Undergraduate Studies, Director of Radiation Therapy, Director of Graduate Studies or Single Subject Credential Advisor.

All Health Science majors and minors are responsible for requirements specified in the University Catalog. Students should meet periodically with either the Director of Undergraduate Studies, the Director of Radiation Therapy, or the Director of Graduate Studies. Faculty advisors will discuss and review the student's academic program, program requirements and monitor academic progress. Students also have the responsibility of keeping track of unit totals required for graduation and insuring that these requirements are met.

### *Program in Health Education*

Health education programs help participants enhance health, prevent disease and disability, as well as help improve the well-being of people in organizations, schools, businesses, and communities. The program focuses on environmental influences, which include the cultural and societal context in which health behavior occurs; is also emphasizes processes for developing and changing individual attitudes and behaviors toward health.

The focus of health education is on planned change. Individuals are encouraged to take responsibility for their own health and to assume responsibility for the health of their families and communities.

Our society continues to change and health problems are redefined. Future health advances will not only come from new technology, but also as the result of community, group, and individual actions. These will impact education, lifestyle, environment, and the organization and delivery of health services.

Brochures describing each of the programs are available at the Health Science Department office.

Courses are designed to satisfy Health Science requirements for:

1. general education,
2. the baccalaureate degree major,
3. Single Subject Credential in Health Science,
4. Master of Science Degree with a Major in Health Science,
5. Master of Public Health Degree in Community Health Education.
6. Master of Science in Nursing/Master in Public Health

### Bachelor of Science in Health Science

The basic University requirements for graduation with a B.S. Degree in Health Science consist of:

1. completion of general education requirements,
2. completion of all courses identified on the Program Planner for the Option selected, with no grade lower than a "C" for each listed course or approved substitute,

3. completion of a minimum of 124 units, at least 40 units of which must be upper division. Upper division courses are numbered 300 to 499.

### Major Core Requirements

All Health Science majors must complete the required core. The core of the Health Science program contains five areas of competencies: Statistics, Program Development, Professionalism, Health Services Organization and Health Promotion. All majors must complete at least one course from each competency area. Courses must be selected in consultation with an advisor.

### Requirements

Required Core: 15 units.

1. Statistics: H SC 403 or ED P 419
2. Program Development: H SC 430 or 460
3. Professionalism: H SC 301 or 451
4. Health Services Organization: H SC 401, 420I or 450
5. Health Promotion: H SC 435

### Option in Radiation Therapy

The Radiation Therapy Option is designed for those individuals who wish to pursue a professional preparation program leading to membership in the health care team using ionizing radiation in the treatment of malignant disease. The program is competency based and integrates didactic courses and clinical experience to prepare entry level radiation therapists to become integral partners in the health care team and contributing members of the profession. On a daily basis, the registered radiation therapist is involved in:

1. Operating sophisticated radiotherapeutic equipment to deliver prescribed doses of ionizing radiation for treatment of malignant disease.
2. Providing psychological and emotional support to patients who are dealing with the stress of their illness.
3. Observing patients' progress and recognizing medical problems which require a physician's attention.
4. Assisting with the planning of patient treatments through the use of simulation and computer assisted computations.
5. Constructing devices to aid in treatment positioning, beam modification, and treatment planning.

Successful completion of Option requirements qualifies the student to sit for the examinations for licensure at the state and national levels to practice as a registered radiation therapist.

This program is accredited by the Joint Review Committee on Education in Radiologic Technology (Joint Review Committee on Education in Radiologic Technology, 20 N. Wacker Drive, Suite 900, Chicago, IL 60606-2901, phone: 312-704-5300) as well as the State of California, Department of Health Services, Radiologic Health Branch.

### Pre-Radiation Therapy (code 3-1210)

#### Preprofessional

Because the Radiation Therapy Option is an impacted program, the student completes all of the general education requirements of the University as well as the following prerequisite courses: ANTH 150, A/P 202, 207, PHYS 100A,B, MATH 112, PSY 100, ENGL 200, BIOL 200, C/ST 200, H SC 200. Department core courses H SC 403 and 435 may be tak-

en during the preprofessional component. Several option prerequisite courses also fulfill GE requirements. In addition to course requirements, the student must complete the following prior to applying to the Option:

1. Complete a 40 hour observation in a radiation therapy department;
2. Successfully complete the Writing Proficiency Exam; and
3. Schedule an appointment for consultation with the Radiation Therapy Career Advisement Committee the semester before entry into the professional preparation program.

### Option in Radiation Therapy (code 3-1212) (124 units)

In addition to course requirements, the student must complete the following prior to applying to the Option: 1) complete a 40 hour observation in a radiation therapy department, 2) successfully complete the Writing Proficiency Exam, and 3) schedule an appointment for consultation with the Radiation Therapy Career Advisement Committee the semester before entry into the professional preparation program.

#### Professional

The professional component is designed so that students enter in the spring semester each year and in a step-wise manner complete the remaining didactic and clinical courses. In order to complete the professional preparation component of the Option, students must fulfill the following requirements:

1. Obtain personal malpractice insurance.
2. Maintain full-time student status during the professional program.
3. Complete required summer session clinical and didactic courses.
4. Complete all of the following courses in sequence with a grade of "C" or better: H SC 150, 320, 321, 330, 340, 403, 415, 429, 435, 445A, 445B, 450, 451, 460, 470A, 470B, 475, 475L, 480, 492A, 492B. H SC 492 must be taken each semester and summer session the student is enrolled in the program.

### Option in Community Health Education (code 3-1213) (124 units)

The Community Health Education option is designed for persons whose occupational objective is to serve as a community health educator with an official, voluntary or corporate health agency.

Lower Division: A/P 107, BIOL 200, and either CHEM 100 or 111A; MICR 101; Spanish (3 units) or language equivalent approved by Department advisor.

Upper Division: H SC 301, 400, 401, 402, 403, 405, 421, 430, 435, 440, 485; Three courses selected from the following: H SC 420I, 422, 423, 425I, 427, 429, 490, 499; one course selected from the following: FCS 232 or 430; one course selected from the following: PSY 351 or SOC 335I; one course selected from the following: SOC 320, 336, 445, 462, 464; and one course selected from the following: COMM 332, 334, 335.

## Option in School Health Education (code 3-1215) (124 units)

School Health option is designed for persons who desire to pursue a professional preparation program leading to qualification as a health education teacher in the secondary schools.

A teacher credential requires the completion of the Option in School Health Education and additional courses in the College of Education, Single Subject Teacher Education program. EDSS 300D is the prerequisite to begin the Single Subject sequence.

Lower Division: A/P 107 or 342; BIOL 200; CHEM 100 or 111A; MICR 100 or BIOL 350; MICR 101; PSY 100; Spanish (3 units) or language equivalent approved by department advisor.

Upper Division: H SC 301, 401, 403, 405, 421, 422, 423, 425I, 427, 430, 435, 440; FCS 232 or 430; PSY 351 or SOC 335I; COMM 332 or 335; SOC 336.

## Option in Health Care (code 3-1216) (124 units)

The Option in Health Care is designed for those individuals who have received certification and/or license from an approved allied health/health care program and desire a Bachelor of Science degree. The focus of this option is the development of professional skills for people whose goal is: (a) providing service, or (b) instructing in the health care setting.

### Requirements for Admission to Health Care Option

Once admitted to the University, students are required to complete the following prior to acceptance into the Health Care Option:

1. Obtain certification and/or license from an allied health/health care program from an institution that has been accredited by either a Committee on Post-secondary Accreditation (COPA) approved accreditation agency or the Committee on Allied Health Education and Accreditation (CAHEA). Those individuals who do not have appropriate certification will be counseled by the Department of Health Science regarding where to obtain an appropriate accredited program, and, when possible, concurrent enrollment may be utilized;
2. Earn a minimum GPA of 2.0.

Lower Division: Completion of general education requirements. to include: ENGL 100; one of the following: ANTH 120, SOC 100 or PSY 100; and a minimum of 12 units in Natural Sciences approved by department advisor equivalent to: A/P 107, BIOL 200, and either CHEM 100 or 111A, MICR 101.

Upper Division: (39 units): Required Core: 15 units (one course from each area); courses must be selected in consultation with an option advisor:

1. Statistics: H SC 403, ED P 419;
2. Program Development: H SC 430, 460;
3. Professionalism: H SC 301, 451;
4. Health Organization: H SC 401, 420I, 450;
5. Health Promotion: H SC 435;

Additional Coursework: HCA 411, H SC 452; one of the following: ANTH 353, FCS 430, H SC 400, or SOC 462; one of the following: C/ST 200, or ECON 300; An emphasis in either (a) Providing Service (12 units): HCA 410, 465, ED P 434 or NRSRG 202, 202L, and one of the following: ANTH 319, GERN 482, NRSRG 253, or NRSRG 482; or (b) Instructing in Health Care Setting (12 units): POSC 331, H SC 492AB, and one of the following ED P 434, EDST 300, 301, NRSRG 202, 202L.

## Minor in Health Science (code 0-1211)

Twenty-four units as follows: H SC 301, 401, 430, 435, 440, and three courses from: H SC 400, 409, 420I, 421, 422, 423, 425I, 427.

## Single Subject Credential in School Health

The Single Subject Credential in School Health prepares one to teach at the secondary level. Requirements include a Bachelor of Science degree in Health Science (School Health option) plus the required professional education courses. See the Health Single Subject Credential Advisor.

## Graduate Program in Health Education

Accredited by the Council on Education for Public Health (Council on Education for Public Health, 1015 Fifteenth Street, NW, Washington, DC 20005, phone: 202-789-1050).

## Master of Science in Health Science (code 6-1211)

The Master of Science program is designed to provide students with

1. intensive study of health education concepts, theories, and processes;
2. introduction of public health concepts and issues;
3. research methodology appropriate to the in-depth examination a health topic.

The graduate student is also prepared for a leadership role in a school or community setting and for admission to doctoral programs at other colleges and universities. Graduate students in need of counseling should contact the Director of Graduate Studies.

### Admission Requirements

1. Each applicant must request a copy of official transcript(s) of all work be sent to the Graduate Director in the Health Science Department in addition to the copies required by the Office of Enrollment Services.
2. A bachelor's degree with a major in health education which articulates with the course requirements for the same degree at California State University, Long Beach; or a bachelor's degree in a related discipline with a minimum of 21 units of upper division course work comparable to those required of the Health Science major at the University; or a bachelor's degree in a related discipline and willingness to make up any deficiencies in prerequisite Health Science courses. Prerequisites for all courses carrying graduate credit must have been completed within seven years of taking the graduate courses. If any prerequisite is outdated, it may be repeated or credit obtained by (1) written examination on the subject matter or (2) providing documented evidence of currency in the subject area.



3. An overall undergraduate GPA of at least 3.0. Students with less than a 3.0 GPA on the last 60 units of undergraduate units attempted, but who show promise in all other aspects, may be given special consideration after petitioning for conditional admission into the program through the Director of Graduate Studies.
4. Acceptance by the University as a student with graduate standing.
5. A maximum of 9 units of approved graduate work at the post-baccalaureate level may be credited to a student's program requirements upon Departmental acceptance to the graduate program.
6. Submission of the CSU graduate application to the Department and analytic, quantitative and verbal scores from the Graduate Record Examination (GRE).
7. Three letters of recommendation from persons with whom the candidate has worked and who have direct knowledge of the applicant's qualifications and potential as a community health educator.
8. A separate personal statement of your reason for pursuing this field of study and comments about your interests and experience that are germane to your career objectives and submit a personal resume reflecting the applicant's education and relevant experience.

#### Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy:
  - A. pass the Writing Proficiency Exam;
  - B. maintain at least a 3.0 average for all course work attempted as a graduate student;
  - C. complete H SC 500, 503, and 570;
2. Approval by the Director of Graduate Studies and the Associate Dean of Academic Programs of the College of Health and Human Services.

#### Requirements for Completion of the Master of Science Degree

1. A minimum of 43 units of approved upper division and graduate courses including:
  - A. 21 units of Health Science courses which include HCA 502, H SC 500, 503, 570, 581, 696;
  - B. 18 units of electives in a specialty field;
  - C. 4 units of H SC 698;
2. A thesis with an oral exam.

#### Master of Public Health

##### Option in Community Health Education (code 7-1213)

The Master of Public Health in Community Health provides the opportunity for students to specialize in community health education and health promotion within the general context of Public Health, to increase competence in designing, implementing, and evaluating behavior change programs in preparation for serving in various health agencies, prepare for teaching at college and university levels and for administrative positions in public and private health agencies.

#### Admission Requirements

1. Each applicant must request that a copy of official transcript(s) of all work be sent to the Director of Graduate Studies (in addition to the copies required by the Office of Enrollment Services).
2. A bachelor's degree with a major in health education which articulates with the course requirements for the same degree at California State University, Long Beach; or a bachelor's degree in a related discipline with a minimum of 21 units of upper division course work comparable to those required of the Health Science major at the University; or a bachelor's degree in a related discipline and willingness to make up any deficiencies in prerequisite Health Science courses. Prerequisites for all courses carrying graduate credit must have been completed within seven years of taking the graduate courses. If any prerequisite is outdated, it may be repeated or credit obtained by (1) written examination on the subject matter or (2) providing documented evidence of currency in the subject area.
3. An overall undergraduate GPA of at least 3.0. Students with less than a 3.0 GPA on the last 60 units of undergraduate units attempted, but who show promise in all other aspects, may be given special consideration after petitioning for conditional admission into the program through the Director of Graduate Studies.
4. Acceptance by the University as a student with graduate standing.
5. A maximum of 9 units of graduate work at the post-baccalaureate level may be credited to a student's program requirements upon Departmental acceptance to the graduate program.
6. Submission of the CSU graduate application to the Department and quantitative and verbal scores from the Graduate Record Examination (GRE).
7. Three letters of recommendation from persons with whom the applicant has worked who have direct knowledge of the applicant's professional and academic potential as a health educator.
8. A separate personal statement of your reason for pursuing this field of study and comments about your interests and experience that are germane to your career objectives and submit a personal resume reflecting the applicant's education and relevant experience.
9. At least one year's full-time (or equivalent) paid or volunteer experience in Health Education or a closely related health role. Preference will be given to those with greater experience and ability.

#### Advancement to Candidacy

1. Satisfy the general university requirements for advancement to candidacy:
  - A. pass the Writing Proficiency Examination;
  - B. maintain at least a 3.0 average for all course work attempted as a graduate student;
  - C. complete H SC 500, 503, and 570;
2. Approval by the Director of Graduate Studies and Associate Dean for Academic Programs of the College of Health and Human Services.

## Requirements

1. A minimum of 42 units of approved upper division and graduate-level courses including:
  - A. core: HCA 502, H SC 500 -or- MICR 429, H SC 503 -or- BIOL 565 (4), 508, 528, 570, 581, 624, 625, 626, 696;
  - B. Electives at the 500/600 level;
  - C. H SC 585, a supervised internship experience (1-6 units)
2. A comprehensive written examination (see Department for guidelines).

## Masters of Science in Nursing/Masters in Public Health (code 7-1074)

Masters of Science in Nursing/Masters in Public Health The Departments of Nursing and Health Science offer a concurrent Master of Science and Master of Public Health degree available to qualified students who desire advanced preparation in the area of public health nursing with a practice focus of primary prevention, illness prevention, and health promotion. The concurrent program leading to both degrees represents the core accreditation requirements of each degree. Course-work is integrated between the two Departments in each semester in order to provide an intense learning experience.

The philosophy of graduate nurse education is that the practice of nursing is constantly changing as health needs and health delivery systems are altered. Integral to nursing is an ability to work effectively and cooperatively with other disciplines and community services to promote health. The Master of Science and Master of Public Health (Health Education Option) provides the opportunity for students to specialize in advanced practice public health nursing within the general context of the Masters of Public Health, to increase competence in designing, implementing, and evaluating behavior change programs in preparation for serving in various health agencies. The focal point in this curriculum is the Nursing Process, Epidemiological Process Model, and Population Based Theory complemented by behavioral science concepts. Courses are interdependent and have been structured to provide clinical depth in the area of advanced practice public health nursing.

Each applicant should request a copy of official transcript of all college course work be sent to the Department Graduate Advisor of Nursing in addition to the copies required by the Office of Admissions and Records.

### Admission Requirements

1. Bachelors degree in nursing or currently enrolled in accelerated RN to Masters program. Those nurses with Baccalaureate degrees in health related fields may be conditionally admitted.
2. Current license to practice as a registered nurse in California.
3. Admission to graduate standing at the University.
4. An upper division or graduate course in biostatistics (HSC 403 or Ed. Stat 419) and an ethics course (HSC 451).
5. Public Health Nurse Certificate, or eligibility for certificate in California.
6. An overall GPA of 3.0 or better; an upper division nursing GPA of 3.0 or better and a science GPA of 3.0 or better.

Students who fall below these averages will be evaluated on an individual basis.

7. Submission of quantitative and verbal scores from the Graduate Record Examination (GRE).
8. Three letters of recommendation from persons with whom the applicant has worked and who has direct knowledge of the applicant's qualifications.
9. A separate personal statement of applicant's reasons for pursuing this field of study and comments about interests and experiences which are germane to career objectives.
10. Current professional resume describing the applicant's relevant experience.

### Advancement to Candidacy

A joint committee, consisting of Nursing and Health Science faculty involved in the program, will review files and make determination to advance candidate to graduate status.

### Student Criteria for Advancement

1. Satisfy the general University requirements for advancement to candidacy in Nursing and Health Science.
  - A. pass Writing Proficiency Examination
  - B. have at least a 3.0 grade point average for all course work attempted as a graduate student
2. Joint approval by the Department of Nursing and Health Science, and the Associate Dean for Academic Programs of the College of Health and Human Services.

### Requirements

1. A minimum of 57 units of approved Nursing and Health Science upper division and graduate level courses including:  
HSC 500 or MICR 429; HSC 503 or BIOL 565; HSC 508, 528, 535, 570, 581, 624, 625; NRSNG 660A, 660B, 680A, 680B, 680C; NRSNG 680AL, 680BL, 680CL or HSC 626 (in lieu of one 3 unit 680L); NURS 696 or HSC 696; NURS 695 or HSC 697 or NURS 698
2. An overall GPA of 3.0 or better in all courses
3. Comprehensive written examination or directed project or a thesis
4. Graduate degrees obtained previously will be accepted toward meeting the unit requirements of the concurrent MSN/MPH degree program
5. If a student after entering the concurrent MSN/MPH program returns to a single degree program, all requirements for the single degree program must be met
6. Transfer units will not be accepted toward the concurrent MSN/MPH program.

## Courses (H SC)

### Lower Division

150. Medical Terminology (1)  
Development of a medical vocabulary emphasizing the building of terms utilizing prefixes, combining forms and suffixes. Includes symptomatic, therapeutic, diagnostic and operative terms for application in the interpretation of medical records as needed in Radiation Therapy. (Lecture-discussion 1 hour.) Traditional grading only.

200. Orientation to Radiation Therapy (3)  
Orientation to the Option in Radiation Therapy, professional organizations, career opportunities, department structure, patient management, record keeping, and professional ethics. An overview of the role of radiation therapy in the treatment of cancer and the Radiation Therapist in the field of Radiology. 40 hours of clinical fieldwork required. Traditional grading only.

210. Contemporary Health Problems (3)  
Development of modern health knowledge, attitudes and behavior; includes family life-sex education, drug use and abuse, mental health, medical quackery and health frauds, common diseases such as sexually transmitted diseases, heart disease and cancer.

## Upper Division

301. Orientation to Health Science (3)  
Overview of the philosophy of the Health Science Dept. Orientation to the degree requirements, career opportunities, and the theoretical and practical issues of health education as a profession. Must be taken prior to H SC 401 and 430.

305. Computer Methods for Health & Human Services (3)  
Prerequisite: Upper division standing. Overview of sources and uses of administrative, program evaluation and research data. Introduction to the logic and application of computer functions through experience analyzing data from specific sources (e.g., school and community health, health services). Variety of application software utilized. Traditional grading only. (Lecture 2 hours, Laboratory 3 hours.)

320. Radiologic Techniques and Imaging Modalities (3)  
Prerequisites: Admission to Radiation Therapy Option Professional Preparation or consent of instructor. Introduction to radiographic procedures, equipment, technique development, equipment maintenance as well as darkroom equipment, operation and film processing. An examination of the various modalities of radiologic diagnostic imaging. (Lecture-discussion 2 hrs, Lab 1 hr). Traditional grading only.

321. Introduction to Radiographic Physics and Protection (3)  
Prerequisites: PHYS 100A,B, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. A study of the fundamentals of radiation and radiologic physics, principles of radiation protection, radiologic physics instrumentation and control regulations. Traditional grading only.

330. Topographic Anatomy (2)  
Prerequisites: A/P 202, 207, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. Examination of external anatomic landmarks in relation to internal anatomy with emphasis on the effects of positioning on external landmarks, internal anatomic critical structures, and methods of avoiding or lowering radiation dose to these structures. Interpretation of port films and other diagnostic films is included. (Lecture-discussion 2 hr). Traditional grading only.

340. Clinical Radiation Therapy (3)  
Prerequisites: H SC 200, 320, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. Rationale of radiation therapy treatments; construction of immobilization devices, contours, bolus, and positioning aids. Examination of simulation procedures, contrast media, film, treatment positioning, beam modifiers, patient monitoring, and radiotherapeutic machine operation. (Lec-discussion 2 hrs, Lab 2 hrs.) Traditional grading only.

400./500. Principles of Epidemiology (3)  
Prerequisites: H SC 301 and 403. Application of epidemiologic procedures to the understanding of the occurrence and control of infectious and chronic diseases, mental illness, environmental health hazards, accidents, and geriatric problems. (Lecture 3 hours)

\*401. Community Health Education (3)  
Prerequisite: H SC 301 and H SC 430. Concepts of community health education with emphasis on community organization; application of these concepts to health education activities of official, voluntary and professional health agencies.

\*402. Applied Concepts of Community Health Education (3)  
Prerequisites: H SC 301, 430, 435. Identification and application of concepts unique to community health education; includes examination of theoretical foundations, marketing and promotion techniques, and application of health education strategies.

\*403. Community Health Statistics (3)  
Prerequisites: SOC 250 or PSY 210 or equivalent. Analysis and interpretation of quantitative public health data using interactive computers. Statistical tools include analysis of variance, analysis of covariance, multiple regression, discriminate function analysis, and logistic regression. (Lecture 2 hours, Laboratory 2 hours.)

405. Health Education Program Evaluation and Measurement (3)  
Prerequisite: H SC 403 or equivalent. Design, use of standardized measurements, data collection, analysis, and reporting are used to develop evaluation skills to facilitate program management. Impact of activities aimed at producing behavior change in communities, organizations, groups and individuals will be examined. (Discussion 3 hrs)

411A. Health Science for Elementary Teachers (3)  
Prerequisite: Upper division standing. Co-requisite: Current CPR Certification required. Contemporary teaching of health education in elementary schools; emphasizes drug use and abuse, human sexuality, community and human ecology (meets state credential requirement for health education). Not open to Health Science majors or minors.

411B. Health Science for Secondary Teachers (3)  
Prerequisite: Upper division standing. Co-requisite: Current CPR Certification required. Contemporary teaching of health education in secondary schools; emphasizes drug use and abuse, human sexuality, community and human ecology (meets state credential requirement for health education). Not open to Health Science majors or minors.

415. Radiation Biology (2)  
Prerequisites: A/P 207, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. An examination of: the effects of radiation at the cellular, tissue and organ levels; the cell survival curve, Linear Energy Transfer, (LET), Radiobiological Effectiveness, (RBE), radiation sensitizers and protectors; the effects of whole body acute radiation as well as the developing embryo; the radiobiological basis for radiation therapy treatments and fractionation. (Lecture-discussion 2 hours.) Traditional grading only.

420I. International Health (3)  
Prerequisites: ENGL 100 and upper division status. Analysis of current health problems in the world; examination of contributing social, psychological, physical, legal and cultural factors; international programs for the improvement of world health; structure and functions of world health agencies and organizations.

421. Health Behavior (3)  
A survey of contemporary research on the health effects of human behavior. Special emphasis is given to current issues of health behavior, decision-making in contemporary society, values clarification and contemporary theories of behavior change (e.g., health belief model).

422. Environmental Health (3)  
An examination of the reciprocal relationship existing between man and his environment, with the emphasis directed toward the health related consequences of man's actions in the environment.

423. Consumer Health (3)  
Effective selection of health information, products and services; medical quackery and fraudulent health practices; laws and agencies protecting the consumer; health care delivery systems; and influences of corporate control on the consumer movement in contemporary society.

424./524. Principles of Asian Health Sciences (3)  
Prerequisite: Upper division standing. Presents the philosophical, historical, clinical and scholarly qualities of Asian health sciences to promote health, prevent disease and treat illness. Comparisons are made with selected Asian and western health care systems and individual health practices. Traditional grading only. Same course as A/ST 424./524. (Discussion, 3 hours)

**425I. Human Sexuality and Sex Education (3)**

Prerequisites: ENGL 100 and upper division status. Recommended: PSY 100. Biomedical, sociological, and psychological aspects of human sexuality, the communication of sexual information, the implementation, content and evaluation of family life and sex education in the schools.

**427. Drugs and Health (3)**

Prerequisite: Upper division standing. Study of psychoactive drugs with primary attention to alcohol, nicotine, caffeine, cannabis, hallucinogens, narcotics and other drugs; examination of trends, philosophical issues and behavioral practices associated with drug use and dependence. Includes physiological psychosocial, legal, historical, philosophical and political aspects; treatment-rehabilitation activities and programs; and drug abuse prevention education. Not open to students with credit in H SC 327.

**429. Stress Reduction (3)**

Recognition of stress and its causes. Physical and mental symptoms of stress. Influences which reduce or create stress; methods of coping.

**\*430. School Health Program (3)**

Prerequisite: H SC 301. Intensive analysis of the philosophy, organization and legal aspects of the school health program. Includes school and community coordination for a team approach to health education for the school age individual.

**435./535. Health Promotion and Risk Reduction (3)**

Prerequisites: H SC 421 or consent of instructor. Health promotion/risk reduction program content, development and implementation for use in corporate, hospital and public settings. Intended primarily for Health Science majors. (Discussion 3 hours)

**\*440. Applied Concepts of Health Science (4)**

Prerequisite: Health Science 430. Identification and application of the concepts and modes of inquiry unique to the discipline of health science; development of appropriate curriculum based upon an analysis of individual, school and community needs and interests. (Lecture 3 hours; laboratory 3 hours.) Traditional grading only.

**445A. Oncologic Pathology I (3)**

Prerequisites: A/P 202, 207, H SC 150, Admission to Radiation Therapy Professional Preparation or consent of instructor. Examination of oncologic pathology with emphasis on malignant neoplasia; specific attention is given to epidemiology, etiology, detection, diagnosis, staging, histopathology, metastatic pattern, treatment options and principles of radiation therapy treatments. Examines cancers of the head and neck, lung, breast, gastrointestinal tract, kidney, and bladder. (Lecture-discussion 3 hours.) Traditional grading only.

**445B. Oncologic Pathology II (3)**

Prerequisites: H SC 445A, Admission the Radiation Therapy Option Professional Preparation or consent of instructor. Continuation of 445A with specific attention given to cancers of the reproductive system, central nervous system, eye, skin, endocrine and major digestive glands, bone, soft tissue, blood, lymphatic system and pediatric solid tumors. (Lecture-discussion 3 hours.) Traditional grading only.

**\*450. The Health Care Professional in the United States (3)** Identification of the role and function of the health care professional; legal aspects of health care delivery; factors influencing the quality of health care, problems from consumers' viewpoints; cultural influences; governmental involvement and current issues in health care; examination of health care in the United States.

**\*451. Ethics Professionalism in Health Care (3)**

Examination of professionalism and bioethics, and the process of making moral decisions; ethical issues; professional oaths and codes of ethics; health care ethics and the law.

**\*460. Health Care Program Development (3)**

Examination of the process of health care, program development, identification of contemporary health care philosophy, needs, legal aspects, objectives and community involvement as related to program development; process of conducting a needs assessment; factors affecting development; regionalization; grantsmanship.

**470A. Clinical Radiation Physics I (3)**

Prerequisites: PHYS 100A,B, H SC 321, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. Nature and description of the structure of matter and energy; interactions of photons and gamma radiation; instrumentation and measurement of ionizing radiation, beam quality, and dose; percentage depth dose, tissue air ratios, treatment dose calculations. (Lecture-discussion 2 hours, Laboratory 2 hours.) Traditional grading only.

**470B. Clinical Radiation Physics II (3)**

Prerequisites: H SC 470A, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. A continuation of H SC 470A with emphasis on electron beam characteristics and use in radiation therapy, brachytherapy, radioactive sources, implantation methods and dosimetry. An overview of hyperthermia, particle radiation and radiation protection. (Lecture-discussion 2 hours, Laboratory 2 hours.) Traditional grading only.

**475. Treatment Planning – Dosimetry (2)**

Prerequisites: H SC 470A,B, Concurrent enrollment in H SC 475L, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. Examines the effects of treatment distance, field weighting, beam modifiers, irregular fields, tissue inhomogeneities and tissue compensation on dose. Dose calculations for external photon and electron beams. (Lecture-discussion 2 hours.) Traditional grading only.

**475L. Treatment Planning – Dosimetry Laboratory (1)**

Prerequisites: Concurrent enrollment in H SC 475, Admission to Radiation Therapy Option Professional Preparation or consent of instructor. Practical experience with clinical situations in regards to calculation of treatment time/monitor units, gapping, irregular fields, rotational and arc treatments. Use of isodose curves for hand dose summations and treatment planning computer for complex field arrangements. (Laboratory 3 hours.) Traditional grading only.

**480. Advanced Radiation Therapy (2)**

Prerequisites: Must be in final semester of Radiation Therapy Option Professional Preparation. Synthesis of previous didactic and clinical information; an in depth examination of current and future professional issues, technological advances and ethics; a look at professional preparation, organizations and continuing education. (Lecture-discussion 2 hours.) Traditional grading only.

**\*485. Internship in Health Education (3)**

Prerequisites: H SC 401 and consent of instructor. Supervised observation and field experience in community health education as conducted by official, voluntary and professional health organizations.

**490. Independent Studies in Health Science (1-3)**

Prerequisite: Consent of instructor. Students will conduct independent library or laboratory research under the supervision of a faculty member and write a report of the investigation. May be repeated for a maximum of six units.

**492A. Internship in Health Care (1-6)**

Prerequisites: Consent of instructor. Supervised observation and field experience in community health and medical facilities. Student responsible for successful completion of clinical objectives applicable to area of observation. Traditional grading only. Course may be repeated for a maximum of six units.

**492B. Internship in Health Care (1-9)**

Prerequisites: Consent of instructor. Supervised observation and field experience in community health and medical facilities. Student responsible for successful completion of clinical objectives applicable to area of observation. Traditional grading only. Course may be repeated for a maximum of nine units.

**\*499. Special Studies (1-3)**

Group investigation of selected topics. Topics to be announced in the Schedule of Classes. May be repeated for credit to a maximum of 9 units with change of topic.

## Graduate Division

### 500./400. Principles of Epidemiology (3)

Prerequisites: H SC 301 and H SC 403. Application of epidemiologic procedures to the understanding of the occurrence and control of infectious and chronic diseases, mental illness, environmental health hazards, accidents, and geriatric problems. (Lecture 3 hours.)

### 503. Advanced Community Health Statistics (3)

Prerequisite: H SC 403 or equivalent. Analysis and interpretation of quantitative health education/public health data. Topics include expanded discussion of parametric techniques (e.g., hypothesis testing, confidence interval estimation, power functions, small sample sizes). Other topics include multivariate analyses, non-parametric tests, regression analysis. Use of computers required. Traditional grading only. (Discussion, 3 hours.)

### 508. Administrative Relationships in Health Education Programs (3)

Prerequisite: Undergraduate major in Health Science or related field. Introduction to administrative theory; investigation of administrative responsibilities and functions implicit in school health or other health education programs.

### 516. Health Promotion in Organizational Settings (3)

Prerequisite: H SC 570. Exploration of health promotion programs in worksite settings, health services, business and industry. Assessment of the organizational climate for health promotion and principles for maintaining program viability and vitality. Strategies for developing and conducting health promotion programs in these settings. Traditional grading only. (Discussion, 3 hours)

### 524./424. Principles of Asian Health Sciences (3)

Prerequisite: Upper division standing. Presents the philosophical, historical, clinical and scholarly qualities of Asian health sciences to promote health, prevent disease and treat illness. Comparisons are made with selected Asian and western health care systems and individual health practices. Traditional grading only. Same course as A/ST 524./424. (Discussion, 3 hours.)

### 528. Advanced Environmental Health (3)

Prerequisite: H SC 422 or consent of instructor. Organization and methods for promoting human health by controlling environmental factors.

### 535./435. Health Promotion and Risk Reduction (3)

Prerequisites: H SC 421 or consent of instructor. Health promotion/risk reduction program content, development and implementation for use in corporate, hospital and public settings. Intended primarily for Health Science majors. (Discussion 3 hours)

### 570. Theoretical Concepts and Issues in Health Science (3)

Identification and analysis of current trends, philosophies and issues in health science.

### 581. Curriculum Development in Health Education (3)

Prerequisites: H SC 430, 440. Principles of curriculum development; selection and evaluation of resource materials; theory and practice in measurement in health education.

### 585. Health Education Internship (1-6)

Prerequisite: Consent of the instructor. Extended applied experience under guidance of faculty and preceptors in an approved health education practice setting. Traditional grading only. (480 hours of field placement or the equivalent experience.)

### 590. Independent Study (1-3)

Independent research conducted under the supervision of a full-time faculty member resulting in a written report of the investigation. (Independent Study.) Traditional grading only. Repeatable to a maximum of 6 units with different topics.

### 624. Seminar in Community Analysis and Program Planning (3)

Prerequisites: H SC 625 or consent of instructor. Process and techniques of community analysis and program planning.

### 625. Advanced Community Health Education (3)

Prerequisites: H SC 401 and 485; or consent of instructor. Advanced study of educational and related theory applicable to the conduct of health education programs in community and other settings. Methods of promoting change; role as program and staff director and evaluation techniques.

### 626. Integrative Seminar in Public Health (3)

Prerequisites: H SC 570, advancement to candidacy. Summative critical analysis of current methodologies, research, and practices in public health and health education in particular. Synthesis of coursework, internship, and other relevant experiences in the graduate program. Traditional grading only.

### 696. Research Methods (3)

Prerequisites: Undergraduate major in Health Science or related field; undergraduate course in statistics. Introduction to research methodology in the area of Health Science.

### 697. Directed Studies (1-3)

Prerequisite: Advancement to candidacy. Independent investigation of research problems in health education.

### 698. Thesis (1-3)

Prerequisites: H SC 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

# INFORMATION SYSTEMS

*College of Business Administration*

Department Chair

Dee Bruce Sun

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CBA 443

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H. Michael Chung

R. Michael Godfrey

Khosrow Moshirvaziri

Kenneth L. Pickard

Department Secretary

Laurie Lawver

For all degree requirements see Business Administration.

## Courses (I S)

### Lower Division

**233. Introduction to Computer Systems and Applications (3)**  
An introduction to the use of DOS and word processing, spreadsheet, and database applications; BASIC programming; basic computer literacy. Credit/No Credit grading only.

**240. Management Information Systems (3)**  
An introductory course in management information systems (MIS). MIS concepts and overview of computer technology. Development of information systems and its use in organizations. "Hands-on" experience with PC-based operating systems, Word processing, Spreadsheet, and Database management software packages.

### Upper Division

**301. Business Communications (3)**  
Analysis of the principles of collecting, organizing and presenting business data. Oral and written reports involving problem solving in the administrative management process. Traditional grading only.

**310. Business Statistics (3)**  
Prerequisites: MATH 114, and 115. Application of statistics to business problems. Topics include data collection and organization, probability theory, measures of central tendency and dispersion, hypothesis testing and estimation, simple regression, and correlation. Use of statistical software. Traditional grading only.

**320. Quantitative Analysis for Business Decisions (3)**  
Prerequisite: IS 310. Application of quantitative analysis and computer software for solving business problems. Topics include linear programming, integer programming, PERT and CPM, inventory control, queuing models, quality control, number basis, transportation and assignment models, and simulation. Use of computer software. Traditional grading only.

**340. Business Application Programming (3)**  
Prerequisites: IS 240 or equivalent and familiarity with Windows. Visual programming systems. Object-oriented programming (OOP). Simple concepts to advanced topics, including labels, buttons and text boxes, menus, dialog boxes and multiple forms, arrays, and drag-and-drop functions. Traditional grading only.

**341. Structured Cobol Programming (3)**  
Prerequisite: IS 240 or equivalent. Introduction to the COBOL programming language. Structured programming techniques, and design of structured programs. Development of programs ranging from simple Input-output to control breaks and Single-level tables. Traditional grading only.

**355. Introduction to Business Telecommunications (3)**  
Prerequisite: IS 240 or equivalent. Introduction to concepts and technology of telecommunications and networking in business and organizations. Basics of voice, data, image, and video transmission; fundamental of networking; use of Internet technology; telecommunication regulation and standards. Traditional grading only.

**375. Computer-Based Knowledge Delivery Systems (3)**  
Prerequisite: IS 240 or equivalent. Systems for using computers to make knowledge available. Technology used to create on-line help systems and multimedia training systems used in business. Other types of computer-based knowledge delivery systems. Traditional grading only.

### 380. Database I (3)

Prerequisite: IS 240 or equivalent. Introduction to database requirements analysis and specification. SQL query formulation. Database implementation using database management system software, such as Microsoft Access. Design of computerized business forms and reports. Traditional grading only.

### 385. Systems Analysis and Design (3)

Prerequisite: IS 240 or equivalent. Broad introduction to the concepts, methods, current and emerging practices of systems analysis and design. Topics include development process models, requirements analysis and system modeling, conceptual and physical design, systems implementation and maintenance, project management and teamwork, and the roles and responsibilities of systems analysts. Traditional grading only.

### 410. Probability and Decisions (3)

Prerequisites: MATH 114, and 115. Probability theory with emphasis on logical applications of probability models for business problems and decision making. Topics include elements of probability, distribution and density functions, random variables, and their properties.

### 411. Statistical Decision Theory (3)

Prerequisite: IS 410. Statistical tools for the analysis of data and for business decision making. Topics include sampling and sampling distributions, hypothesis testing, and estimation.

### 445. Internet Applications in Business (3)

Prerequisites: IS 355, permission of instructor. Design, management, and applications of Internet-based electronic business transaction systems. Special emphasis on Web home page design. Internet applications in functional areas including accounting, finance, marketing, and management. Intranet and groupware. Lecture, hands-on, software project, and case studies. Traditional grading only.

### 455. Networks in Information Systems (3)

Prerequisite: IS 355. Technology and system development of local and wide area networks including Internet. Network requirement analysis, design, implementation, and operation from user and network administrator perspectives. Network control and security as well as Internet server management. Traditional grading only.

### 460./560. Operations Research: Deterministic Models (3)

Prerequisites: MATH 114 and 119B or 123, IS 410, or consent of instructor. Theory and applications of operations research as an aid to management decision making. Emphasis on the application of deterministic models such as linear programming, network analysis, PERT/CPM, duality, sensitivity analysis and parametric programming.

### 463./563. Operations Research: Probabilistic Models (3)

Prerequisite: IS 410, or consent of instructor. Theory and applications of operations research as an aid to management decision making. Emphasis on the application of probabilistic models such as inventory, queuing theory, dynamic programming, Markov chains and simulation.

### 464./564. Network Modeling and Simulation (3)

Prerequisites: IS 310 and 355. Fundamentals of simulation methodology and its use in performance measurement and feasibility study of business models of real systems. Topics include; basic probability distributions, random number generation, model formulation, evaluating results, validations, waiting-line simulation, network fundamental, and computer network performance measurement via simulation, and use of computer software simulation packages. Traditional grading only.

### 470. Decision Support Systems (3)

Prerequisites: IS 310, 380. Use of information systems technologies to support decision making by managers. Emphasis is given to individual and group decision support systems, expert systems, and executive information systems.

### 485. Information Systems Project (3)

Prerequisite: IS 380. A comprehensive systems project of moderate complexity for a client-server environment using a team approach for requirements analysis, system design, and prototype creation. Project planning and management techniques. Traditional grading only.

### 493. Information Systems Internships (3)

Prerequisites: Classified Business Major, 3.0 GPA in IS, 3.0 GPA overall. Students work in Information Systems or Quantitative Analysis divisions of private industry or governmental agencies to gain experience in real world situations. Class seminar analysis, evaluation of academic theory in terms of real world environment.

### 495. Selected Topics (1-3)

Prerequisites: Consent of instructor and GPA of 3.0 or higher in major. Topics of current interest in the field as announced in the Schedule of Classes. In the absence of significant duplication, may be repeated for a maximum of six units.

### \*497. Directed Studies (1-3)

Prerequisites: Consent of instructor and Department Chair; student must be on Dean's List and have a GPA of 3.0 or higher in one of the following options: Quantitative Methods, Administrative Information Systems, or Management Information Systems. Individual projects, research, or study in one of the options.

## Graduate Division

### 500. Management Information Systems (3)

Prerequisite: MBA standing required. Introduction to management information systems. Topics include information systems concepts, and computer technology, telecommunications, information systems development process, and use of information systems in business. "Hands-on" laboratory work using PC-Based applications software.

### 501. Applied Statistics and Decision Analysis (3)

Prerequisite: MBA standing or consent of instructor. Background in finite mathematics and introductory calculus is required, with use of some statistical software packages. Topics include review of probability concepts, distribution functions, measures of central tendency and dispersion, hypothesis testing and estimation, Bayesian decision analysis, and regression and correlation.

### 502. Management of Information Systems (3)

Prerequisite: IS 500. Information Resource Management (IRM). Management of information technology and systems development process. Strategic uses of information systems. Use of software to assist management decision making.

### 550. Business Telecommunications Management (3)

Prerequisite: IS 500 or equivalent. Introduction to the technologies and applications of telecommunications and networking. Infrastructure planning and operation of organizational telecommunication networks. Management and control of Internet servers and mobile systems. Telecommunication regulation and standards. Traditional grading only.

### 560./460. Operations Research: Deterministic Models (3)

Prerequisites: Graduate standing, MATH 114 and 119B or 123, IS 410, or consent of instructor. Theory and applications of operations research as an aid to management decision making. Emphasis on the application of deterministic models such as network analysis, linear programming, PERT/CPM, duality, sensitivity analysis and parametric programming.

### 563./463. Operations Research: Probabilistic Models (3)

Prerequisites: Graduate standing, IS 410, or consent of instructor. Theory and application of operations research as an aid to management decision making. Emphasis is on the application of probabilistic models such as inventory, queuing theory, dynamic programming, Markov chains, and simulation.

### 564./464. Network Modeling and Simulation (3)

Prerequisites: IS 501 and 550. Fundamentals of simulation methodology and its use in performance measurement and feasibility study of business models of real systems. Topics include basic probability distributions, random number generation, model formulation, evaluating results, validations, waiting-line simulation, network fundamental, and computer network performance measurement via simulation, and use of computer software simulation packages. Traditional grading only.

580. Management Support Systems and Database

Management Systems (3)

Prerequisite: IS 500 or equivalent. Management Support Systems (MSS) with special emphasis on database management techniques. Use of information and database techniques to support management decision making. Topics include individual and group decision support systems, groupware, expert systems, executive information systems, database management systems (DBMS), database analysis and design, database manipulation languages (SQL and QBE), and data warehousing. Hands-on projects on both MSS and DBMS. Traditional grading only.

584. Electronic Commerce (3)

Prerequisite: IS 500 or equivalent. A comprehensive managerial-oriented examination of the development of various electronic commerce applications on the internet. Major applications include advertisement and marketing, customer service, stocks and commodities, trading, market and product research and standard business-to-business transactions. EDI implementation issues such as security and payment methods. Traditional grading only.

625. Problems in Business Communication (3)

Prerequisite: Graduate standing. Contemporary business communication thought and research applied in the solving of organizational communication problems.

685. Internet/Intranet Application Development (3)

Prerequisites: IS 500 or equivalent and permission of the instructor. Theory and applications of the Internet. Applications development using tools such as HTML and FrontPage. Use and development of Intranet applications in the Client/Server environment. Issues such as Internet business opportunities, network security, home page maintenance, Internet database interface and cooperative computing. Traditional grading only.

695. Selected Topics (3)

Prerequisites: Graduate standing and consent of instructor. Topics to be announced in the Schedule of Classes.

697. Directed Studies (1-3)

Prerequisites: Graduate standing and consent of instructor. Individual study under the direction of the faculty.



# INTERNATIONAL BUSINESS

## College of Business Administration

Director  
Wendell McCulloch  
Phone  
(562) 985-4565

### Option in International Business (code 3-2703) (124 units)

The objective of the international business option is to prepare students for the increasingly competitive and interdependent international business world with which they must cope. There is great and growing need for American business school graduates to be better informed about how to compete and do business outside the U. S. as well as in the U. S. market where much of their competition is from foreign firms. Students need to understand how international business practices and customs differ from those in the U. S. They need at least some familiarity with a language other than English as well as with cultural diversity and world geography.

#### Requirements

1. ACCT 465
2. FIN 490
3. MGMT 405 or 406
4. MKTG 480
5. Any one of the following four courses: FIN 424, HRM 458, MGMT 405 or 406 (whichever was not taken in satisfaction of requirement 3) or MKTG 481.
6. Two years in high school or one year (2 semesters or 3 quarters) at the baccalaureate level of one of the following languages: Chinese, French, German, Italian, Japanese, Russian, or Spanish. Under individual, special circumstances, the Director of the International Business Option may approve a language other than those listed above to satisfy the language requirement for a degree in the option.
7. Choice of the language will determine the country or geographic area of the world about which the student must study to a minimum of 2 courses (6 units).

These will be in lieu of 6 other elective units, and can be double counted as part of the student's general education requirement.

#### G. E. or Elective Courses

Select two courses (6 units), appropriate for your choice of language:

All Languages: ANTH 412I, ECON 368, POSC 371, POSC 485, I/ST 355, I/ST 317I, I/ST 318I, I/ST 319I, LING 413, LING 425, LING 470, SPCH 451, SPCH 452.

Chinese: ANTH 332, A/ST 301I, A/ST 310, A/ST 495I, CHIN 370, CHIN 441A, ECON 365, ECON 370, GEOG 312, HIST 382B, HIST 406, HIST 488, POSC 362, POSC 371, POSC 485, R/ST 152, R/ST 331I, R/ST 341I, R/ST 343, C/LT 403.

French: C/LT 330A,B, ECON 361, ECON 361I, GEOG 316, HIST 335, HIST 339, POSC 353, POSC 371, POSC 485, FREN 335, FREN 336 or courses taken at a specified French

university with which CSULB has an exchange agreement and taught by instructors from CSULB may be approved by the Director of the International Business Program in partial or full satisfaction of this requirement

German: C/LT 330A,B, ECON 361, ECON 361I, GEOG 316, HIST 335, HIST 339, POSC 353, POSC 371, POSC 485, GERM 309, GERM 315, GERM 316, GERM 380I, HIST 437.

Italian: C/LT 330A,B, ECON 361, ECON 361I, GEOG 316, HIST 332, HIST 335, HIST 339, POSC 353, POSC 371, POSC 485.

Japanese: ANTH 335, A/ST 301I, A/ST 310, ECON 370, GEOG 312, HIST 383B, HIST 384, HIST 406, HIST 407, JAPN 350, JAPN 451, JAPN 471, R/ST 152, R/ST 341I, R/ST 344, C/LT 403.

Russian: ANTH 331, ECON 361I, GEOG 318, GERM 410, HIST 341B, HIST 441, POSC 356, POSC 484, RUSS 310, RUSS 410.

Spanish: ANTH 323, ANTH 324, ECON 361I, ECON 363, GEOG 320I, HIST 364, HIST 433, HIST 462, HIST 463, POSC 358, POSC 359, POSC 459, SPAN 330, SPAN 341, SPAN 415, SPAN 430, SPAN 445, C/LT 440.

### Certificate in International Business: Undergraduate Program (code 1-2000)

Phenomenal growth of multi-national companies has been apparent in recent years, with increasing internationalization of the business world. Multi-national firms, governmental agencies, and varied international organizations express heightened demand for management personnel with a broad, global perspective. The Certificate in International Business, Undergraduate Program, combines an undergraduate degree in business with additional training in the area of international business beyond that normally included in a traditional business program. The objective of the program is to enhance the scope and perception of the business student to include the international business environment. Courses used to meet requirements for the Certificate in International Business may also apply toward College of Business Administration degree requirements.

#### Requirements

1. A bachelor of Science degree in Business Administration. This requirement may be completed concurrently with certificate requirements;
2. Eighteen units or more of study at this University in International Business to include: CBA 300, ACCT 465, FIN 424, FIN 490, HRM 458, MGMT 405, MGMT 406, MKTG 480, and MKTG 481.
3. A grade of "C" or higher will be required in each course completed;
4. The Certificate Program does not permit use of the Credit/No Credit option. Students with specific geographic areas of interest should consider development of language competence and cultural understanding relative to their area of interest concurrent with their Certificate Program. For additional information or for application to the program, interested persons may contact the Director of International Business Program.

# CENTER FOR INTERNATIONAL EDUCATION

## *University Academic Programs*

Associate Vice President, Academic Affairs and  
Dean, University Academic Programs

Marilyn Jensen

Office

Academic Affairs

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Assistant Director - International  
Admissions

Robert Paul Prather

International Admissions Specialist

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International Credential Specialist

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Director - American Language Institute, University College and  
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Debra Jonas

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SS/AD 201

Telephone

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The Center for International Education is under the division of Academic Affairs. Its mission is to stimulate, develop and administer programs and services in the international area.

The program priorities of the Center for International Education are as follows:

to strengthen the internationalization of the curriculum, involving the participation of all the University's colleges. Interdisciplinary courses have been developed to further this goal. The infusion of existing courses with comparative approaches and non-western materials is being encouraged as well as the introduction of a number of issue-oriented international courses and several international studies emphases;

to render all services relating to the admission, counseling, academic life and success of international students attending CSULB;

to develop selective international educational linkages with institutions in other countries;

to assist CSULB students and faculty in participating in overseas opportunities;

### International Admissions

The International Admissions component of the Center for International Education assists academically eligible international students to apply for admission to the University, and advises them of CSULB's financial, immigration and English language requirements. Throughout the students' attendance, the International Admissions staff is involved in their registration, evaluation of transfer credit, changes of majors, and graduation checks. Students are also counseled regarding their field of study requirements, which vary at both the undergraduate and graduate levels. The International Admissions staff coordinates closely with the American Language Institute, International Student Services, Study Abroad Office, administrators, and faculty to support students in pursuing their educational objectives.

### International Student Services

Some 1,200 non-immigrant students, representing over 80 countries, attend CSULB. The primary mission of International Student Services, a component of the Center for International Education, is to assist these students with their academic, personal and cultural growth and development during their years at CSULB. This mission is accomplished through professional counseling and advising; assistance with Immigration and Naturalization Service (INS) regulations, paperwork processing, and documentation; student orientations; and registration and clearance. The ISS staff also serves as the University liaison with consulates, embassies, businesses, foundations, and community organizations concerning international students and faculty at CSULB.

In addition, the ISS staff works with international students, faculty, and members of the community to design international programs. International students are encouraged to partici-

pate in all University and community programs. During the academic year, ISS staff works with the International Student Association, the International Peer Advisors, and the International Community Council of Long Beach to plan and organize cross-cultural events such as the Annual International Dinner and Culture Show, International Faire, and other major events. These organizations add a special dimension to student life on campus by hosting various cultural events and providing leadership training opportunities for their members.

## English Proficiency Requirements for Admission

### Undergraduate Applicants

Each undergraduate applicant, regardless of citizenship, whose prior education was in a country where English was not the primary language of social, educational, and business interaction, must demonstrate English competency by receiving a minimum score of 500 on the Test of English as a Foreign Language (TOEFL), unless the applicant:

1. has proof of at least three years attendance at a secondary level educational institution in a country where English was the principal language of instruction.\* CSULB interprets "where English was the principal language of instruction" to mean that a school is located in a country where English is the native language (the daily medium of communication of the majority of residents is English), and that the students receive academic instruction in all subjects (except foreign language courses) at all levels of education in English, or
2. completed at least 56 transferable units from accredited U.S. community colleges and/or universities and a grade of "A", "B", or "C" in ENGL 100 or its equivalent\*, or
3. successfully completed CSULB's American Language Institute's Intensive English Program.\*

EXCEPTION: Applicants applying for Film and Electronic Arts, which requires a 550 TOEFL score, and Journalism, which requires a 600 TOEFL score, will not be waived from the TOEFL requirement.

\* For this exemption to remain valid, once having met the exemption, the student must not have left the U.S.A. for more than two years to reside or study in a country where English is not the predominant language of business, education and day-to-day societal functions.

### Graduate Applicants

Each applicant for graduate or post-baccalaureate studies, regardless of citizenship, whose prior education was in a country where English was not the primary language of social, educational, and business interaction, must demonstrate English competency by receiving a minimum score of 550 on the Test of English as a Foreign Language (TOEFL), unless the applicant:

1. Submits proof of having obtained a bachelor's degree from an accredited post-secondary institution where English was the principal language of instruction.\* CSULB interprets "where English is the principal language of instruction" to mean that a school is located in a country where English is the native language (the daily medium of communication of the majority of residents is English), and the applicant received academic instruction in all subjects (except foreign language courses) at all levels of education in English, or

2. Notification from CSULB's American Language Institute that the applicant has successfully completed the American Language Institute's Bridge to the University Program.\*

EXCEPTION: Applicants applying for Public Policy and Administration, which requires a 600 TOEFL, will not be waived from the TOEFL requirement.

\* For this exemption to remain valid, once having met the exemption, the student must not have left the U.S.A. for more than two years to reside or study in a country where English is not the predominant language of business, education and day-to-day societal functions.

## International Student Admission Requirements

CSULB encourages eligible international students to apply for undergraduate and graduate level studies. International students are defined as those who hold non-immigrant (student or exchange) visas. Application requests and questions should be directed to International Admissions, which is located in the Center for International Education (SS/AD 201).

International students need to complete a different application process than U.S. students, and there are different application deadlines. The following documents are required:

1. International application form;
2. \$55.00 application processing fee;
3. Affidavit of support from financial sponsor;
4. Bank statement/letter from financial sponsor;
5. Proof of acceptable English proficiency (usually met by the Test of English as a Foreign Language);
6. Official academic documents and certified English translations;
7. ACT or SAT (required for student athletes and graduates of U.S. high schools);
8. GMAT (required for graduate business majors only);
9. Letters of recommendation (graduate level applicants).

The recommended latest deadline to turn in an application form is November 15 for the Spring semester, and June 15 for the Fall semester. Graduate applicants must check with their department for earlier deadlines.

Once all the documents are submitted to the International Admissions Office, eligibility for admission will be determined based on English proficiency and academic history, as well as other considerations. Graduate applications will be forwarded to the graduate departments for review by the graduate coordinators. Once admitted, international students will receive pre-arrival, arrival, and orientation information, and the appropriate immigration form and instructions on how to legally enter and/or remain in the U.S.

The Immigration and Naturalization Service (INS) requires that international students be aware of and follow INS regulations to remain legally in the U.S. for the duration of their academic status. International students on "F" and "J" visas must be enrolled as full time students. Courses taken through the University College and Extension Services at CSULB or courses taken concurrently at other colleges nearby may only count toward full time status when approved in advance of course registration by the Center for International Education. Questions about INS policies may be directed to the Center for International Education.

Many foreign students for whom English is a second language are required upon arrival to take the Examination in English as a Second Language (EESL) and enroll in any necessary class(es) in English as a second language. Please check with International Admissions for more information on EESL requirements and exemptions. In some cases this may mean that students will be required to take reduced course loads in their major field until English proficiency can be demonstrated. This requirement cannot be postponed.

For students who need English language training prior to enrolling at CSULB, the American Language Institute in the University College and Extension Services (UCES) provides professional instruction in all four language skills: reading, writing, listening and speaking. Conditional admission to CSULB is available for qualified students.

### Study Abroad Office

The Study Abroad Office is located in the Center for International Education. Its mission is to assist CSULB students and faculty select and prepare for an educational experience in another country. This office administers exchange programs throughout the world, provides advising services, maintains an overseas opportunities resource library, and sponsors special programs such as pre-departure workshops, information seminars, and speakers from off-campus.

### CSU International Programs (IP) System-wide

Developing intercultural communication skills and international understanding among its students is a vital mission of The California State University (CSU). Since its inception in 1963, the CSU International Programs has contributed to this effort by providing qualified students an affordable opportunity to continue their studies abroad for a full academic year. Over 13,000 CSU students have taken advantage of this unique study option.

International Programs (IP) participants earn resident academic credit at their CSU campuses and pay only regular home campus fees while they pursue full-time study at a host university or special study center abroad. The International Programs serves the needs of students in over 100 designated academic majors. Affiliated with 37 recognized universities and institutions of higher education in 17 countries, the International Programs also offers a wide selection of study locales and learning environments.

The affiliated institutions are:

Australia .....	University of Western Sydney
Brazil .....	Universidade de São Paulo
Canada .....	universities of the Province of Quebec
	13 institutions, including:
	..... Université de Montréal
	..... Concordia University
	..... Université Laval
	..... McGill University
	..... Université du Québec System
	..... Bishop's University, i.a.
Denmark .....	Denmark's International Study Program (DIS)
	(the international education affiliate
	of the University of Copenhagen)
France .....	Institut des Etudes Françaises pour
	Étudiants Étrangers
	..... Université de Droit d'Economie et
	des Sciences d'Aix-Marseille:
	..... (Aix-en Provence)

	..... Mission interuniversitaire de coordination
	des échanges franco-américains (MICEFA)
	..... Universités de Paris III, V, VI, VIII, X, XI, XII, XIII
Germany .....	The institutions of higher education in the
	German Federal State of Baden-Württemberg,
	including:
	..... Ruprecht-Karls-Universität (Heidelberg)
	..... Musikhochschule Trossingen
	..... Universität Hohenheim
	..... Fachhochschule Furtwangen
	..... Fachhochschule Mannheim
	..... Fachhochschule Nürtingen
	..... Fachhochschule Reutlingen
	..... Berufsakademie Stuttgart
	..... Universität Freiburg
	..... Universität Karlsruhe
	..... Universität Konstanz
	..... Universität Mannheim
	..... Universität Stuttgart
	..... Universität Ulm
	..... Eberhard-Karls-Universität (Tübingen)
Israel .....	Tel Aviv University
	The Hebrew University of Jerusalem
Italy .....	CSU Study Center (Florence)
	..... Università degli Studi di Firenze
	..... La Accademia di Belle Arti Firenze
Japan .....	Waseda University (Tokyo)
Korea .....	Yonsei University (Seoul)
Mexico .....	Instituto Tecnológico y de Estudios
	Superiores de Monterrey (Querétaro)
	..... Universidad Pedagógica Nacional (Mexico City)
New Zealand .....	Lincoln University (Christchurch)
	..... Massey University (Palmerston North)
Spain .....	Universidad Complutense de Madrid
	..... Universidad de Granada
Sweden .....	Uppsala Universitet
Taiwan .....	National Chengchi University (Taipei)
United Kingdom .....	Bradford University
	..... Bristol University
	..... Kingston University
	..... Sheffield University
	..... University of Swansea
	..... Wales
Zimbabwe .....	University of Zimbabwe (Harare)

Information on academic course offerings available at these locations is in the International Programs Catalog which may be obtained from the Study Abroad Office in the Center for International Education (SS/AD 201) or by writing to The California State University International Programs, 400 Golden Shore, Suite 122, Long Beach, CA 90802-4275 (562) 985-2831.

To qualify for admission to the International Programs, students must have upper division or graduate standing at a CSU campus by the time of departure. Students at the sophomore level may, however, participate in the intensive language acquisition programs in France, Germany, and Mexico. California Community Colleges transfer students are eligible to apply directly from their community college if they can meet these requirements. Students must also possess a current cumulative GPA of 2.75 or 3.00, depending on the program for which they apply, for all college level work completed at the time of application, and have completed required language or other preparatory study where

applicable. Selection is competitive and is based on home campus recommendations and the applicant's academic record. Final selection is made by the Office of International Programs in consultation with a statewide selection committee.

The International Programs pays all tuition and administrative costs overseas for each of its participants to the same extent that such funds would be expended to support similar costs in California. Students assume responsibility for all personal costs, such as transportation, room and board, and living expenses, as well as for home campus fees. Because they remain enrolled at their home CSU campus while studying overseas, International Programs students earn full resident credit for all academic work completed while abroad and remain eligible to receive any form of financial aid (other than work-study) for which they can individually qualify.

Additional information and application materials may be obtained from the CSULB Center for International Education by calling (562) 985-4106 or by writing to The California State University International Programs, 400 Golden Shore, Suite 300, Long Beach, California 90802-4275. Visit us on the World Wide Web at:

<http://www.gateway.calstate.edu/csuienet/>. Applications for the 1997-98 academic year overseas must be submitted by February 1, 1997. (May 1 for Australia, New Zealand and Zimbabwe.)

#### CSULB Exchange Programs

In addition to the CSU International Programs, CSULB has developed exchange programs with outstanding universities in many parts of the world through cooperative linkage agreements. These agreements allow CSULB students to study for a semester or an academic year in a foreign institution while remaining enrolled at CSULB. A wide range of major fields of study may be accommodated in this program. So far, agreements have been signed with institutions in the following countries:

Argentina .....	University of Belgrano
Australia .....	University of Wollongong
Brazil .....	Universidade Federal Fluminense
Chile .....	Universidad del Desarrollo
Cambodia .....	University of Phnom Penh
China .....	Huazhong Normal University
.....	Qingdao University
France .....	Le Groupe Superieur de Commerce de Montpellier
.....	MICEFA (Consortium of Universities in Paris)
Germany .....	Fachhochschule Wiesbaden
.....	Otto-von-Guericke University, Magdeburg
.....	University of Bielefeld
.....	University of Oldenburg
Japan .....	Goto College of Medical Arts
.....	Waseda College of Medical Arts and Sciences
.....	Yokkaichi University
Korea .....	Yonsei University
.....	Honam University
Mexico .....	Universidad Autonoma de Guadalajara
Switzerland .....	University of Fribourg
.....	University of Lausanne
.....	Universite de Neuchatel

Taiwan .....	Tamkang University
.....	Tunghai University
Turkey .....	Marmara University
U.K./England .....	The Nottingham-Trent University
.....	Wolverhampton Polytechnic
U.K./Wales .....	Cardiff Institute of Higher Education (South Glamorgan Institute of Higher Education)
Vietnam .....	Vietnam National University
West Bank .....	Birzeit University

For more information and eligibility qualifications, please see the staff in the Study Abroad Office or call them in the Center for International Education at (562) 985-8429.

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#### Courses (INTL)

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##### 400. Upper Division Coursework Taken at a Foreign University (1-4)

Advanced college level coursework completed at a foreign university under the auspices of a CSULB exchange program. Course content is planned in cooperation with CSULB faculty.

##### 500. Graduate Level Coursework Taken at a Foreign University (1-4)

Graduate college level coursework completed at a foreign university under the auspices of a CSULB exchange program. Course content is planned in cooperation with CSULB faculty.

#### AMERICAN LANGUAGE INSTITUTE

The mission of the American Language Institute (ALI) is to provide quality English as a Second Language instruction to students whose first language is not English. The ALI serves visa-bearing international students at both the undergraduate and graduate levels and provides a steppingstone into the University for qualified pre-university students from abroad.

The overall goal of the ALI is to develop students' proficiency in oral and written English. The pre-university component of the ALI offers the incoming student with little prior exposure to English up to a full year of intensive (25 hours per week) English followed by an academic year of semi-intensive (12 hours per week) coursework. Pre-university ALI students attend classes on campus and enjoy all the campus facilities.

The ALI also provides academic English support classes to regularly enrolled students. All students admitted to CSULB whose native language is not English and who have not lived in the United States for at least 10 years continuously prior to admission must take the Examination in English as a Second Language (EESL) during their first semester on campus. The EESL results place students in English as a Second Language courses in the American Language Institute or equivalent courses in the American Language Program. These courses are required for graduation and must be taken in sequence at the earliest opportunity; course loads may need to be adjusted accordingly. American Language requirements can be modified only by proving proficiency within the class or by appeal to the American Language Petitions Committee; classes or exams taken elsewhere cannot be substituted for American Language requirements.

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## Courses (ALI)

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025A. American Language Introductory I (non-credit)  
No prerequisites. Intensive English as a Second Language, including basic reading, writing, speaking, and listening skills. Emphasizes oral communication and cultural orientation. Twenty-five hours per week.

030A. American Language Introductory II (non-credit)  
Prerequisite: Appropriate American Language Institute (ALI) Placement Test score or successful completion of ALI 025B. Intensive academic English as a Second Language, focusing on development of speaking, listening, reading, and writing skills. Preparation for university-level English, including study skills, language functions, and vocabulary necessary for academic coursework. Twenty-five hours per week.

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## Courses (ALI and ALP)

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035. American Language Intermediate I (6)  
Prerequisite: Appropriate placement test score or successful completion of ALI 030B. Semi-intensive academic study of English as a Second Language, integrating reading, writing, speaking (including pronunciation) and listening comprehension skills development in context of current interest topics. Emphasizes basic expression of ideas and relationships. Not open to students with credit in ALP 135. Twelve class hours per week.

040. American Language Intermediate II (6)  
Prerequisites: Appropriate EESL score or successful completion of ALP/ALI 035 with a grade of "C" or better. Semi-intensive academic ESL integrating reading, writing, speaking (including pronunciation) and listening comprehension skills development presented in context of current interest topics. Emphasizes process of paragraph development. Not open to students with credit in ALP/ALI 140 or ALP 121. Twelve class hours per week.

126. Cross-Cultural Communication Skills (3)  
Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing cross-cultural communication, including American communicative expectations, barriers to intercultural understanding, and interpersonal oral communication skills in a variety of contexts, particularly instructor-student interactions at the college level. This course is designed to help students understand cultural differences in communicative style and behavior. Four class hours per week. (No credit for students with credit in ALP/ALI 125.)

127. Public Speaking (3)  
Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing public speaking, including effective oral presentation techniques, audience analysis, and speech organization. Students learn to prepare, present, and critique academic speeches and understand culturally appropriate speech styles for an academic setting. Four class hours per week. (No credit for students with credit in ALP/ALI 125.)

145. American Language Advanced I (3)  
Prerequisites: Appropriate EESL score or successful completion of ALP/ALI 040 with a grade of "C" or better. University-level ESL including inferential reading comprehension and vocabulary development and essentials of paragraph and short essay organization. Not open to students with credit in ALP 122/123. Three class hours per week.

150. American Language Advanced II (3)  
Prerequisites: Appropriate EESL score or successful completion of ALP/ALI 145 with a grade of "C" or better. University-level ESL including critical/analytical reading and expository writing, with emphasis on longer essays. Analysis and practice of standard rhetorical modes of essay development. Three class hours per week.

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## Courses (ALP)

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024. English Pronunciation (3)  
Prerequisites: Appropriate EESL score. Spoken English skills development emphasizing the sound system of American English, including accurate perception, production, and prediction of speech sounds in context and increased oral fluency. Individual language laboratory work required. Four class hours per week. (No credit for students with credit in ALP 124A,B.) (Lecture-Activity) Credit/No Credit grading only. Repeatable to a maximum of 6 units.

128. Employment Communication Skills (3)  
Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing pre-employment communication, including interviewing, conflict resolution, and negotiation techniques for the non-native English speaker in the workplace. The course focuses on the skills necessary for successful interpersonal and professional communication for career entry and mobility. Four class hours per week. (No credit for students with credit in ALP/ALI 125.)

# INTERNATIONAL STUDIES

*College of Liberal Arts*

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Molly Debysingh (Geography)

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Lisa Grobar (Economics)

Elaine Haglund (Educational Psychology)

Arnold Kaminsky (Asian and Asian-American Studies)

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Gary Peters (Geography)

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Benjamin Wisner (Geography)

Associate Professors

Kenneth R. Curtis (History)

Larry N. George (Political Science)

Jack Hou (Economics)

Claire Martin (Foreign Languages)

Larry Martinez (Political Science)

George M. Scott (Anthropology)

Assistant Professor

Xiaolan Bao (History)

James Curtis (Geography)

## Bachelor of Arts in International Studies (code 2-8545) (124 units)

The Bachelor of Arts in International Studies is an interdisciplinary degree program designed to provide a rigorous introduction to the complex interrelationships that exist among societies in the modern world. It combines the study of international relations, global and development issues and contemporary belief systems with a concentration on a major world area. In addition, the degree aims to equip students with the skills in language, analytical thinking, research, and economic literacy that are necessary for graduate study and careers in international fields. Further, students in the International Studies program receive direct exposure to an international environment by participating in a foreign study program or an internationally related internship in this country. Because it is an interdisciplinary program, this program emphasizes the ways in which the expertise and methodologies of various disciplines contribute to the understanding and resolution of international issues.

The degree is a liberal arts program intended to provide a broad understanding of international issues and world cultures through the methodologies of the social science and liberal arts disciplines. It offers pre-professional study for careers in government, communications, business, law, journalism, and international non-profit organizations. Students are encouraged to combine a major in International Studies with a second major or minor in a field appropriate to their career plans.

All International Studies majors are required to develop a program of study in consultation with the program advisor. This program should be balanced among the participating disciplines and should help the student to develop a coherent emphasis in a world region and/or a topical area. The foreign language, foreign study or internship, and research in the senior seminar should reflect this emphasis. The program advisor will also give advice on post-graduate study.

### Requirements

A minimum of 45 units in a program approved by the International Studies advisor. It is expected that each student's program will reflect the interdisciplinary nature of the degree by including a balanced selection of courses from the participating disciplines.

Economic Literacy: (Units not included in total for major; may be fulfilled as part of General Education): ECON 201, 202; or, with permission of the International Studies Advisor, ECON 300. (Note: ECON 201 and 202 are strongly recommended, and may be required as prerequisites for some upper division courses in the program).

Foreign Language: Three years of college level study or equivalent proficiency in a language appropriate to the program of study and area concentration selected.

Lower Division: (12 units): ANTH 120; HIST 112; GEOG 100 or 160; POSC 215 or 220.

Upper Division: A minimum of 33 units including:  
 Cross-Cultural Communication: 3 units, chosen from ANTH 412I (Culture and Communication); ANTH 413 (Language and Culture); SPCH 451 (Intercultural Communications).  
 Basics of International Relations: Select 6 units from the following: ECON 370 (Economics of the Pacific Rim); ECON 471 (International Economics); GEOG 470 (Political Geography); HIST/I/ST 478 (Foreign Relations of the U.S.); POSC 371 (Introduction to International Politics); POSC 378 (International Organization and Administration); POSC 483 (Foreign Policies of the Major Powers); POSC 485 (International Political Economy).  
 Development Studies: 6 units, selected from: ANTH/GEOG/ HIST 307I (Modernization in Global Perspective); ECON 465 (Economic Development); GEOG 460 (Population Geography); H/SC 420I (International Health); JOUR 312 (World Press); POSC 461I (The Politics of Development); I/ST 317I (Problems in International Social Conflict); I/ST 318I (Cases in International Social Conflict); I/ST 319I (International Development); I/ST 355 (International Environmental Issues); SOC 350 (International Population Problems); W/ST 401I (History of Women in Cross-Cultural Perspective).  
 Contemporary Belief Systems: 3 units selected from: ANTH 305I (Radical Social Analysis); ECON 313 (History of Economic Thought); HIST 438 (History of Marxist Thought); POSC 306 (Contemporary Political Ideologies); R/ST 383I (Christianity and Marxism); SOC 356 (Development of Sociological Theory); SW/I/ST 491 (Non-Violent Conflict Resolution).

### Area Concentration

Choose 9 units from one of the following areas:

Asia: A/ST 300I (Traditional Asia); A/ST 301I (Modern Asia); A/ST 310 (The United States and Asia); A/ST 495I (China Heritage); ANTH 332 (Chinese Culture and Society); ANTH 333 (Cultures and Societies of Southeast Asia); ANTH 335 (Japanese Culture and Society); GEOG 312I (Eastern and Southern Asia); HIST 382B (Modern China); HIST 383B (Modern Japan); HIST 384 (Contemporary Japan); HIST 385 (History of India); HIST 386 (Modern Southeast Asia); HIST 407 (Japan and the US in the 20th Century); HIST 488 (Chinese Revolution); POSC 362 (Society and National Politics of China); POSC 364 (Society and National Politics of India); POSC 366 (Government and Politics of Southeast Asia).  
 Latin America: ANTH 323 (Peoples of Mexico and Central America); ANTH 324 (Peoples of South America); ECON 363 (Latin America and Industrialization); GEOG 320I (Latin America); HIST 364 (The Latin American Nations); HIST 462 (Mexico); HIST 463 (The Caribbean and Central America); HIST 466 (Topics in Latin American History); CHLS 312 (Mexican Thought); POSC 358 (Contemporary Latin American Politics); POSC 359 (Latin American Comparative Political Systems); POSC 459 (US-Latin American Relations).  
 Africa: ANTH 336 (Peoples of Africa); B/ST 337 (Cultures of the Pan African Peoples); B/ST 380 (African Political Theory); B/ST 430 (African Political Leadership); B/ST 460 (African Thought); GEOG 308I (Africa South of the Sahara); HIST 391 (The Making of Modern Africa); HIST 392 (Contemporary Africa).

North Africa and the Middle East: GEOG 309I (The Middle East and North Africa); HIST 431 (Arab and Islamic Civilization); POSC 367 (Governments and Politics of the Near and Middle East); R/ST 331I (Islamic Religion and Culture); R/ST 315I (Modern Jewish Thought/Zionism).

Eastern Europe/Former Soviet Union: ANTH 331 (Soviet Culture and Society); GEOG 318 (Russia and Its Neighbors); HIST 341B (Modern Russia); HIST 441 (Russian and Soviet Cultural History); HIST 495 (Eastern Europe); POSC 356 (Government and Politics of the USSR); POSC 357 (Governments of Eastern Europe); POSC 484 (Soviet Foreign Policy).

Western Europe: ECON 361 (European Economic History); FREN 440 (French Civilization); GEOG 316 (Europe); GERM 316 (Survey of German Literature and Culture); GERM 380IC (Contemporary Germany: Society and Culture); GERM 410 (German Civilization); HIST 337 (Europe in the 19th Century); HIST 339 (Europe Since 1914); HIST 357 (Recent Britain); HIST 432 (Modern Scandinavia and the Baltic); HIST 433 (Spain and Portugal); HIST 437 (History of Germany 1871 to Present); HIST 495 (European Diplomatic History); POSC 353 (Government and Politics of Western Europe); POSC 354 (Government and Politics of Scandinavian Countries); POSC \*497 Special Topics (German Question); SPAN 430 (Spanish Civilization).

Internship or Foreign Study: (I/ST 492, 3 units) An internship or foreign study program related to the course of study selected, as approved by major advisor.

Senior Research Seminar: (I/ST 490, 3 units) As approved by the director of the International Studies program.

### Minor in International Studies (code 0-8545)

The Minor in International Studies consists of a minimum of 21 units at least 15 of which must be upper division courses, together with at least two years of college level of study (or equivalent proficiency) in a language other than English which must be a language appropriate to the student's program of study in International Studies. No course in the department of a student's major may be used in satisfaction of the unit requirements for this minor except for ECON 201, 202, 300.

#### Requirements

Economic Literacy: Three units selected from ECON 201, 202 or, with the consent of the International Studies advisor, upper division students may take ECON 300. (Units earned in satisfaction of this requirement may not be counted as part of the unit requirement in the minor.)

Lower Division: Six units selected from ANTH 120, HIST 112, GEOG 100 or 160, POSC 215 or 220.

Upper Division: Three units selected from the courses grouped under Cross Cultural Communication or from the courses grouped under Contemporary Belief Systems as those groups are defined for the Bachelor of Arts degree in International Studies.

Either six units selected from the courses grouped under Development Studies or six units selected from the courses grouped under Basics of International Relations as those groups are defined for the Bachelor of Arts degree in International Studies.

Six units selected from one of the geographic Area Concentrations defined for the Bachelor of Arts degree in International Studies.



## Courses (I/ST)

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 317I. Problems in International Social Conflict (3)

Prerequisites: ENGL 100, upper division status, and at least one introductory course in the Social Sciences. An interdisciplinary analysis of the causes, human costs, and possible remedies of social conflict in the world today. Primary emphasis on the social sciences, incorporating in addition the perspectives of humanities and technological disciplines. Problem areas of international conflict will be discussed, such as ethics, nationalism, scarcity, warfare, governmental policies, dependency, and technological innovations. Students may take either I/ST 317I or I/ST 318I, and in any sequence.

#### 318I. Cases in International Social Conflict (3)

Prerequisites: ENGL 100, upper division status, and at least one introductory course in the Social Sciences. Interdisciplinary analysis of the causes, human costs, and possible remedies of social conflict in the world today. Primary emphasis on the social sciences, incorporating in addition the perspectives of the humanities and technological disciplines. Options in a case study format will be discussed, such as conflict in a multinational state USSR political and economic democracy in Eastern Europe, Asia and the West; impact of modernization in Latin America; nuclear warfare and competing ideologies. Students may take either I/ST 317I or I/ST 318I, and in any sequence.

#### 319I. International Development (3)

This course focuses on the issues and problems of development confronting the countries of the Third World. The causes and theories of underdevelopment will provide a background for identifying the problems of underdevelopment and for exploring regional, national and global strategies for development. Same course as GEOG 319.

#### 355. International Environmental Issues (3)

An examination of the deterioration, destruction, maintenance and restoration of environmental systems and resources forms the core content of this course. Identification of major environmental problems that have international dimensions, an analysis of their causes and ramifications, and an investigation of potential and/or already initiated attempts at their resolution form the structural framework of the course. Same course as GEOG 355.

#### 478. Foreign Relations of the U.S. (3)

The course incorporates a global perspective and considers the influence of such issues as domestic politics, bureaucratic rivalry and decision-making, economics, ideology, race, and the role of special interest groups on the making of foreign policy. Same course as HIST 478.

#### 490. Senior Research Seminar in International Studies (3)

Prerequisites: Senior status; consent of the International Studies advisor and instructor. Capstone research seminar primarily for senior-year International Studies majors. Classroom preparation for directed research by students on a topic of their choice integrating international economics, international politics, cross-cultural communication, development studies, contemporary belief systems, language skills, and a geographic area. Traditional grading only.

#### 491. Non-Violent Conflict Resolution: In Your Life and On the Job and Around the Planet (3)

Designed to help the student examine conflict and violence, their own and others' responses to different situations, and to learn to utilize a set of tools to deal with conflict in a productive, non-violent manner. Same course as S W 491.

#### 492. International Studies Internship/Foreign Study (3)

Prerequisites: Consent of I/ST advisor; completion of a minimum of 15 upper division units required for the major in International Studies. Internship with private organizations and governmental agencies with an international focus, international companies located in the US or abroad. A Study Abroad program with CSULB or other reputable university also meets this requirement. Work done under the joint supervision of the program sponsor and CSULB International Studies faculty. A final report is required.

#### 493. Special Topics (1-6)

Prerequisite: Consent of instructor. Analysis of contemporary issues and problems in International Studies. Topics to be announced in the Schedule of Classes. Both grading options.

#### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Individually directed studies of special problems in International Studies. May be repeated for a maximum of six units with consent of program director. May not be credited toward the major in International Studies without written department consent in advance of enrollment. Supervised. Traditional grading only.

# INTERDISCIPLINARY STUDIES

## *University Academic Programs*

Associate Vice President, Academic Affairs –  
Instructional Programs and Research  
Keith I. Polakoff

Associate Vice President, Academic Affairs and  
Dean, University Academic Programs  
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**U**niversity Programs is the administrative designation for a group of University-wide academic programs that are interdisciplinary in nature. The Associate Vice Presidents function as Deans for these programs.

The Interdisciplinary Studies Program offers students the opportunity to develop individualized cross disciplinary majors utilizing courses from appropriate departments at California State University Long Beach. Each student, with the help of a faculty advisor, must select courses and focus his/her major on the basis of a unifying issue, theme or topic called an area of concentration. The area of concentration must meet three criteria to be acceptable:

- first, the area of concentration must be interdisciplinary. This means the area of concentration must integrate and focus approaches and knowledge from at least two fields or disciplines. The principle of integration can be historical, regional, thematic or problem-focused.
- second, the area of concentration must not replicate any existing major. The purpose of the Special Major (undergraduate) or Interdisciplinary Studies Major (graduate) is to link students with clusters of courses and faculty where no structure or formal program exists.
- third, the area of concentration must be feasible. Each student's proposed program must be discussed with a faculty advisor to ensure that the range and number of courses required will be available.

The student's role in the selection of the area of concentration is active not passive. The student must actively plan his/her program and cultivate relationships with assigned or chosen faculty. Furthermore, the student has the greater initial responsibility in shaping his/her program.

### **Bachelor of Arts in Special Major (code 2-0404) (124 units)**

The special major for the bachelor of arts degree allows selected students to engage in an individualized baccalaureate program when legitimate academic and/or professional goals cannot be accommodated by existing academic programs or combinations of such programs (i.e., majors, minors, certificates). The special major adheres strictly to the University's mission statement and consists of a closely correlated program of study in two or more departments developed in conference with faculty members from the respective departments who have the academic and professional expertise necessary to support the individualized course of study.

The special major is not a means of bypassing normal graduation requirements nor a means by which students may seek to graduate who have failed to gain admission to impacted programs or to complete a degree major in which they are currently enrolled. Consequently, a candidate must apply for approval of a special major when:

1. At least one full year of academic work (30 units) remains to be completed to meet minimum graduation requirements;
2. At least 2/3 of the upper-division (300-400) units in the proposed course of study remain to be completed at the time the application is submitted for approval.
3. The GPA in the current major is 3.0 or better. Exceptions to this rule will be made on a case-by-case basis.

A special major program must be justified by legitimate career, academic, and/or professional goals commensurate with the broader mission of the University in baccalaureate education. Special majors are considered on a case-by-case basis. Approval is determined on the basis of the academic merit of the proposed course of study, the proposal rationale, the applicant's potential for successful completion of the program, and on the ability of the University to support the proposed program. Goals should be carefully reviewed before proceeding with an special major.

#### Procedures

1. To prepare for the initial interview:
  - A. Make an appointment with the Interdisciplinary Studies Director to discuss eligibility for the program.
  - B. Prepare a written proposal, eight pages in length, identifying your educational goals and objectives, your career goals and objectives; explaining why these cannot be met through an existing major; and listing the courses at CSULB appropriate to your goals.
2. Present your written statement for initial review to the Interdisciplinary Studies Director from whom guidelines, recommendations, and forms necessary for the following steps may be obtained if the proposal is determined to be promising;
3. Seek out a faculty advisor from each discipline in which substantive course work will be undertaken. These faculty must have the expertise appropriate to the interdisciplinary study you propose, must find merit in your proposal, must agree to meet together with you and all other faculty advisors to develop a program of study, and must agree to continue to act as your program advisors;
4. Arrange a meeting of the faculty advisors for the purpose of developing the list of specific courses that will constitute the special studies degree program. Any modification of this program after it has been officially approved by the Interdisciplinary Studies Director requires the concurrence of all faculty advisors and must be the result of consultation with them, usually at an advisory meeting. Faculty advisors sign the official Special Major Program form and any subsequent Program Addendum forms;
5. Submit the Special Major Program, signed by the faculty advisors, to the departmental chairs of each department in which substantive work is projected. Their signatures on your program form indicate they have reviewed its contents, approved the proposed program, and are granting you the same priority status for enrollment in courses in their departments as that accorded departmental majors;

6. Return your program with all signatures to the Interdisciplinary Studies Director along with your typed interdisciplinary studies proposal and transcripts from all schools attended, including a current set of transcripts from CSULB. Completed programs must be approved by the Interdisciplinary Studies Director and will be filed in the Interdisciplinary Studies Office and the Records Office. Be advised that pending final approval of your special major program you should proceed with the course work for your previously declared major or with General Education and elective courses. You should delay taking courses that will count only toward the fulfillment of your special major program until the semester following formal admission into the major.

#### Requirements

1. A special major consists of a maximum of four lower-division courses (100-200) and a minimum of 24 units of upper-division courses (300-400) totalling a minimum of 40 units in the program.
2. It is recommended that a minimum of 12 upper-division units be taken in each of two disciplines (departments) of the interdisciplinary program. Exceptions may be made only in cases where an interdisciplinary program is based on a thematically cohesive core of classes involving significant work in more than two disciplines. A rationale for such exceptions must accompany the program and be signed by the faculty advisors when the program is submitted to the Interdisciplinary Studies Director for approval.
3. Interdisciplinary courses (I) taken to satisfy General Education requirements may be double-counted to meet interdisciplinary studies unit requirements, if the program consists of more than 40 units of credit.

#### Master of Arts (code 5-0405) and Master of Science (code 6-0405) in Interdisciplinary Studies

The Master of Arts or Master of Science degree in Interdisciplinary Studies permits students to earn an interdisciplinary master's degree when their special needs or interests cannot substantially be met by any existing CSULB graduate degree program. The interdisciplinary studies master's degree is not a degree divided between or among disciplines, but is a cohesive program of studies which integrates the methodologies, perspectives, and content of two or more disciplines. An interdisciplinary studies master's degree must be justified by legitimate academic goals.

Acceptance of an applicant to an interdisciplinary studies master's program is based on the academic merit and rationale of the proposed course of study, the applicant's potential for successful completion of a master's program, and the ability of the University to support the proposed study with faculty, curricula, and facilities. Candidates should carefully assess goals before proceeding with this degree. The degree program is administered by the Dean of Graduate Studies through the office of the Interdisciplinary Studies Director, Academic Advising Center, Library East 127.

## Prerequisites

1. A bachelor's degree from an accredited college or university.
2. An interdisciplinary master's program requires demonstration of potential for success in each of the disciplines relevant to the proposed degree work.  
An individual's graduate advisory committee determines the appropriate prerequisite courses for each program; these are listed on the Prerequisite Sheet that accompanies the Application for a Master's Degree in Interdisciplinary Studies.
3. A 3.3 GPA (on a 4-point system) in the last 60 units of work completed at an accredited college or university and a 3.0 GPA in all prerequisite course work listed on the Prerequisite Sheet (see item 2 above).
4. No more than 9 units of program course work completed at the time the program and attendant application materials are submitted to the Interdisciplinary Studies Director for approval.

## Acceptance to the Program

Those students who meet all program and University prerequisites for graduate study and whose interdisciplinary studies master's programs have been approved by the Interdisciplinary Studies Director will be admitted as Classified graduate students in the Interdisciplinary Studies program. Students who have not met all program and University prerequisites but who demonstrate potential for their immediate and successful completion may be accepted as conditionally classified graduate students in the Interdisciplinary Studies program. Conditionally classified graduate students will be closely monitored and those making no progress toward completion of prerequisites will be declassified.

## Procedures

1. Make an appointment for a preliminary interview with the Director; prepare a written proposal 8 pages in length:
  - A. Identifying by title the interdisciplinary program of study in which you wish to engage (i.e., Interdisciplinary Studies Master's Degree in (30-space limit)) and description;
  - B. Explaining why this course of study cannot be pursued within one department with electives from other departments;
  - C. Explaining how this program relates to your educational and career goals;
  - D. Indicating your background, both academic and experiential, for undertaking this study; and
  - E. Listing the CSULB courses appropriate to your goals.
2. Make an appointment to meet with the Interdisciplinary Studies Director in LIB-E 127; bring your proposal for review and approval. If the proposal is found promising and University facilities can support the proposed program of study, the Interdisciplinary Studies Director will provide you with the forms and guidelines necessary to proceed with application to the program as outlined in item 4 below;
3. To complete your application for acceptance to an Interdisciplinary Studies Master's program:

A. Secure the agreement of faculty in the disciplines related to your proposed special program to serve as members of your Interdisciplinary Studies Graduate Committee. This committee must consist of no less than three tenured/tenure-track, full-time faculty members at CSULB. The chair of the committee must be a member of a department approved to grant a graduate degree;

B. Convene a meeting of your Interdisciplinary Studies Graduate Committee. At this meeting your committee will: review your documents (i.e., transcripts from all institutions attended, your Statement of Purpose, etc.); identify the appropriate preparatory course work, completed or to be completed (see item 2, under Prerequisites above) to list on the Prerequisite Check Sheet for the Master's Degree in Interdisciplinary Studies; apprise you of any unique guidelines or requirements of the degree-issuing department; and develop with you the academically sound program of graduate study related to your Statement of Purpose and to be identified on the Student Program for the Master's Degree in Interdisciplinary Studies;

C. Secure signatures on your Student Program for the Master's Degree in Interdisciplinary Studies from the following: your Interdisciplinary Studies Graduate Committee; the graduate advisors or chairs of the departments of the members of your Committee; the Dean or designee (i.e., the Director of Graduate Studies or the Associate Dean) of the committee chair's College;

D. Submit the proposal, the Prerequisite Check Sheet for the Master's Degree in Interdisciplinary Studies, the Student Program for the Master's Degree in Interdisciplinary Studies, the thesis proposal form, notice of meeting and copies of transcripts from all institutions attended, including a current transcript from CSULB, to the Interdisciplinary Studies Director. These materials constitute the Application for a Master's Degree in an Interdisciplinary Studies. These materials are reviewed by the Interdisciplinary Studies Director whose signature on the Student Program for the Master's Degree in Interdisciplinary Studies signals acceptance of an applicant to the program in either a Classified or Conditionally Classified capacity. Subsequent modification of an approved Student Program requires approval of the Interdisciplinary Studies Graduate Committee, the Interdisciplinary Studies Director, on an official Change of Program form to be obtained from the Interdisciplinary Studies Director.

## Advancement to Candidacy

Advancement to candidacy comes with the approval by the Dean of Graduate Studies of the Student Program for the Master's Degree in Interdisciplinary Studies. Graduate students are apprised of their advancement or failure to be advanced by the Dean of Graduate Studies. Any modifications to the Student Program after advancement to candidacy requires the approval of the Interdisciplinary Studies Graduate Committee, the Interdisciplinary Studies Director, and the Dean of Graduate Studies on an official Addendum to Program form to be obtained from the Interdisciplinary Studies Director.

The Interdisciplinary Studies Director will submit an Interdisciplinary Studies graduate student's program for advancement to candidacy when the following conditions apply:

1. Classified status (i.e., prior acceptance to the Interdisciplinary Studies Program);
2. Successful completion of the University Writing Proficiency Exam (WPE);
3. Satisfactory completion of all prerequisite course work with a minimum 3.0 GPA (see item 3 in Prerequisites above) as well as any additional prerequisites (i.e., departmental qualifying exams);
4. Completion of a minimum of six units of graduate-level (500-600) program work with a 3.0 GPA;
5. Approval by the Interdisciplinary Studies Director of the completed Application for Thesis and Committee Form for thesis option programs;
6. Resolution of all incomplete grades (I) on the record;
7. A cumulative 3.0 GPA in all completed program work;
8. Current enrollment in University course work.

#### Requirements

1. A minimum of 60% of the units required for the degree shall be in the 500 and 600 level series. The number of units required for the degree shall be the number of units approved on the individual student's program (minimum 30 units).
  - A. No fewer than 18 units shall be at the 500-600 level. These must be done in residence at CSULB. Extension 500-600 level courses are not acceptable on the Interdisciplinary Studies graduate program;
  - B. No less than 15 units shall be completed within a primary department. The primary department is normally the degree-issuing department;
  - C. No more than six units in any one or combination of:
    - (1) Approved CSULB extension (no extension class credit earned at another institution may be used to satisfy degree requirements nor may extension credit be used to offset a grade-point deficiency in the graduate program);
    - (2) Transfer credit (transfer credit units may not be used to fulfill the requirement for 18 units at the 500-600-level);
  - D. No more than three units of independent study in addition to Thesis on a minimum 30-unit program. Exceptions to this regulation are as follows:
    - (1) Up to six units of independent study in addition to Thesis may be permitted in a minimum 30-unit program when the projected studies are not to be taken in the same department and when the focus of each projected independent study is clearly distinct from the other (as evidenced on the Independent Study Agreement); forms should be submitted with all other materials constituting the Application for a Master's Degree in Interdisciplinary Studies (see item 3, under Acceptance Procedures above), and when each independent study is justified by the student's graduate committee as programmatically essential;
    - (2) In excess of six units of independent study in addition to Thesis may be permitted only in cases when an Interdisciplinary Studies graduate program exceeds the minimum 30 units; when the focus of each projected study is clearly distinct from any others (as evidenced on the Independent Study Forms as identified in 1.d.1 above);

and when each study is justified by the student's graduate committee as programmatically essential. Programs with more than six units of independent study will be referred to the Interdisciplinary Studies Advisory Board for final approval.

2. Successful completion of a Thesis or Comprehensive Exam. The selection of the Thesis or Comprehensive option will be made by the Interdisciplinary Studies Graduate Committee in consultation with the student at the time the program is developed (see item 3 under Acceptance Procedures above). Students electing to write a thesis must enroll for thesis credit in the department of the Graduate Committee Chair;
3. All requirements of the degree program must be completed within seven years of the date when the program was initiated (i.e., no course on the program at the time of graduation may be more than seven years old);
4. A favorable vote of the faculty of the primary department, the Thesis or Comprehensive Chair, and the Graduate Advisors in the departments represented on the student's Interdisciplinary Studies Graduate Committee.

#### Requirements

The requirements for the Master of Science in Interdisciplinary Studies shall be the same as the Master of Arts degree in Interdisciplinary Studies with the following exception: a thesis or project in the primary department is required.

# JOURNALISM

*College of Liberal Arts*

Department Chair

Craig R. Smith

Office

Social Sciences and Public Affairs (SPA) Room 024

Telephone

(562) 985-4981

Faculty

Professors

Daniel E. Garvey

Wayne F. Kelly

Whitney Mandel

William A. Mulligan

Associate Professor

Emma Daugherty

Students should contact the Journalism Department office for referral to one of the faculty advisors in the student's area of journalistic interest: Broadcast, Journalism Education, Photojournalism, Print, and Public Relations.

The department's Print Option prepares students to work as writers, reporters and editors on newspapers and provides training for employment on consumer magazines, trade journals, and company publications. The Photojournalism Option prepares students for careers as photojournalists for newspapers and magazines and free-lance photojournalists.

Broadcast Option students learn to gather and prepare material for radio and television news programs.

The Public Relations Option prepares students for careers in all phases of public relations and public affairs areas including media relations corporate and agency, public relation's writing and publications, government and community affairs, and work in both the profit and non profit sectors.

The Journalism Education Option curriculum meets the requirements for a single-subject California secondary teaching credential. Journalism Education Option students, by taking courses in journalism in conjunction with courses in Education and related fields, learn to teach journalism and advise high school level student publications.

The Accrediting Council for Education in Journalism and Mass Communication writes in regard to the education of a journalist: "The traditional arts and sciences remain the solid basis of professional education for all of journalism and mass communications." In applying this philosophy to the course work journalism students should take "a minimum of 90 ... semester hours in courses outside the major area of journalism and mass communications, with no fewer than 68 ... semester hours in the liberal arts and sciences." Students, therefore, should have no more than 34 Journalism and technical communication units unless they already have 90 units in liberal arts and sciences and "other" category.

The Journalism Department's laboratory newspaper, the Daily Forty-Niner, serves a campus community of approximately 25,000 students, plus faculty and university staff.

Print Option students also produce University Magazine, a slick, four-color publication and the On-Line Forty-Niner, a weekly electronic newspaper.

Broadcast Journalism students work at KLON-FM 88, which produces daily news heard throughout southern Los Angeles County and northern Orange County. Students also work with Advanced Media Productions to produce a monthly cable TV program.

Qualifying students in all options are eligible for internships at various media outlets and in public relations or corporate PR departments, PR agencies and non-profit organizations throughout Southern California. The department helps graduating students and alumni find jobs.

## Requirements for the Bachelor of Arts in Journalism

Students may obtain a bachelor's degree in any of the department's five options: Broadcast Journalism, Photojournalism, Print, Public Relations and Journalism Education. Availability of options may change in near future. Please consult with Department for more information.

### *Prerequisites to Entering Journalism Classes*

Computer skills: All students entering production classes must know the WordPerfect word-processing program and be able to word-process at no less than 40 words a minute. Photojournalism students must know Aldus PageMaker.

### *Writing Skills*

JOUR 120 is the basic writing and reporting course for Journalism and is a prerequisite to most courses in the department. Students must pass ENGL 100 with at least a "C" before entering JOUR 120. Students who took an equivalent course on another campus instead of ENGL 100 at CSULB must also take the university's English Placement Test (EPT) and receive a score of at least 155 to enter JOUR 120 or courses for which it is a prerequisite.

Students must pass the university's Writing Proficiency Examination (WPE) before entering JOUR 120. All transfer students are required to take the WPE during their first semester at CSULB. They may take no other journalism course (except JOUR 110) until they have passed the WPE.

### *Course Prerequisites*

Journalism majors must have both passed the WPE and passed JOUR 120 with at least a "C" to enter any course for which JOUR 120 is listed as a prerequisite. ENGL 101 is a prerequisite for JOUR 312I, 315, 350, 412, 498 and 499. (Public Relations and Photojournalism majors are exempt from this requirement. Other students may obtain exemption by petitioning the department and showing evidence of needed skills.) Broadcast, Public Relations and Print Journalism students must take ENGL 320, English Grammar.

Second semester English courses taken on other campuses are usually not equivalent to ENGL 101 at CSULB. Before assuming you have met the ENGL 101 requirement, check with the CSULB English Department.

Students who need an ENGL 101 prerequisite and have not taken ENGL 101 on this campus must have certification from the CSULB English Department that a course taken on another campus is equivalent to ENGL 101.

### *Grade Requirements*

Journalism majors must have a "C" average in the major. Journalism students must achieve a grade of "C" or better in each required course for the major.

### *Residency Requirements*

Transfer students must complete 50 percent of their upper division journalism units at CSULB.

Journalism (Communication) Courses Transferrable From Other Campuses:

No more than 12 (usually nine or less) units of community college communication units may be transferred to CSULB. (Included in the 12 units will be any professional communication courses, whether listed as journalism or under any other title.) No journalism course taken on another campus may be substituted for a CSULB journalism course without the approval of the head of the CSULB option involved.

Transfer students must bring a complete transcript of all units taken at any other college to their first meeting with a Journalism Department advisor. Transcripts sent to the university admissions office are not available to the Journalism Department. You must provide the department with a separate copy.

### *Distribution of Units*

Journalism majors must take a minimum of 90 units in courses that are not technical communication courses. Such communication courses include all JOUR and FEA courses and any courses that provide training for a professional communication career (e.g., an Art Department course in graphic design or photography).

The requirement that 68 of these 90 units must be in areas of traditional liberal arts and sciences should not be confused with the university's general education requirements. Many general education courses may also be counted toward this 68 unit journalism department requirement, but not all general education units are accepted by the journalism department for this requirement.

Courses from the department listed below can usually be counted in this 68 units, but not every course in these departments is acceptable. To avoid potential loss of units, consult a Journalism Department advisor before entering the department and every subsequent semester before enrolling in classes. Examples of liberal arts courses include those in:

Courses that may be counted in the 68 units include all courses offered through the College of Liberal Arts except for technical writing courses, and all courses offered in the College of Natural Sciences and Mathematics. Students may also include appreciation and history courses offered by the College of the Arts; however, performance courses are excluded.

If Journalism majors have at least 68 units of Liberal Arts outside technical communications, they may include up to 6 units of the following JOUR courses under Liberal Arts, according to AEJMC: JOUR 312I, 315, 350, and 431.

No more than 22 units of the non-communication courses may be outside the area of liberal arts and sciences. Examples are courses from departments such as Physical Education or Business.

Journalism majors may not count more than 34 communication units toward graduation (90 non-communication plus 34 communication units equal 124). In most journalism options, the required course work uses up all or nearly all of these 34 units. Categorizing courses to meet the journalism department requirements can be confusing. Journalism majors or students contemplating a journalism major should always consult advisors from the Journalism Department.

### *Mandatory Advising*

All students must meet with an advisor from the Journalism Department before declaring the major. Entering students should make arrangement for advising before the start of their first semester by calling (562) 985-4981. Majors must obtain the approval of a journalism faculty advisor each semester before completing a class schedule.

ACEJMC divides courses into three basic categories: liberal arts and sciences, journalism and technical communication, and "other." All classes not specified as liberal arts and science (Anthropology, etc.) or journalism and technical communication are listed in the "other" category. These include, but

are not restricted to, physical education, recreation, marketing, sports, business, finance, industrial arts and other professional courses.

To meet the ACEJMC requirements, a student must have a minimum of 68 liberal arts and science units, a maximum of 34 journalism and communication units, and a maximum of 22 "other" units.

Example: A Marketing minor requires 18 units; if a student brings in 6 business units and 4 KPE units, he/she has a choice: (1) take a minor in liberal arts and sciences or (2) be prepared to take more than 124 units to qualify for graduation. All majors will be counseled into a minor (or under special circumstances an area of specialization) outside of journalism designed to aid in reaching their professional goals.

## Bachelor of Arts in Journalism

### Requirements

Please note requirements differ for each option.

#### Option in Broadcast Journalism (code 2-6460) (124 units)

A minimum of 33 communication units (27 journalism units of which 21 units must be upper division and 6 FEA units) to a maximum of 34 communication units. The required FEA courses are FEA 220 and 230. The required journalism and FEA courses take up 33 of the 34 units.

Students will be counseled into a minor or an area of concentration of at least 15 units of study outside of journalism designed to aid in reaching their professional goals. Students are encouraged to select a minor rather than the 15-unit alternative.

All option majors must take ENGL 320, English Grammar, preferably before taking any upper division Journalism courses. A foreign language is also recommended.

Students must have a minimum of 90 non-communication units with at least 68 of the 90 in the traditional liberal arts and science areas. No more than 22 units can be in areas that do not fall into the liberal arts and science or communication categories.

Lower Division: JOUR 110, 120, FEA 220, 230, SPCH 271.

Upper Division: ENGL 320, JOUR 319, 321, 325, 382A, and B, 430, and one or more of the following: JOUR 312I, 315, 412, 431, 494, or 498.

Recommended additional courses: JOUR 320, 420 and 490.

#### Option in Journalism Education (code 2-6836) (124 units)

A minimum of 24 journalism units of which 15 must be upper division, selected in consultation with an advisor.

Lower Division: JOUR 110 and 120.

Upper Division: JOUR 319, 320, 323, 331 and 430.

Recommended additional courses: JOUR 280, 312I, 370, 422, 431, 490, and 499.

To qualify for a credential that will authorize the teaching of journalism in California Public schools, a student must complete the journalism requirements specified above and core English courses.

#### Option in Print Journalism (code 2-6463) (124 units)

A minimum of 29 journalism and a maximum of 34 communication units of which at least 24 must be upper division. Students will also be counseled into a minor or an area of concentration of at least 15 units of study outside journalism designed to aid in reaching their professional objectives. The department requires Print Option majors take ENGL 320, English Grammar, prior to taking JOUR 331, Publication Editing and Makeup. A foreign language is also recommended for majors in the option. Students must have a minimum of 90 non-communication units with at least 68 of the 90 units in the traditional Liberal Arts and Science areas. No more than 22 units can be in areas that do not fall into the Liberal Arts and Science or Communication categories.

Lower Division: JOUR 110, 120.

Upper Division: ENGL 320, JOUR 316, 319, 320, 323, 331, 420, 430, and JOUR 305 or 480, and at least one of the following JOUR 312I, 315, 350, 412, 422, 431, 490, 498, or 499.

Recommended additional courses are: JOUR 380, 428, 455, 494.

#### Option in Photojournalism (code 2-6462) (124 units)

A minimum of 30 units as specified below, of which at least 21 must be in the upper division. Students must have a minimum of 90 non-communication units with at least 68 of the 90 units in the traditional Liberal Arts and Science areas. No more than 22 units can be in areas that do not fall into the Liberal Arts and Science or Communication categories. Students will be counseled into a minor or concentration of at least 15 units of study outside of Journalism designed to aid in reaching their professional goal.

Lower Division: JOUR 110 and 120.

Upper Division: JOUR 300, 319, 324A, 324B, 331, 380, 430, and 480.

#### Option in Public Relations (code 2-6837) (124 units)

A minimum of 30 journalism and a maximum of 34 journalism/communication units of which at least 24 must be upper division. Students will also be counseled into a minor or an area of concentration of at least 15 units of study outside of journalism designed to aid in reaching their academic and professional objectives. Students must take one research methods class before they graduate. A research course other than JOUR 494 requires the consent of an advisor. It is strongly recommended that students in this option take as many English writing courses as possible; and transfer in, or take, at least a year of foreign language; and take advantage of the ethnicity classes offered at CSULB. Students must have a minimum of 90 non-communication units with at least 68 of the 90 units in the traditional Liberal Arts and Science areas. No more than 25 units can be in areas that do not fall into the Liberal Arts and Science or Journalism/Communication categories. The Public Relations Option highly recommends JOUR 498, Internship, to qualified students.

Lower Division: JOUR 110, 120.

Upper Division: ENGL 320, JOUR 370, 374, 375, 376, 430, 471, 478, 494 and one of the following: JOUR 412, 431, 498 or 499.



## Minor in Journalism (code 0-6835)

A minimum of 21 units including:

Choose one area of concentration:

Broadcast: JOUR 110, 120, 319, 321, 325, 430, and 431.

Print: JOUR 110, 120, 316, 319, 331, and six units from JOUR 305, 312I, 320, 323, 412, 422, 430, or 431.

Photojournalism: JOUR 110, 120, 324, 331, 380, and 430.

Public Relations: JOUR 110, 120, 370, 374, 375, 376, and 471 or 478.

## Courses (JOUR)

### Lower Division

#### 110. Introduction to Mass Communications (3)

Origins, development and contemporary role of newspapers, magazines, radio, television, books, and films, and such related fields as advertising and public relations. (Lec, discussion 3 hrs.) (CAN JOUR 4)

#### 120. News Writing (3)

Prerequisites: Ability to word process 40 wpm, knowledge of the Word Perfect program, a "C" or better in ENGL 100, and passing the Writing Proficiency Examination. Course focuses on news writing, newspaper style, writing leads, developing the story, and importance of deadlines; it includes study of news sources, reporting and interviewing methods, law, ethics and responsibilities of the reporter. Practical exercises in reporting and writing news and features for publication. (CAN JOUR 2)

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 300. Intermediate Photojournalism (3)

Prerequisites: JOUR 120 with a grade of "C" or better, ART 141 or consent of instructor. Techniques of photojournalism for newspapers, magazines, corporate communications and Public Relations. Student work is regularly critiqued and published in departmental publications. Course covers types of photos needed for all aspects of editorial photography, including lighting, use of filters, working with subjects, and the photo picture page. Hands on projects give students an opportunity to develop skills. \$30.00 materials fee for those using university supplies. (Lectures, demonstrations and practical assignments). Traditional grading only for majors/minors.

#### 305. Editorial Graphics (3)

Designed to give students experience in the design of printed materials. Examines theories, principles, and techniques of contemporary page design, especially of newspapers and Sunday magazines. Covers the historical roots of publication design and acquaints students with the use of photographs, illustrations, graphs, type and color in visual communication. Students gain hands-on experience with Macintosh computers and produce prototype-newspaper and magazine pages. Traditional grading only for majors/minors.

#### 312I. World Press (3)

Prerequisite: ENGL 101. An analysis of the world's news media with emphasis on their structure, ownership, social and political roles and the degree of government pressure and control. Particular attention is paid to the position of the media in developing nations. Examination of the methods and problems of the American foreign correspondent.

#### 315. Journalism as Literature (3)

Prerequisite: ENGL 101. Sets criteria for defining journalism and literature. Examines great journalistic works of the last 275 years from Addison, Steele and Swift, through Twain, Stephen Crane,

Mencken and Camus, to E.B. White, Updike, Didion and Tom Wolfe which have earned a place in literature.

#### 316. Feature Writing (3)

Prerequisite: JOUR 120 with a grade of "C" or better or consent of instructor. Feature Writing covers the feature article for both newspapers and magazines. Discusses style, organization, human interest, use of quotes, leads and article ideas. Emphasis is on clear readable prose. Publishable articles are submitted to the Daily Forty-Niner or University Magazine. Traditional grading only for majors/minors.

#### 319. News Reporting (3)

Prerequisites: JOUR 120 and 316 for Print Option students with a grade of "C" or better. Focuses on news reporting and includes study of reporting and writing different types of stories. Students work as staff writers on Daily Forty-Niner or University Magazine. Course may not be taken simultaneously with JOUR 323 or 422. Lab 9 hrs. Traditional grading only for majors/minors.

#### 320. Reporting Public Affairs (3)

Prerequisite: JOUR 120 or consent of instructor. News coverage of police, courts and city, county, state and Federal government. Study and practice in methods of investigative reporting. (Reporting and writing practice 3 hours.)

#### 321. Television News Writing (3)

Prerequisites: JOUR 120 with a grade of "C" or better and FEA 230 or consent of instructor. It is recommended students take JOUR 325 before taking this course. Techniques of gathering, writing and editing news for television.

#### 323. Advanced Publication Writing and Reporting (3)

Prerequisites: JOUR 319 and 320 with a grade of "C" or better. Course focuses on advanced news reporting and writing and includes study of interviewing techniques. Students work as staff writers on the Daily Forty-Niner or University Magazine. Course may not be taken simultaneously with JOUR 319 or 422. Traditional grading only for majors/minors. (Lab 9 hours.)

#### 324A,B. Photography for Publication (3,3)

Prerequisites: JOUR 120 and 300 (with a grade of "B" or better), or consent of instructor. Students with qualifying photo skills will comprise staff of the Daily Forty-Niner newspaper and University Magazine. Staffers will be responsible for photographic coverage of campus news and feature events for daily and special edition use. Photographers will practice techniques of newspaper photography through assigned stories as well as personally developed enterprise stories. Individual approach and skills are assessed daily, with staff efforts analyzed at weekly photo conference. Students must provide own camera. Materials fee. (Laboratory 6 hours.)

#### 325. Radio News Writing and Reporting (3)

Prerequisites: JOUR 120 with a grade of "C" or better and FEA 220 or consent of instructor. Techniques of gathering, writing and editing radio news.

#### 331. Publication Editing and Makeup (3)

Prerequisites: ENGL 320 and JOUR 319 with a grade of "C" or better or with consent of instructor. JOUR 323 and 331 cannot be taken concurrently except by permission of instructor. Study of methods in newspaper and magazine production and practice in preparing copy for periodical publication, including editing, proof-reading, headline writing, using photographs and other display materials, handling news service copy, legal problems, and page design. Traditional grading only for majors/minors. (Lecture, 2 hrs, activity with the Daily Forty-Niner or University Magazine, 3 hrs.)

#### 350. Contemporary Magazines (3)

Prerequisite: ENGL 101. Development of the magazine and its significance in American life. Periodical types, editorial policies and literary stature. Special study of magazines in a field of the student's particular interest. (Lecture, discussion 3 hours.)

#### 355. Feature Article (3)

Techniques of writing non-fiction articles with a view toward potential sales to magazines, newspaper syndicates and Sunday supplements.

370. Principles of Public Relations (3)  
Prerequisites: ENGL 100 with a grade of "C" or better. Public relations fundamentals: research, action, and evaluation. Study of planning to special publics, the use of public relations tools, planning a public relations program. Numerous writing assignments involved.
374. Internal Communication for Public Relations (3)  
Prerequisites: JOUR 120, 370 or consent of instructor. Writing a wide variety of internal public relations materials including program proposals, background memoranda, employee publications and internal audio-visual media, speeches, internal crisis communication, and issues anticipation.
375. External Communication for Public Relations (3)  
Prerequisites: JOUR 120, 370 or consent of instructor. Writing for specific target audiences, news release and media alerts, captions, query letters, feature stories, media relations, letters to the editor, public service announcements, press kits, and external crisis communication.
376. Publications for Public Relations (3)  
Prerequisites: JOUR 120, 370 (or 270) or consent of instructor, and 374 or 375. Techniques of writing, editing and publishing newsletters, brochures and other publications as communication tools for public relations, utilizing computers.
380. Advanced Photojournalism (3)  
Prerequisite: JOUR 300 or consent of instructor. Photographic reporting with a camera. In-depth study of photojournalism with emphasis on creation of photo story ideas, photo essays and feature photos; photo editing and layout as applied to newspapers and magazines. Materials fee for those using university supplies.
- 382A. Broadcast News Production (3,3)  
Prerequisites: JOUR 120 and 325 and FEA 220 or consent of instructor. Reporting, writing and editing of news for broadcast. Interviewing and pursuit of story material. Production techniques including preparation of scripts with actualities. (Laboratory 6 hours.)
- 382B. Advanced Broadcast News Production (3)  
Prerequisites: JOUR 382A and consent of instructor. Development of the broadcast news story. Time management under strict deadlines. Preparation of complete news story, including script, actuality, voicing and production. (Lab 6 hrs.)
412. Theories of Mass Communication (3)  
Prerequisites: ENGL 101 and JOUR 110 or consent of instructor. Contemporary theories of mass communication. An overview of the development of communication theory as it relates to the mass media. Evaluation of theories of the communication process through analysis of the original research upon which the theories were founded. Source, message and audience effects of the communication process.
420. Investigative Reporting (3)  
Prerequisite: JOUR 120 and 320 or consent of instructor. Advanced course in investigative and interpretive reporting. Students will work in an editor-reporter relationship with instructor in researching and writing in-depth pieces on such complex issues as mass transit, air pollution, city government, poverty, crime, housing and drug abuse. Investigative and interviewing techniques will be stressed.
422. Senior Media Production (3)  
Prerequisite: Consent of instructor. Advanced work on Journalism Department publications as editors, writers, photographers, designers, or news broadcasters. May be repeated for a max. of 6 units with consent of instructor. Required course for Daily Forty-Niner and University Magazine editors. A student may not take course simultaneously with JOUR 319 or 323.
430. Law of Mass Communications (3)  
Principles and case studies of the law of the press, radio and television with emphasis on constitutional guarantees, prior restraints, libel, contempt, privacy, taxation, licensing, shield laws, free press vs. fair trial, and other laws affecting the news media.
431. Ethical Problems of the News Media (3)  
The study of ethical codes and value systems used in writing, editing, producing and presenting the news in the United States today. Case studies of current ethical problems confronting print and broadcast journalists with emphasis on how the student solves each problem.
455. Advanced Magazine Article Writing (3)  
Prerequisite: JOUR 355. Writing of fully developed magazine articles. At least two major pieces will be required. Heavy stress will be placed on article ideas, research and sophisticated interviewing techniques. Designed especially for students who plan to earn all or part of their income through free-lance writing of magazine articles and books.
471. Agency Public Relations (3)  
Prerequisites: JOUR 370 (or 270) and two of the following: JOUR 374, 375, 376. One of the fastest-growing segments of the public relations practice is the agency. This course is designed to acquaint students with the public relations agency and familiarize them with the structure and operation of agencies of all sizes and types. Students will have an opportunity to conduct an interview with a practitioner working in an agency and will work with others in an agency situation to develop business proposal involving a written program and an oral presentation of that program. Students also serve as consultant to a non-profit organization and help develop a public relations program. All assignments are designed to expand the student's skills in public relations problem-solving within an agency setting.
478. Public Relations Case Studies (3)  
Prerequisites: JOUR 120, 370 (or 270), 374 or 375, and 376. Case studies are used to acquaint students with types of problems that they will encounter when doing work in both profit and non-profit sectors. Strong emphasis on analytic planning and programmatic skills.
480. Picture Editing (3)  
Prerequisites: JOUR 120 and 331. Principles of picture selection for newspaper and magazine publication. Emphasis on preparing material — written and visual — for use as single picture or layout presentation. Materials fee.
490. Special Topics in Mass Communications (1-3)  
Topics of special interest in mass communications selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated for a total of six units.
494. Research Methods in Mass Communications (3)  
Prerequisite: Consent of instructor. Basic techniques of research in mass communication and mass media. Overview of theory building and hypothesis testing procedures as applicable to current problems in the mass communication field. Scientific methods, survey and experimental design, field studies, analysis of data.
498. Internship (3)  
Prerequisite: ENGL 101 (except PR and Photojournalism majors). For seniors only, by faculty recommendation, with consent of department chair. Work of an editorial or writing nature at least one full day a week with cooperating organizations in the Los Angeles-Orange County area. Work edited and evaluated by supervisors of the participating public relations and media firms. Regular reports to faculty supervisor and regular scheduled meetings with supervisor on-campus to discuss progress and problems. Students must gain approval. Credit/No Credit grading only.
499. Special Projects (1-3)  
Prerequisites: ENGL 101 (except PR majors), advance approval of project by the department. Research in the field of journalism in newspaper, magazine, public relations, advertising or other related fields. Open to journalism majors only. Student must meet once a week with instructor. Course may be repeated for a maximum of 6 units with different topics.

# KINESIOLOGY AND PHYSICAL EDUCATION

*College of Health and Human Services*

Department Chair

Dixie A. Grimmett

Department Office

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Faculty

Professors

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James A. Davis

Betty V. Edmondson

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Barbara J. Franklin

John J. Garhammer

John F. Gonsalves

Dixie A. Grimmett

William S. Husak

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Clayre K. Petray

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Sharon R. Guthrie

Michael G. Lacourse

Mary Ellen Leach

Ralph Rozenek

Douglas E. Young

Assistant Professor

Emyr W. Williams

Jill A. Crusemeyer

Department Secretary

Dee Sundry

Students may contact the Department Office for information and referral to the appropriate Faculty Advisor, Graduate Advising Coordinator, Student Teaching Coordinator, or Credential Advising Coordinator.

The Department of Kinesiology and Physical Education mission is accomplished by providing excellence in instruction, scholarship and service through a multidisciplinary approach that will foster the development and maintenance of behavior that is essential for a healthy lifestyle in ever changing demographics. The Department's programs offer a course of study for students wishing to prepare for professional careers or related disciplines in physical education-teaching (Adapted, Elementary, and Secondary), athletic training, fitness-wellness, exercise science and kinesiotherapy. The programs have been developed from physiological, psychological, biomechanical, and sociological principles. The Department also serves the needs of students completing majors in other fields who find that certain aspects of Kinesiology and Physical Education are important to their professional objectives and personal interests. In meeting the educational needs of these students the Degrees, Certificates, and Minor available in the Department of Kinesiology and Physical Education include:

- Bachelor of Arts in Kinesiology in five options.
- Bachelor of Science in Kinesiology in two options.
- Master of Arts in Kinesiology in seven options.
- Master of Science in Kinesiology in three options.
- California Single Subject Clear Credential Programs in Physical Education (K-12)
- Adapted Physical Education Specialist Credential (K-12)
- Minor in Physical Education: Single Subject Credential Add-on
- Community Physical Fitness Certificate
- Wilderness Studies Certificate
- Kinesiotherapy Certificate

The Department of Kinesiology and Physical Education, in addition to its Degrees, Certificates, and Minor, assumes the responsibility for the psychological, physiological, and sociological needs and interest of the college student through general education, interdisciplinary, and physical activity course offerings. Students enrolling in physical education activity courses assume responsibility for satisfactory health status appropriate to the class activity.

In addition to the degree requirements for the Bachelor of Arts in Kinesiology and the Bachelor of Science in Kinesiology, the Major must meet the following Department policies and requirements for University graduation:

1. Each major course and prerequisite course must be completed with a grade of "C" or better. A course in which a grade lower than a "C" is received must be retaken and successfully completed prior to enrolling in any course for which it is a prerequisite;
2. Upper division courses may not be waived by substitution or examination without Department petition and approval;

3. Current certification in First Aid (ARC-Standard, Advanced, EMT or equivalent) and Cardiopulmonary Resuscitation (ARC-Community, Professional Rescuer; AHA-Level B, Level C, or equivalent);
4. Department approval.
5. Bachelor of Arts degree Majors must also have Department clearance of lower division courses/activities and skill proficiencies;

## Bachelor of Arts in Kinesiology

Students pursuing a Bachelor of Arts degree in Kinesiology must complete lower division and upper division core courses and skill proficiency requirements plus courses in a specific area (Option). Students may select their area of specialization from one of the five Options described below. In meeting the requirements of this degree, the Department offers five specialized Options for study which permit students to develop a conceptual understanding related to human movement and to focus on preparation for one or more specific occupations. The student must demonstrate 1) physical skill proficiency, 2) knowledge of physical fitness, and 3) knowledge in the personal performance activity courses completed according to the lower division core requirements for specific Options prior to graduation. A minimum of 124 units are required for graduation.

### Physical Skill Proficiency

Each Bachelor of Arts Major is required to demonstrate physical skill proficiency at a 3.5 (1-5 scale) overall average level in fitness (KPE 263 or 343) and the personal performance activity courses required in each Option prior to graduation. Physical skill proficiency examinations are administered in the appropriate personal performance activity courses. Only physical skill proficiency scores in the range of a 2.0-5.0 are recorded and computed to determine a student's physical skill proficiency average.

### Pre-Athletic Training Option (pre-code 2-1290)

#### Preprofessional

In the California State University, an undergraduate major is designated as impacted when the number of applications received the first month of the filing period is greater than the available spaces. Such majors are authorized to use a pre-major code and supplementary admission criteria to screen applicants. The Option in Athletic Training (code 2-1240) is an impacted program. The supplementary admission criteria are as follows:

1. File a supplemental application obtained from the Department of Kinesiology and Physical Education. See Department Office for application deadlines.
2. Complete all lower division CSULB general education requirements before entry into the option.
3. Complete passing scores on the CSULB writing proficiency examination before entry into the option.
4. Earn an overall college cumulative GPA of a 2.75.
5. Complete the following prerequisite courses with "C" or better before entry into the option: Human Physiology (A/P 207 or equivalent), Human Anatomy (A/P 208 or equivalent), General Psychology (PSY 100 or equivalent), Community First Aid and CPR (KPE 210 or equivalent).

6. Complete the following prerequisite course with "B" or better before entry into the option: Prevention and Care of Athletic Injuries (KPE 307 or equivalent).
7. Complete a minimum of 150 hours of observation or student athletic trainer participation in a traditional athletic training setting (interscholastic or intercollegiate) under the supervision of a NATA certified athletic trainer.
8. Obtain three letters of recommendation, one of which must be from the athletic training setting in which the observation or student athletic trainer participation took place.

### Option in Athletic Training (code 2-1240) (124 units)

This Option is designed for students interested in careers in the prevention/care of athletic injuries and the administration of athletic training programs in public and private schools, colleges, universities, and with professional teams. Students interested in pursuing certification by the National Athletic Trainers Association, Inc. must complete additional requirements which are available from the Department Office.

Lower Division: A/P 207, 208; PSY 100; KPE 215, 263, and eight physical activity units distributed over a minimum of four activity categories:

Aquatics: KPE 125A, 125B, 237, 238;

Combative: KPE 106A, 149A, 249;

Dance: KPE 181A, 185, 260;

Individual/Dual Sports: KPE 100A, 100B, 112A, 112B, 171A, 264, 265, 266, 267;

Wilderness Studies: KPE 242, 244, 246A;

Team Sports: KPE 250, 253, 255, 257.

Upper Division: KPE 300, 301, 307, 308, 309, 310, 312, 315, 332I, 335, 363, 407; H SC 427; E DP 434B; Select one course from FCS 430 or H SC 210.

### Option in Fitness (code 2-1241) (124 units)

This Option is designed for those students interested in careers in the fitness industry, e.g., fitness director, program specialist or personal trainer in corporate, commercial, YMCA or other public/private facility.

Lower Division: A/P 207, 208; PSY 100; KPE 210, 215, 263, and eight physical activity units distributed over a minimum of four activity categories:

Aquatics: KPE 125A, 125B, 237, 238;

Combative: KPE 106A, 149A, 249;

Dance: KPE 181A, 185, 260;

Individual/Dual Sports: KPE 100A, 100B, 112A, 112B, 171A, 264, 265, 266, 267;

Wilderness Studies: KPE 242, 244, 246A;

Team Sports: KPE 250, 253, 255, 257.

Upper Division: KPE 300, 301, 305, 312, 315, 332I, 335, 363, 405, 489D; Select three courses from KPE 307, 309 or 320, 462/562, 483, 465/565, REC 425, FCS 430.

A fieldwork, field experience or internship course requires current certification in First Aid (ARC-Standard, Advanced, EMT or equivalent) and Cardiopulmonary Resuscitation (ARC-Community, Professional Rescuer; AHA-Level B, Level C, or equivalent) prior to enrollment.

### Option in Adapted Physical Education (code 2-1242) (124 units)

This Option is designed for the preparation of students seeking a California Single Subject Clear Credential in Physical Education (K-12) with a specialist credential in adapted physical education. The emphasis is placed upon teaching public school physical education to students with disabilities in pre-school through grade 12. The academic and professional course work is designed to provide students with philosophical, theoretical and applied concepts of teaching adapted physical education.

Lower Division: A/P 207, 208; PSY 100; KPE 149A, 171A, 250, 253, 255, 257, 260, 264, 265, 266, 267, 270; Select one course from KPE 237, 238.

Upper Division: KPE 300, 301, 312, 315, 320, 332I, 335, 343, 370, 380, 387, 388, 427, 460.

A fieldwork, field experience or internship course requires current certification in First Aid (ARC-Standard, Advanced, EMT or equivalent) and Cardiopulmonary Resuscitation (ARC-Community, Professional Rescuer; AHA-Level B, Level C, or equivalent) prior to enrollment.

### Option in Elementary School Physical Education (code 2-1243) (124 units)

This Option is designed for the preparation of students seeking a California Single Subject Clear Credential in Physical Education (K-12). The emphasis is placed upon teaching public school physical education to students in grades K through 6. The academic and professional course work is designed to provide students with philosophical, theoretical and applied concepts of teaching elementary school physical education.

Lower Division: A/P 207, 208; PSY 100; KPE 149A, 171A, 250, 253, 255, 257, 260, 264, 265, 266, 267, 270; Select one course from KPE 237, 238.

Upper Division: KPE 300, 301, 312, 315, 320, 332I, 335, 343, 370, 380, 460, 477, 483, FCS 430.

A fieldwork, field experience or internship course requires current certification in First Aid (ARC-Standard, Advanced, EMT or equivalent) and Cardiopulmonary Resuscitation (ARC-Community, Professional Rescuer; AHA-Level B, Level C, or equivalent) prior to enrollment.

### Option in Secondary School Physical Education (code 2-1244) (124 units)

This Option is designed for the preparation of students seeking a California Single Subject Clear Credential in Physical Education (K-12). The emphasis is placed upon teaching public school physical education to students in grades 6 through 12. The academic and professional course work is designed to provide students with philosophical, theoretical and applied concepts of teaching secondary school physical education.

Lower Division: A/P 207, 208; PSY 100; KPE 149A, 171A, 250, 253, 255, 257, 260, 264, 265, 266, 267, 270; Select one course from KPE 237, 238.

Upper Division: KPE 300, 301, 312, 315, 320, 332I, 335, 343, 370, 380, 457, 460, 461, 483.

A fieldwork, field experience or internship course requires current certification in First Aid (ARC-Standard, Advanced, EMT or equivalent) and Cardiopulmonary Resuscitation (ARC-Com-

munity, Professional Rescuer; AHA-Level B, Level C, or equivalent) prior to enrollment.

### Bachelor of Science in Kinesiology

#### Pre-Exercise Science Option (pre-code 3-1292)

##### Preprofessional

In the California State University, an undergraduate major is designated as impacted when the number of applications received the first month of the filing period is greater than the available spaces. Such majors are authorized to use a pre-major code and supplementary admission criteria to screen applicants. The Option in Exercise Science (code 3-1230) is an impacted program. The supplementary admission criteria are as follows:

1. File a supplemental application obtained from the Department of Kinesiology and Physical Education. See Department Office for application deadlines.
2. Complete all lower division CSULB general education requirements before entry into the option.
3. Complete passing scores on the CSULB writing proficiency examination before entry into the option.
4. Earn an overall college cumulative GPA of a 3.00.
5. Complete the following prerequisite courses with "C" or better before entry into the option: Human Physiology (A/P 207 or equivalent), Human Anatomy (A/P 208 or equivalent), General Chemistry (CHEM 111A and 111B or equivalents), Composition (ENG 100 or equivalent), College Algebra (MATH 112 or equivalent), General Physics (PHYS 100A and 100B or equivalents), and General Psychology (PSY 100 or equivalent).
6. Show proof of current First Aid (Community) certification and CPR (Community) certification.

#### Option in Exercise Science (code 3-1230) (132 units)

This option is designed primarily for those students interested in careers in exercise physiology, biomechanics, or motor control/learning as well as those students contemplating graduate work in these areas or one of the health professions, e.g., physical therapy. A minimum of 132 units are required for graduation.

Core Courses: A/P 207, 208; KPE 300, 301, 312.

Lower Division: CHEM 111A, 111B; KPE 263; PHYS 100A, 100B.

Upper Division: KPE 339I, 405, 441, 462, 465, 466, KPE 483 or BIOL 260.

Elective Courses: Select 18 units (minimum 6 units from KPE) from the following courses: BIOL 200, 211A, 211B; A/P 342 and 342L, 401, 442 and 442L, 443, 445, 446; CHEM 327, 448; FCS 232, 331A, 331B; H SC 150; KPE 157, 315, 320, 363, 494, 497, 499-03 Biofeedback Applications in Sport and Exercise Science.

A fieldwork, field experience or internship course requires current certification in First Aid (ARC-Standard, Advanced, EMT or equivalent) and Cardiopulmonary Resuscitation (ARC-Community, Professional Rescuer; AHA-Level B, Level C, or equivalent) prior to enrollment.

## Pre-Kinesiotherapy Option (pre-code 3-1291)

### Preprofessional

In the California State University, an undergraduate major is designated as impacted when the number of applications received the first month of the filing period is greater than the available spaces. Such majors are authorized to use a pre-major code and supplementary admission criteria to screen applicants. The Option in Kinesiotherapy (code 3-1245) is an impacted program. The supplementary admission criteria are as follows:

1. File a supplemental application obtained from the Department of Kinesiology and Physical Education. See Department Office for application deadlines.
2. Complete all lower division CSULB general education requirements before entry into the option.
3. Complete passing scores on the CSULB writing proficiency examination before entry into the option.
4. Earn an overall college cumulative GPA of a 3.00.
5. Complete the following prerequisite courses with "C" or better before entry into the option: Human Physiology (A/P 207 or equivalent), Human Anatomy (A/P 208 or equivalent), General Psychology (PSY 100 or equivalent), Community First Aid and CPR (KPE 210 or equivalent).
6. Complete the following prerequisite course with "B" or better before entry into the option: Psychology Research Methods (PSY 200).
7. Complete a minimum of 50 hours of observation or active participation in a therapeutic or rehabilitation setting.
8. Obtain two letters of recommendation, one of which must be from the therapeutic or rehabilitation setting in which the observation or active participation took place.

### Option in Kinesiotherapy (code 3-1245) (132 units)

This option is designed primarily for those students interested in careers which provide therapeutic physical activities in rehabilitation settings including clinics, hospitals, schools, universities, convalescent homes and other private and public institutions. Students interested in certification by the American Kinesiotherapy Association must complete additional requirements. A minimum of 132 units are required for graduation. Please consult the Department Coordinator and the Kinesiotherapy Certificate Program for additional information.

Core Courses: A/P 207, 208; KPE 300, 301, 312.

Lower Division: PSY 100, 200; KPE 210, 263, and eight physical activity units distributed over a minimum of four activity categories:

Aquatics: KPE 125A, 125B, 237, 238;

Combative: KPE 106A, 106C, 149A, 249;

Dance: KPE 181A, 185, 260;

Individual/Dual Sports: KPE 100A, 100B, 112A, 112B, 171A, 264, 265, 266, 267;

Wilderness Studies: KPE 242, 244, 246A;

Team Sports: KPE 250, 253, 255, 257.

Upper Division: GERN 400I or A/P 401; KPE 309, 315, 320, 332I, 335, 427, 489F; PSY 341, 370.

A fieldwork, field experience or internship course requires current certification in First Aid (ARC-Standard, Advanced, EMT or equivalent) and Cardiopulmonary Resuscitation (ARC-Community, Professional Rescuer; AHA-Level B, Level C, or equivalent) prior to enrollment.

### Adapted Physical Education Specialist Credential (code 980)

This program is designed for students interested in the administration and implementation of physical activity programs for persons with disabilities. Completion of this credential authorizes the California Adapted Physical Education Specialist Teaching Credential.

#### Requirements

1. Bachelor's degree with a teaching major in Kinesiology;
2. Must be obtained concurrently or after completion of the Single Subject Physical Education Teaching Credential, K-12;
3. KPE 320, 387, 388, 427; ED P 350; Select two courses from CD 280, ED P 405, 526, 546, 564, 579B.

### Minor in Physical Education Teaching (code 0-1201)

This minor is designed for those students who are striving for an additional credential. With completion of this minor, the University will recommend the additional credential in Physical Education.

#### Requirements

A minimum of 34 units as follows: A/P 207 and KPE 301 or A/P 208 and KPE 300; KPE 315, 343, 370, 380, 460, 483; EDSS 300P; Eight physical activity units including: KPE 237 or 238; 265; 250 or 257; 253 or 255; 171A or 264; 266 or 267; 270.

In addition to the above, each student is required to demonstrate skill proficiency at an average 3.5 level on a 5 point scale in KPE 343 and the 8 physical activity units completed to satisfy requirements for this minor. Only physical skill proficiency scores in the range of 2.0-5.0 are recorded and computed to determine a student's physical skill proficiency average.

### Concentration in Physical Education Elementary Teaching

#### Requirements

A minimum of 21 units as follows:  
KPE 301, 312, 315, 370, 427, 476, 477.

### Requirements for the Concentration in Physical Education Coaching

A minimum of 20 units as follows:  
KPE 301, 307, 332I: a minimum of 11 units selected in consultation with appropriate KPE Advisor from the following: KPE 312, 350, 353, 355, 356, 363, 365, 366, 369, 453, 458, 475, 489B.

### Certificate Programs

The Department of Kinesiology and Physical Education offers four different certificate programs each of which is related to a special emphasis provided in the curriculum. All certificate programs are open to students enrolled in the University who meet general admission requirements as follows:

1. Completion of 30 hours of course work;
2. A minimum 2.75 GPA in all completed course work;

3. Admission application and approval by a faculty committee in the certificate program selected.

### Community Physical Fitness Certificate (code 1-1050)

Specific emphasis in this program is directed to the knowledge, understanding and application of principles designed to prepare the student for personal training in physical fitness and management of fitness-wellness facilities. Such facilities include corporate fitness, commercial health clubs, personal training centers, hospitals, senior centers, retirement facilities and with other public/private fitness, sport and wellness programs.

#### Requirements

1. Current certification in cardiopulmonary resuscitation and first aid;
2. Course work (35 units as follows): A/P 207, 208; KPE 300, 301, 305, 363, 489D or H SC 485.

Select five additional courses from the Area's listed below in consultation with the Certificate Advising Coordinator. Of the five courses selected, a minimum of three courses must be from one Area.

Area I: ED P 191, 434B; FCS 232 or 430, 331A, 331B, 336, 433, 436, 436L, 439, 461; H SC 210, 401, 421, 435/535; KPE 309, 339, 405, 441/541, 462/562, 465/565; REC 312, 421, 425, 427.

Area II: ACCT 201; C/ST 200, 210; HRM 361, H SC 305, 403; IS 240; MGMT 421; MKTG 300, 330; PSY 381.

Area III: A/P 342, 342L, 441/541, 443/543, 446/546; BIOL 260.

### Wilderness Studies Certificate (code 1-1160)

This program is designed to develop leaders who can provide safe and challenging situations for individuals seeking self-fulfilling experiences in wilderness environments. The program of study will enable the student to acquire appropriate knowledge and skills, and to develop a personal philosophy reflecting understanding and concern for the protection of the environment and safety of participants in wilderness activities.

#### Requirements

1. Certification in First Aid and Cardiopulmonary Resuscitation;
2. Completion of Log of Outdoor Experiences;
3. Course work (31-33 units as follows): BIOL 100, KPE 346, 448, REC 490 with advisement. The following coursework must be taken in consultation with the advising coordinator: select four courses from KPE 131, 153, 242, 244, 247A; select two courses from KPE 243A, 243C, 245, REC 430; select one course from KPE 141, 446, 497, 499; select one course from FCS 232, REC 317, 407, 495.

### Pre-Athletic Training Certificate (code 1-1130)

This program is designed to assist the student in acquiring a foundation of knowledge and skills necessary for providing prevention and care of athletic injuries, and the administration of athletic training programs in public and private schools, colleges, universities and professional sport teams. Individuals who wish to pursue certification by the National Athletic Trainers' Association must complete additional requirements. Information concerning specific requirements for admission to the NATA

program may be obtained from the Department of Kinesiology and Physical Education.

#### Requirements

1. Certification in cardiopulmonary resuscitation and first aid;
2. Course work: (31 units as follows):  
KPE 300, 301, 307, 308, 309, 363, 483, 489C; FCS 430.

### Corrective Therapy Certificate (code 1-1060)

This program is designed to prepare the student to pass the American Kinesiotherapy Association (AKTA) Certification Test. AKTA certification will qualify the therapist to provide therapeutic physical activities in rehabilitation settings including clinics, hospitals, schools, universities, convalescent homes and other private and public institutions or in private practice. The student will complete the Kinesiotherapy Option in the undergraduate curriculum plus 27 additional units. Information concerning the certificate can be obtained from the Director of the Kinesiotherapy Program in the Department of Kinesiology and Physical Education.

#### Requirements

1. Admission application and approval by Director;
2. Completion of the degree requirements of the Bachelor of Science: Option Kinesiotherapy;
3. Specialization course work requires a "B" or better grade for AKTA Certification;
4. Course work: A/P 401 or GERN 400I; H SC 210 or 411 or 427; KPE 210, 309, 320, 405 or 499, 427, 485, 489F, 538, 588, 588L; PSY 341 or 345.

### Graduate Program

Two degree programs are available to the student: Master of Arts degree in Kinesiology with seven Options and Master of Science degree in Kinesiology with three Options. The student may select the thesis track or the comprehensive examination track. The student who chooses the thesis track is required to complete a thesis project. The student who chooses the comprehensive examination track is required to take KPE 695. The minimum unit requirement for the MA degree major program is 30 units for thesis students and 36 units for comprehensive examination students. The minimum unit requirement for the MS degree major program is 33 units for thesis students and 39 units for comprehensive examination students.

#### Admission Criteria

1. A bachelor's degree from an accredited institution with a major in Kinesiology/Physical Education; or
2. A bachelor's degree in another field with a minimum of 24 units of upper division courses in Kinesiology/Physical Education composed of prerequisite courses needed for the tentative degree plan and the remaining courses to be selected by the student in conjunction with the student's major advisor and approved by the Department Graduate Advisory Council. All deficiencies must be removed prior to advancement to candidacy;
3. An overall undergraduate GPA of 2.50 or better and an upper division Kinesiology/ Physical Education major GPA of 2.75 or better;
4. A minimum cumulative score of 1350 on the verbal, quantitative and analytical sections of the Graduate Record Examination.

### Advancement to Candidacy

1. Completion of the general University requirements for advancement to candidacy;
2. Successful completion of the CSULB Writing Proficiency Examination. Information about the exam is available in the Testing Office (SS/A-216);
3. A graduate program must have approval of the student's advisor, Department Graduate Coordinator, and Associate Dean of Graduate Students, Research, and Faculty Affairs for the College of Health and Human Services.

### Master of Arts in Kinesiology

Seven options are under the Master of Arts degree in Kinesiology and are described below. The core courses for thesis students are KPE 590, 696, and 698. The core courses for comprehensive examination students are KPE 590, 695, and 696.

#### Option in Adapted Physical Education (code 5-1235)

This option is designed to provide advanced preparation in adapted physical activity and the study of individuals with disabilities across the lifespan (preschool to adult).

##### Requirements

1. KPE 590 and 696
2. Minimum of 12 units selected from the following: KPE 537, 538, 546, 638, and 697 (3 units)
3. KPE 698 (4 units) for thesis students plus a minimum of 8 elective units
4. KPE 695 for comprehensive exam students plus a minimum of 15 elective units

#### Option in Coaching (code 5-1238)

This option provides an in-depth study in the scientific, mechanical, emotional, and methodological realms of coaching.

##### Requirements

1. KPE 590 and 696
2. Minimum of 12 units selected from the following: KPE 524, 540, 551, 560, 562, 575, 630, and 633
3. KPE 593 (3-6 units) required after advancement to candidacy
4. KPE 698 (4 units) for thesis students, plus a minimum of 2-5 elective units
5. KPE 695 for comprehensive examination students, plus a minimum of 12-15 elective units

#### Option in Motor Behavior (code 5-1237)

This option is designed to provide advanced preparation in human movement from a behavioral perspective; this includes the examination of motor learning, control and development across the lifespan.

##### Requirements

1. KPE 590 and 696
2. Minimum of 12 units selected from the following: KPE 540, 546, 630, 633, and 697 (3 units)

3. KPE 698 (4 units) for thesis students, plus a minimum of 8 elective units
4. KPE 695 for comprehensive examination students, plus a minimum of 15 elective units

#### Option in Pedagogical Studies (code 5-1232)

This option provides preparation in student design, instructional development, and evaluation to improve the supervision of skills and develop expertise in behavioral research methods.

##### Requirements

1. KPE 524, 525, 526, 590, 696, and 697 (3 units)
2. KPE 698 (4 units) for thesis students, plus a minimum of 8 elective units
3. KPE 695 for comprehensive examination students, plus a minimum of 15 elective units

#### Option in Sports Studies (code 5-1236)

This option examines sport from the perspective of sociology, culture, anthropology, history, psychology, and philosophy.

##### Requirements

1. KPE 590 and 696
2. Minimum of 12 units from the following: KPE 573, 574, 577, 633, 674, 675, and 697 (3 units)
3. KPE 698 (4 units) for thesis students, plus a minimum of 8 elective units
4. KPE 695 for comprehensive examination students, plus a minimum of 15 elective units

#### Option in Sports Management (code 5-1233)

This option provides preparation for management (administrative) career opportunities in physical education, athletics, or commercial settings.

##### Requirements

1. KPE 521, 590, 592 (6 units), 685, and 696.
2. Department electives. Thesis students select 3 units and comprehensive examination students select 6 units from the following: KPE 573, 574, 577, 633, 671, and 674.
3. Nondepartment electives. Thesis students select 9 units with advisor's approval and comprehensive examination students select 12 units with advisor's approval from the following: EDAD 541, 544, and 647; ACCT 500; FIN 500; HRM 500; and MKTG 500.
4. KPE 698 (4 units) for thesis students
5. KPE 695 for comprehensive examination students

#### Option in Individualized, Program, and Generalized Areas (code 5-1239)

These options are designed to provide the student with curriculum activities that combine one or more option areas into a program of study. These options are developed by the student with the advisement of a graduate faculty member and/or the Graduate Advisor. A statement of rationale for the proposal must accompany the program of study.



## Requirements

1. KPE 590 and 696
2. Minimum of 15 units from 500 and/or 600 level coursework in KPE
3. KPE 698 (4 units) for thesis students, plus a minimum of 5 elective units (individualized)
4. KPE 695 for comprehensive examination students, plus a minimum of 12 elective units (generalized and program areas only)

## Master of Science in Kinesiology

Three options are under the Master of Science degree in Kinesiology and are described below. The core courses for thesis students are KPE 580, 590, 696, and 698. The core courses for comprehensive examination students are KPE 580, 590, 695, and 696.

### Option in Exercise Science (code 6-1230)

This option is designed to provide up-to-date theoretical principles and practical experiences in exercise physiology and biomechanics.

## Requirements

1. KPE 540, 550, 551, 552, 580, 590, 696, and either 594 or 697 (3 units)
2. Select two of the following four courses or select other 6 units with advisor's approval: KPE 541, 562, 565, and 566
3. KPE 698 (4 units) for thesis students
4. KPE 695 for comprehensive examination students, plus a minimum of 6 elective units

### Option in Sport and Exercise Psychology (code 6-1231)

This option is designed to prepare students for careers in sport and exercise psychology, in particular as athletic performance enhancement specialists and/or as researchers and teachers in academic settings.

## Requirements

1. KPE 575, 580, 590, 633, and 696
2. Six units from the following: KPE 524, 526, 546, 574, 577, 593, 630, and 675.
3. KPE 698 (4 units) for thesis students, plus 3 units of KPE 697 and 6 units from PSY and/or additional electives in KPE.
4. KPE 695 for comprehensive examination students, plus 15 units from PSY courses and/or additional electives in KPE.

### Option in Sports Medicine and Injury Studies (code 6-1234)

This option is designed to provide the student with an in-depth study in the many health-related problems related to individuals who are physically active.

## Requirements

1. KPE 540, 551, 560, 561, 562, 580, 590, 633, 696, and 697 (3 units)
2. KPE 698 (4 units) for thesis students
3. KPE 695 for comprehensive examination students, plus a minimum of 6 elective units

## Courses (KPE)

### Activity Courses

#### 100-199. Physical Education Activity (1)

A broad range of physical education activities is offered. These are designed to provide an opportunity for students to meet their health, physical and recreational needs and interests. Maximum of 8 units may be applied toward the University graduation requirement. Students enrolling in physical education courses assume the responsibility for satisfactory health status appropriate for class activity. KPE activity courses may be offered at the beginning (I), intermediate (II), and advanced (III) levels. All classes are co-educational, any student may enroll in the activity courses offered by the Department of Kinesiology and Physical Education. Classes offered within areas are as follows:

#### Individual/Dual Activities (1)

- 100A,B. Archery
- 102A. Badminton
- 104A. Bowling
- 108A. Golf
- 110A. Horsemanship
- 112A,B. Racketball
- 114A,B,C. Tennis
- 145A. Gymnastics
- 152A. Yoga

#### Combative Activities (1)

- 106A,C. Fencing-Foil
- 107A. Fencing-Sabre
- 147A. Judo
- 148A. Karate
- 149A. Self Defense

#### Aquatics (1)

- 121A,B. Sailing
- 124A. Surfing
- 125A,B. Swimming
- 126A. Swimming Conditioning
- 128A. Water Polo
- 132. Springboard Diving
- 133A. Windsurfing

#### Fitness Activities (1)

- 140A,B. Aerobic Dance
- 141A. Bicycling
- 142. Low Impact Aerobics
- 146A. Jogging
- 151A,C. Weight Training and Conditioning
- 155. Stretching
- 158. Senior Citizen Fitness

#### Team Activities (1)

- 161A. Basketball
- 162A. Beach Volleyball
- 165A. Flag Football
- 166. Rugby
- 167A. Soccer
- 169A. Softball
- 171A. Track and Field
- 172A,B,C. Volleyball

#### Recreational Dance

- 181A. Folk Dance
- 183A. Recreational Dance Workshop
- 185. Social Dance

#### Special Studies (1-3)

- 122. Scuba (See Lower Division)
- 157. Fitness for Living (See Lower Division)

197. Special Topics  
 198. Special Activities  
 A. Aqua Aerobics  
 B. Triathlon Fitness  
 C. Social Dance Aerobics  
 D. Individual Conditioning  
 E. Individual Adapted Activities

199. Special Studies

\* See Physical Education professional courses for additional activities open to non-majors.

## Physical Education Professional Courses (KPE)

Kinesiology majors and minors will be given priority enrollment in classes required for the major. Selected courses are available to the general student body to receive credit toward general education requirements.

### Lower Division

#### 122. Scuba Diving (2)

Prerequisites: Swim test and diving exam. An introductory class in recreational skin and scuba diving techniques in preparation for an openwater diving certification card. (Act 4 hrs.)

#### 157. Fitness for Living (3)

This course is a practical and personalized approach for the development of an individualized self-managed lifestyle. This will be accomplished through a synthesis of food for fitness, circulatory efficiency evaluation and information, relaxation skills, and a variety of cosmetic and/or body conditioning techniques. (Lecture 2 hours, Activity 2 hours.)

#### 210. Advanced Emergency Care (3)

Theory and practice of first aid for the injured. Successful completion of course requirements leads to the American National Red Cross advanced first aid and personal safety and community CPR certificate.

#### 215. Career Perspectives in Human Movement (1)

An overview of human movement including professional preparation and employment opportunities. Orientation to current programs and proficiency requirements. Students entering the Kinesiology major are required to enroll in this course their first semester of study.

#### 230. Sports Appreciation (3)

Introduction to the study of sport as social institution in American society. (Lec-disc. 3 hrs)

#### 237. Techniques and Analysis of Aquatic Skills (2)

Prerequisites: Open to Kinesiology majors and minors only, American Red Cross Community First Aid and Safety or equivalent. Instruction and techniques in individual aquatic skills, hydrodynamic and movement principles, and an exposure to a variety of learning procedures applicable to the development of aquatic skills. Traditional grading only. (Lecture 1 hour, Activity 3 hours.)

#### 238. Water Safety Instructor (2)

Prerequisites: Open to Kinesiology majors and minors only, KPE 237 or equivalent or instructor permission, American Red Cross Community First Aid and Safety or equivalent. Comprehensive analysis of principles of movement, organizational strategies utilized in presenting aquatic activities and advanced swimming skills in physical education classes. Includes an opportunity to qualify for the American Red Cross Water Safety Instructor certification. Traditional grading only. (Lecture 1 hour, Activity 3 hours.)

#### 239. Lifeguard Training (2)

Prerequisites: American Red Cross Community First Aid and Safety or equivalent. Provide lifeguard candidates with the skills and knowledge necessary to keep the patrons of aquatic facilities safe in and around the water. (Lecture 1 hour, Activity 3 hours.)

#### 242. Backpacking (2)

An experiential examination and analysis in the judgment, knowledge, equipment and skills necessary to safe wilderness travel and living. (2-3 day field experience required)

#### 243A. Winter Mountain Expedition (3)

Introduction to winter mountaineering skills; study of the mountain environment. (Activity 6 hours.) (2-3 day field experience required) A course fee may be required.

#### 243B. Summer Mountain Expedition (3)

Instruction and extended experience developing the attitudes, judgment, knowledge and skills for safe mountain travel and living. Trip planning, logistics, navigation, mountain medicine, mountaineering techniques, safe and ecological camping will be learned and practiced while on a ten-day expedition. Throughout the wilderness expedition group process, leadership, problem solving and judgment all provide growth and experiential education opportunities that develop the successful wilderness traveler. Traditional grading only. (Activity 6 hours.) A course fee may be required.

#### 243C. Desert Expedition (3)

Introduction to the skills, attitudes and knowledge required for safe use and enjoyment of desert areas. An interdisciplinary introduction to the meaning and significance of the desert. Trip planning, map use, methods of safe travel. Course includes field trip.

#### 244. Kayaking (2)

An experiential examination and analysis of the judgment, knowledge, equipment and skill development necessary to safe flat and whitewater kayaking. (2-3 day field experience required).

#### 245. Wilderness Water Expedition (3)

Introduction to the skills, attitudes and knowledge required for safe use of varied types of wilderness waters. The skills and techniques of boat handling and trip planning. An interdisciplinary introduction to the study of waterways. (Activity 6 hours.) (2-3 day field experience required) A course fee may be required.

#### 246A. Mountaineering (2)

An experiential examination and analysis in the judgement, knowledge, equipment and skills necessary to safe mountaineering. Course includes field trip. Traditional grading only. (Activity 4 hours.) A course fee may be required.

#### 247A. Techniques of Rockclimbing (2)

Introduction to the basic skills, judgment and safety for technical rockclimbing. The skills and techniques of top roping, belaying rapels and self rescue. Course includes a field trip.

#### 250. Techniques of Basketball (1)

(Open to Kinesiology majors and minors only.) Instruction in individual and team skills and techniques utilized in the sport of basketball for successful performance.

#### 253. Techniques of Soccer (1)

(Open to Kinesiology majors and minors only.) Instruction in individual and team skills and techniques utilized in the sport of soccer for successful performance.

#### 255. Techniques of Softball (1)

(Open to Kinesiology majors and minors only.) Instruction and practice in catching, throwing, hitting, sliding, base running, and bunting. Comprehensive teaching of skills and techniques in softball.

#### 257. Techniques of Volleyball (1)

(Open to Kinesiology majors and minors only.) Instruction in individual and team techniques utilized in the sport of volleyball.

#### 260. Fundamental Rhythms (2)

Instruction and practice in fundamental rhythms involving folk and social dance forms. Designed for Kinesiology majors and minors, but open to all students. (Laboratory) Grading: Student Option.

#### 263. Techniques of Physical Fitness (2)

Instruction, practice and evaluation in physical fitness. Calisthenics, static and dynamic flexibility exercises, weight training, fitness trail, running, and other aerobic activities, including exercises to music and relaxation training, will be part of the training program. (Laboratory, including off campus long distance runs and other aerobic activities.)

264. Techniques of Golf (1)  
(Open to Kinesiology majors and minors only.) Instruction and techniques in individual skills and strategies for successful performance in golf.

265. Techniques and Analysis of Gymnastics (2)  
(Open to Kinesiology majors and minors only.) Techniques, instruction and comprehensive analysis of the principles of movement in gymnastics. Organizational strategies utilized in presenting gymnastics in Physical Education classes. Traditional grading only. (Lecture 1 hour, Activity 3 hours.)

266. Techniques of Badminton (1)  
(Open to Kinesiology majors and minors only.) Instruction and techniques in the skills and strategies for successful performance in badminton.

267. Techniques of Tennis (1)  
(Open to Kinesiology majors and minors only.) Instruction, techniques and analysis in the concepts of teaching, coaching, and playing tennis.

270. Professional Practices in Public School Physical Education (3)  
Prerequisite: ENGL 100 or equivalent; ARC-Community First Aid and CPR or equivalent. An introductory course designed to provide an overview of current professional practices in public school physical education. Students entering the Kinesiology and Physical Education Pedagogy Options (Adapted, Elementary, Secondary) are required to enroll in this course the first semester of their junior year or after completing 30 units of college course work. Traditional grading only. (Discussion 3 hours.)

#### Upper Division

300. Biomechanics of Human Movement (3)  
Prerequisites: A/P 208 or equivalent. Anatomical structure and function, and mechanical principles relating to human motion, including analytical application. (Lecture, laboratory)

301. Exercise Physiology (3)  
Prerequisites: A/P 207 or equivalent 4-unit Human Physiology course with 3 hour lecture and 3 hour laboratory. Basic concepts of the physiology of muscular exercise with emphasis on the responses and adaptations of the circulatory system, the respiratory system, and skeletal muscles to the physical stress of acute and chronic exercise. (Lecture 2 hours, Laboratory 3 hours.)

305. Introduction to Community Physical Fitness (2)  
Introduction to community physical fitness, leadership, management and skill proficiency. (Lecture, laboratory.)

307. Prevention and Care of Athletic Injuries (3)  
Prerequisites: KPE 210 or equivalent. Principles and techniques of the prevention and care of common athletic injuries. (Lecture, laboratory.)

308. Advanced Athletic Training (2)  
Prerequisites: KPE 300, 307; A/P 208. Study of advanced training techniques, methods and skills required for the evaluation and therapeutic treatment of athletic injuries. (Lecture, laboratory.)

309. Developmental and Therapeutic Exercise (3)  
Prerequisites: KPE 300, 301 or consent of instructor, Principles, techniques, and prescription of exercises for development or rehabilitation of the body. (Lecture, laboratory.)

310. Therapeutic Approaches in Athletic Training (3)  
Prerequisites: KPE 308, 309, and permission of instructor. Theory and application of therapeutic modalities and exercise rehabilitation commonly used in athletic training programs. Designed for Kinesiology majors in the athletic training track. (Lecture: 2 hours, Laboratory, 2 hours)

312. Motor Control and Learning (3)  
Prerequisites: A/P 207, 208; PSY 100. Basic concepts of the neuro-motor and psychological contributions in the control and acquisition of skilled performance. Traditional grading only for Majors/Minors. (Discussion 2 hours, Laboratory 2 hours.)

315. Motor Development (3)  
Prerequisites: A/P 207, 208; PSY 100 or equivalent. Developmental perspective of the factors which contribute to the acquisition of mo-

tor control from the period of infancy through adolescence. (Lecture, laboratory.)

320. Adapted Physical Education (3)  
Prerequisites: A/P 208. This course is designed to prepare Kinesiology majors to meet the physical activity program needs of persons with disabilities. Designed primarily to understand the etiology and characteristics of persons with mental, physical, emotional, sensory, health, learning and/or multiple impairments. When appropriate, be able to successfully integrate the disabled individual into the physical education mainstream. (Lecture 2 hours, Laboratory 2 hours.)

332I. Sociocultural Dimensions of Sport and Human Movement (3)  
Prerequisite: ENGL 100, upper-division status. Socio-cultural and psychological correlations to human movement. (Lecture-discussion, 3 hours.)

335. Historical and Cultural Foundations of Sport in America (3)  
Survey of the history of sport. Historical identification of the cultural trends and functions of sport and physical education in America.

336. The Olympic Movement (3)  
Survey of the Olympic movement. Identification of its trends and functions as a social force throughout the world.

338I. Women in Sport (3)  
Prerequisites: ENGL 100 and upper division status. Survey of women's historical and contemporary involvement with sport. The social, cultural and developmental implications of sports participation for women. Same course as W/ST 338I. (Lecture-discussion, 3 hours.)

339I. Psychology of Sport Behavior and Athletic Performance (3)  
Prerequisites: Upper-division status, ENGL 100, PSY 100. Psychological dimensions of attitudes, behaviors, and performance in sport and exercise environments. Same course as PSY 339I. (Lecture-discussion, 3 hours.)

343. Techniques and Analysis of Fitness (2)  
(Open to Kinesiology majors and minors only.) Knowledge and understanding needed to plan and implement fitness programs in the K-12 school setting. Analysis of the development, maintenance, implementation, and self-evaluation of physical fitness. Methods, techniques, instructional strategies, safety factors, motivation, and necessary equipment for teaching physical fitness. The activity component of the course includes fitness development that is designed to prepare the student for the Department's fitness proficiency requirement. Traditional grading only. (Lecture 1 hour, Activity 3 hours.)

346. Wilderness Emergency Care (2)  
Prerequisites: One wilderness skill course or equivalent; KPE 210 or current certification in first aid and cardiopulmonary resuscitation. Techniques concerned with wilderness emergencies, including advanced first aid, cardiopulmonary resuscitation, search and rescue and emergency evacuation methods. (Discussion 1 hour, Laboratory 2 hours.)

350. Applied Theory of Teaching and Coaching Basketball (2)  
Prerequisites: KPE 250 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in teaching basketball including coaching theories, principles and organization as an interscholastic sport. (Lec 1 hr, Act 3 hrs.)

353. Applied Theory of Teaching and Coaching Soccer (2)  
Prerequisites: KPE 253 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in teaching soccer including coaching theories, principles and organization as an interscholastic sport. (Lec 1 hr, Act 3 hrs.)

355. Applied Theory of Teaching and Coaching Softball/ Baseball (2)  
Prerequisites: KPE 255 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in teaching softball/baseball including coaching theories, principles and organization as an interscholastic sport. (Lecture 1 hour, Activity 3 hours.)

356. Applied Theory of Teaching and Coaching Volleyball (2)  
Prerequisite: KPE 257 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in teaching volleyball including coaching theories, principles and organization as an interscholastic sport. (Lecture 1 hour, Activity 3 hours.)
360. Applied Theory of Teaching Recreational Dance Forms (2)  
Prerequisite: KPE 260 or equivalent. Comprehensive analysis of the theory and practice of social, folk and square dance. Includes skills analysis, organization, leadership and evaluation of recreational dance forms. (Lecture 1 hour, Activity 3 hours.)
362. Applied Theory of Teaching Self Defense (2)  
Prerequisite: KPE 149A or equivalent. Application of the theory and techniques of self defense and combative movement forms. Content focuses on analysis, teaching techniques and strategies. (Lecture 1 hr, Activity 3 hrs.)
363. Applied Theory of Teaching Fitness and Conditioning (2)  
Prerequisite: KPE 263. Analysis, practice and assessment in physical fitness and conditioning. Methods, techniques, safety factors, equipment, ergogenic aids, and sex differences are considered in teaching physical fitness and conditioning. Instruction to include off campus running, swimming, cycling, skating, strength and general fitness activities. (Lecture 1 hour, Activity 3 hours.)
365. Applied Theory of Teaching and Coaching Gymnastics (2)  
Prerequisite: KPE 265 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and methodology used in teaching men's and women's gymnastics including coaching theories, principles and organization as interscholastic sports. (Lecture 1 hour, Activity 3 hours.)
366. Applied Theory of Teaching and Coaching Tennis and Badminton (2)  
Prerequisite: KPE 267 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in teaching tennis and badminton including coaching theories, principles and organization as interscholastic sports. (Lecture 1 hour, Activity 3 hours.)
369. Applied Theory of Teaching and Coaching Track and Field/ Cross Country (2)  
Prerequisite: KPE 171A or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in track and field and cross country including coaching theories, principles and organization as interscholastic sports. (Lecture 1 hour, Activity 3 hours.)
370. Movement Theory and Practice of Elementary Physical Education (3)  
Prerequisite: KPE 270. A creative and movement oriented analysis of the components of basic movement with application to games, gymnastics, dance, aquatics, and developmental skills commonly experienced and/or taught in elementary school physical education programs. Principles, aims, and objectives of elementary physical education. Observation and practice in the teaching techniques used in elementary physical education. Designed for Kinesiology majors. (Lecture, activity.)
380. Principles, Organization and Management of Secondary School Physical Education (3)  
Prerequisites: KPE 370, EDSS 300P, or consent of instructor. Principles, organizational management of activities taught in secondary schools includes teaching strategies. (Lec, lab).
387. Physical Activities for the Disabled (3)  
Prerequisites: KPE 320, 427. Corequisite: KPE 489A. Adaptation of physical activities, equipment, and facilities for individuals with permanent disabilities affecting motor performance. (Lecture, laboratory).
388. Program Planning and Instruction in Adapted Physical Education (3)  
Prerequisite: KPE 387. Corequisite: KPE 489A. Emphasis on program planning and the development of teaching skills in Adapted Physical Education.
405. Cardiopulmonary Aspects of Health-Related Exercise Programs (4)  
Prerequisites: KPE 210 or current First Aid and CPR certificates, KPE 301. Application of advanced exercise science concepts in the design and execution of cardiopulmonary exercise training programs for apparently healthy adults. Traditional grading only. (Lecture, lab.)
407. Management Theory of Athletic Injuries (3)  
Prerequisites or corequisites: KPE 300, 307, 308; A/P 208. Theory and management of specific injuries in physical education and athletics, including recognition, treatment and identification of trends in injury management.
- 427./527. Physical and Motor Assessment (3)  
Prerequisites: KPE 315 or equivalent and KPE 320 or equivalent. Upper-division undergraduate or Graduate standing. Consent of instructor required for graduate students prior to registration. The course includes the selection, evaluation, administration and interpretation of various tests used in the physical and motor assessment practices of individuals with disabilities. The course is a requirement toward the Adapted Physical Education Specialist Credential. Upper-division students register in KPE 427; Graduate students register in KPE 527. Traditional grading only. (Lecture 2 hrs., Laboratory 2 hrs.)
- 441./541. Applied Biomechanics: Lifting and Work Capacity (3)  
Prerequisites: KPE 300 or P T 301 and 302. (Trigonometry and Physics 100A recommended) Study of the mechanical properties of bone, ligament, tendon and skeletal muscle. Development and description of selected biomechanical models with application to the evaluation of weight-lifting and rehabilitation exercises, as well as occupational lifting tasks. Critical analysis of methods used to test and evaluate strength. Traditional grading only.
448. Wilderness Studies: Leadership Practicum (3)  
Prerequisites or corequisites: KPE 346. Analysis and practice of the leadership and teaching techniques appropriate to the conduct of wilderness adventure programs.
453. Theory of Coaching Football (2)  
Prerequisites: Junior or senior standing, consent of instructor. Theories of coaching, principles and organization of interscholastic and intercollegiate football. (Lec 1 hr, Act 3 hrs.)
457. Applied Theory of Teaching Team Sports (3)  
Prerequisites: KPE 250, 253, 255, 257 or instructor permission; senior standing. Comprehensive analysis of the principles of movement, corrections of performance, and organizational strategies utilized in presenting team sports: basketball, field hockey, flag football, soccer, softball, team handball, and volleyball. Traditional grading only. (Lecture 2 hours, Activity 2 hours.)
458. Theory of Coaching Swimming and Water Polo (2)  
Prerequisite: KPE 237, 238 or equivalent. Theory and practice of tactics, strategies, organization and coaching techniques for interscholastic and intercollegiate swimming and water polo. (Lecture 1 hour, Activity 3 hours.)
460. Applied Theory and Analysis of Non-Traditional Physical Education Games and Activities (2)  
Prerequisites: Open to Kinesiology majors and minors only, KPE 370, senior standing. Organization and management to effectively plan and implement a variety of non-traditional physical education games and activities such as cooperative games, problem solving activities, collaborative learning groups, and outdoor educational experiences. Traditional grading only. (Lecture 1 hour, Activity 3 hours.)
461. Applied Theory of Teaching Individual and Dual Sports (3)  
Prerequisites: KPE 171A, 264, 266, 267 or instructor permission; senior standing. Comprehensive analysis of the principles of movement and organizational strategies utilized in archery, badminton, golf, paddle tennis, pickleball, racquetball, tennis, and track and field. Traditional grading only. Traditional grading only. (Lecture 2 hours, Activity 2 hours.)
- 462./562. Advanced Strength and Conditioning (3)  
Prerequisites: KPE 300, 301. Study of biomechanical and kinesiological factors which are important in understanding the function and proper techniques for execution of a wide variety of standard and advanced weight training exercises. Physiological bases for strength training and adaptations caused by different training regimes are emphasized. Traditional grading only.

**465./565. Clinical Exercise Electrocardiography (3)**

Prerequisites: A/P 207, KPE 301, and/or instructor consent. A study of the physiology and patho-physiology of the electrical activity of the heart. Instruction is directed toward pattern recognition of normal and abnormal resting and exercise electrocardiograms. (Seminar 3 hrs.)

**466./566. Biochemical and Hormonal Adaptations to Physical Activity (3)**

Prerequisites: Upper-division undergraduate or Graduate standing; KPE 301 or equivalent; CHEM 111A or its equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. Study of the biochemical and hormonal changes that occur as a result of acute and chronic physical activity. Emphasis will be placed on the application of concepts to the development of exercise training programs. Upper-division undergraduate students register in KPE 466; graduate students register in KPE 566. Traditional grading only. Same as FCS 466./566. (Seminar 3 hours.)

**472./572. Applied Sport and Exercise Psychology (3)**

Prerequisites: Upper division status and permission of instructor or graduate standing. Application of psychological skills and interventions to enhance athletic performance and exercise adherence. (Lecture/discussion, 3 hours).

**475./575. Psychology of Coaching (3)**

Current topics of psychological concern and application as related to athletic performance.

**476. Physical Education for Elementary Teachers (3)**

Instruction and practice in developing physical education programs for children. The purpose of this lecture/laboratory course is to provide classroom teachers, elementary physical education specialists, and administrators with the information necessary to develop a quality physical education program based upon the California State Physical Education Framework. Emphasis is placed on learning progressions and the incorporation of the Physical Best Education and Assessment Program into physical education activities. (Sem 2 hrs, Lab 2 hrs)

**477. Innovative Curriculum in Elementary School Physical Education (3)**

Prerequisites: KPE 370 or 476 or consent of instructor. Theory and application of elementary school physical education curriculum. Designed for students specializing in elementary school physical education programs. (Lecture 2 hrs, Lab 2 hrs.)

**480. Behavior Management in Physical Education and Sport (2)**

Prerequisites: PSY 100, KPE 370, senior standing and concurrent enrollment in KPE 489J. Behavior management procedures unique to physical education and sport. Focus on procedures to strengthen or maintain appropriate behavior and weaken, reduce or eliminate inappropriate behavior. Includes information pertinent to designing a preventive behavior management program that can be effectively implemented in non-traditional classroom settings in physical education and sport. (Lecture/discussion 2 hours.)

**483. Measurement & Evaluation in Physical Education (3)**

Prerequisites: Senior Standing. Principles and techniques of construction, organization, administration, interpretation and evaluation of measuring devices used in Kinesiology. (Lecture: 2 hours, Laboratory: 2 hours.)

**485. Neurological and Pathological Foundations for Corrective Therapy (3)**

Prerequisites: A/P 207, 208; KPE 300, 301, 320 489F or permission of instructor. Survey of neurological control of normal movement and the implications of various medical pathologies for rehabilitation. Emphasis on inflammatory processes, metabolic and vascular disturbances, traumatic injuries, nutritional deficiencies, neoplasms, degenerative conditions and congenital disorders as related to the practice of Corrective Therapy. Traditional grading only. (Lecture.)

**489. Field Work in Physical Activity Settings (1-3)**

Prerequisite: Completion of Kinesiology course requirements for the major Option in which field work is taken. Supervised practice in working with individuals or small to large groups in public or pri-

vate agencies and schools. (Section D. requires 1,000 hours of approved community fitness experiences in two different agencies as an additional prerequisite.) Credit/No Credit grading only. May be repeated to a max of 9 units of credit.

- A. Fieldwork in Adapted Physical Education
- B. Fieldwork in Athletic Coaching
- C. Fieldwork in Athletic Training
- D. Fieldwork in Community Fitness
- F. Fieldwork in Corrective Therapy
- G. Fieldwork in Motor Development
- J. Fieldwork in Behavior Management in PE and Sport

**494./594. Exercise Science Internship (3)**

Prerequisites: Upper-division or graduate standing and KPE 300 or 301 or 312 as appropriate. Consent of instructor required prior to registration. Provides a minimum of 120 hours of practical experience in applying exercise science concepts in a fieldwork setting. The internship will provide such experiences as conducting the biomechanical/physiological exercise testing and/or leading the exercise training of selected subject populations such as patients undergoing cardiac rehabilitation, asymptomatic adults, and athletes. Upper-division undergraduate students register in KPE 494; Graduate students register in KPE 594. Traditional grading only. (Seminar)

**\*497. Independent Study (1-3)**

Prerequisites: Major or minor in physical education, senior status and consent of KPE Department. Student will conduct independent library or laboratory research under the supervision of a faculty member and write a report of the investigation. May be repeated for a maximum of 6 units. Traditional grading only.

**\*498. Special Studies (1-3)**

Group investigation of topics of current interest in physical education or athletics. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units with different topics.

- A. Self-Defense for Women
- B. Internship in Teaching Self-Defense

**\*499. Special Studies (1-3)**

Group investigation of topics of current interest in kinesiology or athletics. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units with different topics.

## Graduate Division

**521. Sports Management (3)**

Prerequisite: EDSS 450P or equivalent, or teaching experience (including student teaching). A course in the management and supervisory philosophies; principles and practices of administering and supervising physical education and athletic programs in the public school system, including scheduling, budgeting, public relations, facility planning, liability, supervision of personnel, curriculum and evaluation; techniques of management and supervision as they apply to athletics and physical education at the secondary and college levels. (Seminar 3 hours.)

**524. Analysis of Teaching in Physical Education (3)**

Analysis of teachers and teaching in physical activity environment: focus on developing observational competencies, analysis of research completed and future research designs.

**525. Instructional Design in Physical Education (3)**

Prerequisites: Undergraduate major in physical education, EDST 300. A systems approach to designing instruction for the physical education program.

**526. Applied Behavior Analysis in Physical Education (3)**

Application of applied behavior analysis principles to physical education (sport) with particular emphasis on single subject research designs and behavior analysis in the physical education setting.

**527./427. Physical and Motor Assessment (3)**

Prerequisites: KPE 315 or equivalent and KPE 320 or equivalent. Upper-division undergraduate or Graduate standing. Consent of instructor required for graduate students prior to registration. The course includes the selection, evaluation, administration and inter-

- pretation of various tests used in the physical and motor assessment practices of individuals with disabilities. The course is a requirement toward the Adapted Physical Education Specialist Credential. Upper-division students register in KPE 427; Graduate students register in KPE 527. Traditional grading only. (Lecture 2 hrs., Laboratory 2 hrs.)
537. Physical Education for Special Populations (3)  
Foundations in the organization and conduct of Adapted Physical Education.
538. Motor Dysfunction and the Exceptional Person (3)  
Prerequisite: A basic undergraduate course in Adapted Physical Education or its equivalent. Recognition, analysis, assessment and remediation of movement problems in a child with minor nervous system dysfunctions.
540. Biomechanical Factors in Human Movement (3)  
Prerequisite: KPE 300 or equivalent. Study of static and dynamic principles of mechanics influencing human motion in sport, dance and rehabilitative programs, including techniques for age-related qualitative and quantitative analysis.
- 541./441. Applied Biomechanics: Lifting and Work Capacity (3)  
Prerequisites: KPE 300 or PT 301 and 302 (PHYS 100A and a course in Trigonometry recommended). Study of the mechanical properties of bone, ligament, tendon, and skeletal muscle. Development and description of selected biomechanical models with application to the evaluation of weight-lifting and rehabilitation exercises, as well as occupational lifting tasks. Critical analysis of methods used to develop and test strength. Traditional grading only.
546. Developmental Aspects of Motor Behavior (3)  
Prerequisite: KPE 315 or equivalent. The study of major factors which contribute to the development of motor skillfulness from birth to maturity.
550. Instrumentation in the Exercise Sciences (3)  
Prerequisites: Upper-division undergraduate or Graduate standing and KPE 301 or equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. This course includes theoretical and practical analysis of instrumentation used in the exercise science laboratory. Concepts to be studied include basic fundamentals of scientific instrumentation, equipment validity and reliability. Instruments to be examined include those used in the assessment of cardiopulmonary functional capacity, body composition, muscular strength, and power. Use of personal computers in the laboratory will be emphasized. Traditional grading only. (Seminar 3 hrs)
551. Advanced Exercise Physiology (3)  
Prerequisites: Upper division undergraduate or Graduate status; KPE 301 or equivalent. Advanced concepts of exercise physiology. (Seminar, 3 hrs.)
552. Exercise Science: Tests and Training (3)  
Prerequisites: Upper-division undergraduate or Graduate standing and KPE 301 or equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. Study of the various aspects of health enhancement exercise programs (e.g., physiological assessment, physical training, weight control, and risk factor modification) for health individuals and patients with systemic diseases such as hypertension, coronary artery disease, and chronic airway obstructions. Traditional grading only. (Seminar 3 hours.)
560. Health Related Problems in Sport (3)  
Prerequisites: KPE 301 and 307 or their equivalents and A/P 207 and 208 or their equivalents. Examination of health problems related to engaging in vigorous physical activity. Traditional grading only. (Seminar)
561. Musculoskeletal Injuries in Sport (3)  
Prerequisites: KPE 300 and 307 or their equivalents and A/P 208 or its equivalent. An in-depth study of the most prevalent musculoskeletal injuries occurring in sports activities, including mechanisms, tissue responses, and management procedures. Traditional grading only. (Seminar)
- 562./462. Advanced Strength and Conditioning (3)  
Prerequisites: KPE 300, 301. Study of biomechanical and kinesiological factors which are important in understanding the function and proper techniques for execution of a wide variety of standard and advanced weight training exercises. Physiological bases for strength training and adaptations caused by different training regimes are emphasized. Traditional grading only. (Seminar)
- 565./465. Clinical Exercise Electrocardiography (3)  
Prerequisites: A/P 207, KPE 301, and/or instructor consent. A study of the physiology and patho-physiology of the electrical activity of the heart. Instruction is directed toward pattern recognition of normal and abnormal resting and exercise electrocardiograms. (Seminar 3 hours).
- 566./466. Biochemical and Hormonal Adaptations to Physical Activity (3)  
Prerequisites: Upper-division undergraduate or Graduate standing; KPE 301 or equivalent; CHEM 111A or its equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. Study of the biochemical and hormonal changes that occur as a result of acute and chronic physical activity. Emphasis will be placed on the application of concepts to the development of exercise training programs. Upper-division undergraduate students register in KPE 466; graduate students register in KPE 566. Traditional grading only. Same as FCS 466./566. (Seminar 3 hours.)
- 572./472. Applied Sport and Exercise Psychology (3)  
Prerequisites: Upper division status and permission of instructor or graduate standing. Application of psychological skills and interventions to enhance athletic performance and exercise adherence. (Lecture/discussion, 3 hours).
573. History of Sport in the U.S.A. (3)  
Prerequisite: KPE 335 or equivalent. An analysis of the history of American sport as it reflects the dominant themes in American society.
574. Contemporary International Sport (3)  
Investigation of contemporary international sport in various world cultures.
- 575./475. Psychology of Coaching (3)  
Current topics of psychological concern and application as related to athletic performance.
577. Sport in U.S. Culture (3)  
Prerequisite: KPE 332I or equivalent. Analysis of physical activities in U.S. culture. Consideration of the relationships between sports and games and the factors of status, values, environment and cultural change.
580. Computer Applications in Physical Education (3)  
Prerequisites: Graduate standing/permission from instructor. Introduction to computer hardware and software used in Kinesiology and Physical Education including DOS/Windows and Apple Macintosh operating systems. Topics include: hardware, operating systems, word-processing, spreadsheets, data exchange, presentation graphics/authoring tools, and video capture. Emphasis will be placed on integrating the use of hardware and software into a variety of Physical Education environments. (Lecture/discussion, 3 hours).
588. Clinical Basis of Corrective Therapy (3)  
Prerequisites: Completion of Bachelor's degree in physical education, physical therapy, exercise physiology, or kinesiotherapy and admission to Corrective Therapy Certificate Program and successful completion of a course(s) in pathological and neurological foundations of rehabilitation or approval of the Corrective Therapy Coordinator. The theoretical foundations of clinical practice in Corrective Therapy. Traditional grading only.
- 588L. Corrective Therapy Clinical Training I Laboratory (6)  
Corequisite: KPE 588. Instruction and observation in the Long Beach Veterans' Hospital.
589. Corrective Therapy Clinical Training II (3)  
Prerequisite: Satisfactory completion of KPE 588. The theory and practice of corrective therapy techniques in the hospital setting. 500 hours of instruction and observation at the Long Beach Veterans' Hospital. (Lecture.)

**589L. Corrective Therapy Clinical Training II (3)**

Corequisite: KPE 589. Instruction and observation in the Long Beach Veterans' Hospital. (Lab)

**590. Statistical Analysis and Measurement in Kinesiology and Physical Education (3)**

Prerequisites: EDSE 421, EDSS 450 P or 450 W, KPE 483 or equivalent. Consideration of the logic and application of statistical inference, sampling theory, correlation, analysis of variance and design of statistical studies. Critical analysis of selected research publications. Required of all master's degree candidates. To be completed within first 12 units of 500-600 series courses.

**592A. Sports Management Internship (3)**

Prerequisites: Bachelor degree with a major or minor in Kinesiology or Physical Education or an approved related major; KPE 521 or KPE 685; approval of Intern Coordinator. A minimum of 40 hours per week for 16 weeks (6 units) or 20 hours per week for 16 weeks (3 units) of supervised work experience in an approved sport management/administrative setting, jointly supervised by a University Faculty member and a supervisor from the assigned organization. May be in a paid or volunteer capacity. Note: 6 units in one semester may not be taken if student is full-time employed. May be repeated for a maximum of 6 units. Traditional grading only.

**592B. Sports Management Internship (3)**

Prerequisites: Bachelor degree with a major or minor in Kinesiology Physical Education or an approved related major; KPE 521 or 685; approval of Intern Coordinator. A min. of 40 hours per week for 16 weeks (6 units) or 20 hours per week for 16 weeks (3 units) of supervised work experience in an approved sport management/administrative setting, jointly supervised by a University Faculty member and a supervisor from the assigned organization. May be in a paid or volunteer capacity. Note: 6 units in one semester may not be taken if student is full-time employed. May be repeated for a maximum of 6 units. Traditional grading only.

**593A. Coaching Internship (3)**

Prerequisites: Bachelor degree with a major or minor in Kinesiology or Physical Education or an approved related major; advancement to candidacy and approval of Intern Coordinator. A minimum of 40 hours per week for 16 weeks (6 units) or 20 hours per week for 16 weeks (3 units) of supervised work experience in an approved coaching setting, jointly supervised by a University Faculty member and a supervisor from the assigned organization. May be in a paid or volunteer capacity. Note: 6 units in one semester may not be taken if student is full-time employed. May be repeated for a max of 6 units. Traditional grading only.

**593B. Coaching Internship (3)**

Prerequisites: Bachelor degree with a major or minor in Kinesiology or Physical Education or an approved related major; advancement to candidacy and approval of Intern Coordinator. A min of 40 hours per week for 16 weeks (6 units) or 20 hours per week for 16 weeks (3 units) of supervised work experience in an approved coaching setting, jointly supervised by a University Faculty member and a supervisor from the assigned organization. May be in a paid or volunteer capacity. Note: 6 units in one semester may not be taken if student is full-time employed. May be repeated for a max of 6 units. Traditional grading only.

**594./494. Exercise Science Internship (3)**

Prerequisites: Upper-division or graduate standing and KPE 300 or 301 or 312 as appropriate. Consent of instructor required prior to registration. Provides a minimum of 120 hours of practical experience in applying exercise science concepts in a fieldwork setting. The internship will provide such experiences as conducting the biomechanical/physiological exercise testing and/or leading the exercise training of selected subject populations such as patients undergoing cardiac rehabilitation, asymptomatic adults, and athletes. Upper-division undergraduate students register in KPE 494; Graduate students register in KPE 594. Traditional grading only. (Seminar)

**597. Independent Research (1-3)**

Prerequisites: Consent of KPE faculty member and graduate advisor. Independent research under the guidance of a faculty member. Varied learning activities utilized to achieve competency

related to Physical Education not offered in regular classes. Written report required. Traditional grading only. (Independent Study)

**630. Seminar in Motor Learning (3)**

Prerequisites: KPE 312, 590 and 696 (may be taken concurrently). Identification and analysis of principles and concepts applicable to motor learning in physical education.

**633. Seminar in Sport Psychology (3)**

Prerequisites: KPE 332I or equivalent and PSY 100; teaching or coaching experience (including student teaching). Study of psychological theories and concepts and their relationship to human behavior in sport. Sport viewed in the context of the participant, the teacher/coach, the spectator and the entrepreneur.

**638. Seminar in Trends in Adapted Physical Education (3)**

Prerequisite: KPE 537 or 538, or equivalent. An examination and analysis of the current trends in Adapted Physical Education.

**671. Seminar in Current Trends and Issues in Sport and Physical Education (3)**

Current trends, issues and research in Kinesiology, physical education and sport.

**674. Seminar in Philosophical Concepts of Sport and Physical Education (3)**

In depth, critical analysis of philosophical movements affecting Kinesiology and physical education with emphasis on practical application and future implications.

**675. Seminar in Human Movement Theory (3)**

Examination of the writings of the major human movement theorists including the aesthetic nature and significance of the human movement experience.

**685. Seminar in Athletics (3)**

Experience in the field. Special problems related to the administration of an athletic program including current issues and practices and supervised research in selected areas.

**695. Seminar In Professional Literature (3)**

Prerequisites: KPE 590, 696. Critical analysis and synthesis by comparative review of professional literature in kinesiology and physical education. Required of all candidates not electing thesis option.

**696. Research Methods (3)**

Prerequisites: KPE 590, undergraduate major in Kinesiology or Physical Education or related field. Methodological approaches to contemporary problems in physical education; research design and reporting; bibliography. Required of all master's degree candidates. To be completed within the first 12 units of 500-600 series courses.

**697. Directed Studies (1-3)**

Prerequisites: KPE 590, 696, advancement to candidacy. Research in an area of specialization under the direction of a faculty member.

**698. Thesis (1-4)**

Prerequisites: KPE 590, 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

**699. Seminar in Selected Topics (3)**

Intensive study of salient problems of current professional importance to experienced physical educators. May be repeated (with selection of a second topic) for a maximum of six units. Topics to be announced in the Schedule of Classes.

# LATIN AMERICAN STUDIES

*College of Liberal Arts*

Director

Norma Chinchilla

Phone

(562) 985-8129

Office

FO2-226

Advisor

Claire Martin

Phone

(562) 985-4638

Office

MHB 822

Affiliated Faculty

Professors

Luis Arroyo (Chicano and Latino Studies)

Roland E. Bush (Comparative Literature)

Norma Stoltz Chinchilla (Women's Studies/Sociology)

Alejandra Cox Edwards (Economics)

Claire E. Martin (Romance, German, Russian Languages & Literatures)

José Sánchez (Film and Electronic Arts)

Rudy Torres (Chicano and Latino Studies)

Associate Professors

Jim Curtis (Geography)

Larry N. George (Political Science)

Carlos Piar (Religious Studies)

Assistant Professors

James Green (History)

Jane Howell (Anthropology)

Jose Rodriguez (Communication Studies)

## Certificate in Latin American Studies (code 1-8090)

Latin American Studies administers an interdisciplinary program which offers students interested in this field the opportunity to pursue courses leading to a Certificate in Latin American Studies. Courses used to meet this certificate requirement may be counted also, where applicable, toward the General Education requirements, and the major or minor requirements of the cooperating departments.

### Requirements

1. The following are the requirements for the Latin American Certificate Program:
  - A. A Bachelor's Degree with a major in a traditional discipline; may be completed concurrently with the certificate.
  - B. The successful completion of two college intermediate level courses in Spanish, Portuguese or any other language appropriate to the student's area of concentration.
  - C. Students must consult with and receive approval from the program advisor.
2. The instruction Program is comprised of 24 units which may be completed concurrently, distributed as follows:
  - A. CORE (Required of all students 6 units. Choose from two disciplines) ANTH 323, 324; GEOG 320I; HIST 362, 364; POSC 358, 359, SPAN 445
  - B. ELECTIVES: 18 units from the following disciplines. Cannot duplicate courses taken in the Core: ANTH 323, 324, 345, 490\*, 499\*; CHLS 352, 380, 400, 420, 499\*; C/LT 440, 499\*; ECON 363, 490\*, 499\*; HIST 162A, 162B, 362, 364, 366, 461, 462, 463, 466, 490\*, 495, 498\*; FEA 392C; POSC 358, 359, 497\*, 499\*; SOC 341, 490\*, 499\*; SPAN (RGRLL) 341, 441, 445, 492, 550, 490\*, 499\*

\*Special Topics and Directed Studies courses in the area of Latin American Studies have to be approved by the advisor.



# LEGAL STUDIES

*College of Liberal Arts*

Director

Albie Burke (History)

Telephone

(562) 985-4458

## Certificate Program in Legal Studies (code 1-8100)

The Certificate Program in Legal Studies is designed for students who are interested in the study of law as a cultural product and as a field of critical inquiry. It is not a professional program in para-legal education. The certificate may be earned in conjunction with any baccalaureate degree and should be especially useful to those preparing for careers in government service, business, journalism and education. Courses taken in the program may be used to satisfy major, minor, other credential or general education requirements. No more than 12 units, however, may be in the candidate's major.

### Requirements

Twenty-four total units distributed as follows:

1. Twenty-one units which must include HIST 308I and an additional 18 units from the courses listed below. The courses taken in the program must be from a minimum of three departments. The selection of courses is made by the student in consultation with an adviser in the program;
2. Project paper (3 units). To be written during the senior year under the supervision of a faculty member participating in the Certificate Program. The paper can be either an exploratory project (in which a subject is researched in a detailed and original manner) or an analytic effort (where fewer sources are used but the discussion of the material is developed more fully).

### Legal Studies Courses

B/ST 332; CRIM 301, 351; ECON 355, 455; FIN 222, 324; HIST 306I, 308I, 479, 480, 489; PHIL 352, 421I, 451I; POSC 311, 312, 318, 376, 412, 414, 419; S W 350; SPCH 441I; W/ST 308.

Persons interested in the Program for Legal Studies should contact Dr. Albie Burke, Director, Department of History.

# LIBERAL STUDIES PROGRAM

*College of Education*

Director  
Kristi Slayman Jones  
Program Office  
Library E., Rm. 127  
Telephone  
(562) 985-4228

## Bachelor of Arts in Liberal Studies (code 2-0300) (124 units)

The Liberal Studies major provides a rich, rigorous and integrated cross-disciplinary liberal arts program of study ideally suited to: 1) Students who seek subject preparation for teaching at the elementary level (Track I) and 2) Students with more varied professional or career goals who prefer a sound generalist program to one requiring early specialization (Track II).

### General Education and the Liberal Studies Major

The General Education requirements for students majoring in Liberal Studies are unique. The Liberal Studies program is not only an approved major, but also an approved alternate general education program. In completing the Liberal Studies major, students concurrently satisfy their general education requirements. Students changing to another major from Liberal Studies, however, will be subject to the standard university General Education requirements and will want to consult the Academic Advising Center for G.E. advising.

### The Liberal Studies Program

The program of study for the Liberal Studies major is composed of two parts: A Core and a Concentration. There are two program tracks in the Liberal Studies major, each with its own core and related concentrations.

Track I of the Liberal Studies program is designed for those students who seek an approved preprofessional program of subject matter preparation for elementary school teaching consistent with the standards established by the California Commission on Teacher Credentialing. Students who complete the Track I program do not have to take the Multiple Subject Assessment for Teachers exam as a requirement for the Multiple Subject Credential. (See Track I overview and requirements on this page.)

Track II of the Liberal Studies program is designed for those students who seek a rich, non-specialized, multidimensional and cross-disciplinary course of studies as a foundation for life-long learning, enlightened citizenship, and a wide range of academic and career opportunities. (See Track II overview and requirements later on in this section.)

### Track I

The minimum unit requirement for the Liberal Studies major, Track I, is 117 units which includes both Core and Concentration. The Track I program is both a major and an approved General Education program. This means that both General Education and major requirements are satisfied by completion of the Track I program.

The Track I Core consists of a minimum of 102 units distributed across six areas: I. Language Studies (minimum 22 units); II. Mathematics (minimum 9 units); III. Natural Sciences (minimum 14 units); IV. History and Social Sciences (minimum 24 units); V. Arts and Humanities (minimum 15 units) and VI. Learning and Well-Being (minimum 18 units). No course in the Track I core may be taken credit-no credit.

The Track I Concentration consists of 15-16 units of integrated course work with advisor approval in a thematic area of inquiry complementary to the Core and consistent with the professional goals of those in this track. Twelve of these units will be at the upper division (300-400) level, with the exception of the Natural Science concentration. No course in the Track I concentration may be taken credit-no credit.

In addition 120 hours of approved service-learning in an elementary or middle school must be completed prior to graduation as a means to learning about cultural diversity in the community, about current problems besetting students in the public schools, about successful intervention strategies for students needing special attention, and promotion of individual civic responsibility.

## Requirements

### Service Learning

The way to earn the required 120 hours of Service Learning is participation in the SERVE (Service Experience for Revitalizing Education) program, which provides orientation and training in addition to school placements. To participate in SERVE, students must have a 2.0 grade-point average, current TB clearance, and be available for either 2 two-hour time blocks or 1 four-hour time block during public school hours over a 10 week period during the semester. For further information and the schedule for orientation and training sessions, contact the Liberal Studies office (LIB E 127) or SERVE office (ED1 168).

### Track I Core

A minimum of 102 units distributed as specified in Areas I, II, III, IV, V and VI. No core classes may be taken credit-no credit

#### Area I: Language Studies (minimum 22 units)

Group 1. Composition in English: a) Choose one course from ASAM 100, B/ST 100, CHLS 104, ENGL 100, 100W; b) ENGL 309

Group 2. Oral Communication in English: Choose one course from COMM 130, 335

Group 3. Literature in English: a) Choose one course from C/LT 230, ENGL 180, 250A, 250B, 370A, 370B; b) Choose one course from ENGL 481, COMM 352

Group 4. Language Acquisition: Choose one from either (a) OR (b): a) C/D 329, EDP 454, LING 329; b) CHIN 201, 202, FREN 201A, 201B, GERM 201A, 201B, ITAL 201A, 201B, JAPN 201, 202, RUSS 201A, 201B, SPAN 201A, 201B (Students with more advanced language competencies substitute appropriate higher level language courses for those listed here.)

Group 5. Integration and Assessment: C/LA 400

#### Area II: Mathematics (minimum 9 units)

Group 1. Real Numbers: MATH 110

Group 2. Higher Math: Choose one course from MATH 111, \*122 (MATH 122 fulfills requirement only for students who subsequently concentrate in Mathematics. Students who concentrate in Mathematics must complete MATH 355 with a "C" or better grade in the concentration prior to enrolling in Area II, Group 3 in the core.)

Group 3. Integration and Assessment. NSCI 402

#### Area III: Natural Sciences (minimum 14 units)

Group 1. Life Science: BIOL 200

Group 2. Physical Science: PHSC 112

Group 3. Earth Science: GEOL 102 + 104

Group 4. Integration and Assessment: SCED 401

#### Area IV: History and Social Sciences (minimum 24 units)

##### A. American History, Culture, Society

Group 1. U.S. History: a) Choose one course from HIST 172, 300; b) HIST 473

Group 2. American Institutions: Choose one course from POSC 100, 391, \*326 (\*POSC 326 is limited to and only required of students who have met the U.S. Constitution/ Government requirement in a state other than California or through Advanced Placement Credit and who must meet the Title V California State and Local Government requirement.)

Group 3. Multicultural Dimensions: Choose one course from AIS 319, ANTH 421/LING 425, ASAM 319, B/ST 319, CHLS 319, C/LA 319, W/ST 319

##### B. World History, Culture, Society

Group 1. Geography: Choose one course from GEOG 100, 100L

Group 2. World History: Choose one course from HIST 111, 112

Group 3. Cultural Anthropology: Choose one course from ANTH 120, 314, 412I

Group 4. Integration and Assessment: C/LA 403

#### Area V: Arts and Humanities (minimum 15 units)

##### A. Visual and Performing Arts

Group 1. Visual Art and Music: a) ART 300; b) MUS 180

Group 2. Dance or Theatre: Choose one course from C/LT 124, 324I, DANC 110, THEA 113, 122, 124, 324I

##### B. Humanities

Group 1. Ethics, Values and Beliefs: Choose one course from PHIL 100, 160, 160L, 203, 204, 305, R/ST 100, 202, 485

Group 2. Integration and Assessment: COTA 404

#### Area VI: Learning and Well-Being (minimum 18 units)

Group 1. Growth and Development: a) PSY 100; b)

Choose one course from EDP 301, HDEV 307I, PSY 361

Group 2. Health and Well-Being: a) HSC 411A; b) KPE 476

Group 3. Access to Learning: a) Choose one course from: A/ST 190, ENGL 200, HIST 201, PHIL 170, PSY 230, COMM 131+131W, \*USP 100 (\*USP 100 is limited to students in the University Scholars Program); b) Choose one course from ENGL 337, MATH 278

## Track I Concentration

A minimum of 15 units with advisor approval, 12 of which must be at the upper division (300-400) level (with the exception of the Natural Science concentration) in one of the thematic programs of study identified below. No concentration courses may be taken credit-no credit.

Students must propose, in writing, a selected concentration and curricular plan and gain approval before taking courses in a concentration. Subsequent modifications of an approved concentration curriculum require prior approval in writing as well.

## Bilingual Spanish-English

Subject preparation for a Multiple Subject Credential with a bilingual, cross-cultural, language and academic development (BCLAD) emphasis requires students to demonstrate proficiency in a targeted language and understanding of the culture of a targeted group. This concentration focuses on the Spanish language and Latino culture to be consistent with the requirements of the BCLAD emphasis in the CSULB credential program. The primary focus of the concentration is development of language skills. Students with demonstrated language proficiencies in reading, writing and speaking at an advanced level may seek to substitute additional culture studies for required language classes. Prior to proposing this concentration or completing any course work toward it, students should meet with the Spanish undergraduate advisor who will be able to determine language proficiencies. (The following Core classes are highly recommended for students proposing this concentration: CHLS 319 in Area IV, A, Group 3; ANTH 412I in Area IV, B, Group 3; EDP 301 in Area IV, Group 1b.)

Complete 15 units from:

- Area 1. Language Foundations (9 units): SPAN 312, 313, 322
- Area 2. Literary Analysis (3 units): SPAN 410
- Area 3. Culture Study (3 units): Choose from CHLS 340, CHLS 350/SOC 340

## Contemporary World

We live in a complex world with many problems of a global or near global nature. This concentration introduces students to the nature and problems confronted in the contemporary world and to major issues in the social sciences from a global (macro) perspective. (No more than 3 units of lower division (100-200) course work may apply toward the concentration.)

Complete 15 units from:

- Area 1. Overview (6 units): Choose from ECON 368, POSC 220, 306, SOC 100, 142, 427
- Area 2. Development and Ideology (3 units): Choose from ANTH 307I, B/ST 304, GEOG 307I, 319I, 460, HIST 307I, I/ST 319I, POSC 461I, 494I, SOC 350, 410I
- Area 3. Inequality and Social Change (3 units): Choose from ANTH 305I, B/ST 404, HIST 303I, 438, POSC 303, 412, 455, SOC 346, 420, 450, W/ST 425
- Area 4. Conflict and Deviance (3 units): Choose from B/ST 332, I/ST 317I, POSC 371, 483, PSY 300I, SOC/SW 423, SOC 441I, 461I, 463, W/ST 430

(No more than one course total from Areas 2, 3, 4 may be taken from any one department.)

## Cultures, Values and Beliefs

Focus is on humanistic study of cultural traditions, both Western and non-Western, and the values and beliefs that have shaped them. Insight will be gained into motivating and orienting ideas that have given meaning to individual lives and structured human relationships. Special attention is given to religious, philosophical and ethical perspectives. (No course used to meet requirements of the core may be used to meet the requirements of the concentration; no more than 3 units of lower division (100-200) course work may apply toward the concentration.)

Complete 15 units from:

- Area 1. Western Culture (3 units): Choose from C/LA 350I, CLSC 310I, C/LT 310I, 414I, HIST 310I, 323I, 335, 337, 339, 400I, 414I, 477A, 477B, MUS 365I, PHYS 400I
- Area 2. Non-Western Cultures (3 units): Choose from ANTH 321, 323, 324, 331, 332, 333, 335, A/ST 300I, 301I, 393I, 495I, CHLS 380, HIST 382A, 382B, 383A, 383B, 385, 431, 441, 461, RUSS 410I
- Area 3. Values and Beliefs/Western (3 units): Choose from HIST 371, 438, PHIL 100, 203, 204, 330, 342, 352, 361, R/ST 102, 383I, 391I, 425I, 482I, 485
- Area 4. Values and Beliefs/Non-Western (3 units): Choose from AIS 335, ASAM 380, B/ST 353, PHIL 306, 307, R/ST 103, 331I, 341I, 343, 344, 351
- Area 5. Ethical Values (3 units): Choose from MICR 302I, PHIL 160, 160L, 302I, 360, 363, R/ST 302I

## Health, Physical Education and Life Management

Provides students with a breadth and depth of knowledge, attitudes and behaviors that prepares them in the areas of health, physical education and fitness, mental health, family life and nutrition. The areas of emphasis include substance use and abuse, family life/health and sexuality education, nutrition, violence prevention (including child abuse and suicide prevention), physical activity and fitness, motor skills and stress management. (Credit in the concentration will be granted for either HSC 425I or FCS 419, but not both.)

Complete 15 units from:

- Area 1. Health (3 units): Choose from HSC 421, 423, 425I, 427
- Area 2. Physical Education (3 units): KPE 477
- Area 3. Life Management Skills (3 units): Choose from FCS 232, 319, 419, REC 371
- Area 4. Additional Selected Study (6 units): Choose from those listed in Areas 1 and 3 not completed.

## Historical Perspectives

Prepares students in the subjects identified in the History-Social Science Framework for California Public Schools which provides the rationale and coherence for this course work. Emphasis is upon historical perspective not only in terms of Western/American tradition, but also in terms of other world societies and peoples. (The following core courses are recommended for students choosing this concentration: HIST 111 in Area IV, B, Group 2; ANTH 314 in Area IV, B, Group 3 and AIS, ASAM, B/ST, CHLS or W/ST 319 in Area IV, A, Group 3.)

Complete 15 units from:

- Area 1. Peoples of the World (3 units): Choose from ANTH 321, 323, 324, 331, 332, 333, 335, GEOG 309I, 316, 318, 320I, 326
- Area 2. Ancient World Civilizations (3 units): Choose from ANTH 313, 345, 347, A/ST 300I, HIST 313, 314, 316, 382A, POSC 301
- Area 3. U.S. Emerges as a Nation (3 units): Choose from HIST 372, 375, 477A, 485A, W/ST 485A
- Area 4. California (3 units): Choose from ANTH 322, 349, CHLS 300, GEOG 304, HIST 370, POSC 326
- Area 5. American Society Today (3 units): GEOG 306, 466, HIST 380, 474I, W/ST 307I

## Human Behavior

Provides an understanding of basic principles underlying human behavior. Why do people interpret, believe, feel, think and act as they do? Basic issues include: How people process information and how they organize what they learn into knowledge structures; processes in social learning; how people influence other people and individual differences in ability and personality that affect behavior. These principles will be applied to specific issues in courses selected from a broad range of disciplines. (Credit in the concentration will be granted for either PSY 351 or SOC 335I, but not for both.)

Complete 15 units from:

- Area 1. Basic Principles (6 units): Choose from ANTH 311I, PSY 351, 356, 370, SOC 100, 335I
- Area 2. Application/Race and Ethnicity (3 units): Choose from ANTH 419, ASAM 340, B/ST 310, 325, 410
- Area 3. Application/Gender Roles (3 units): Choose from ANTH 351, FCS 358, HIST 309I, PSY 352, 354, 366, SOC 325, W/ST 314, 325, 420
- Area 4. Application/Social Environments (3 units): Choose from ANTH 436, ECON 309I, FCS 309I, 410, FIN 309I, HIST 408, HSC 421, POSC 428, PSY 381, SOC 320, 336

## Human/Child Development

Provides students with a background in the developmental issues of children, adolescents and adults within a family and social context. Specific areas focus on the intellectual and socio-emotional development of individuals from birth through aging and the effects of the near environment on their development. Factors which effect individual variability in growth and development such as gender, family, racial, ethnic and cultural differences will be explored. (The following core courses are REQUIRED for students selecting this concentration: AIS, ASAM, B/ST, CHLS or W/ST 319 in Area IV, A, Group 3 and ANTH 120 in Area IV, B, Group 3.)

Complete 15 units from:

- Area 1. Intellectual and Social Development (3 units): Choose from EDP 305, FCS 314, PSY 463
- Area 2. Adult Development (3 units): Choose from GERN 400I, 464, HDEV 357I, PSY 365, SOC 464
- Area 3. The Child in the Family (3 units): Choose from ASAM 340, B/ST 410, FCS 319, 412, 413
- Area 4. Social Ecology of Child Development (6 units): Choose from B/ST 420, CD 361, CHLS 350/SOC 340, EDP 302, 350, 485, FCS 411, 430, HDEV 401, NRSO 481I, SOC/SW 345, 423

## Humanities Through Literature

Provides study in humanistic thought as it emerges in various literary traditions. Some of the questions raised are the following: How have great ideas found their way into literature? How have societies been defined by their literature? What are the connections between writers, their literature and the societies for which they speak? Focus is on literary forms, themes and traditions within a cross-cultural and world perspective. Provides for greater understanding of various cultures and their literature as well as a finer appreciation of literature as documentation of human aspirations and spirit. (No course used for credit in the core may be used for credit

in the concentration. No more than 3 units of lower division (100-200) course work may apply toward the concentration.)

Complete 15 units minimum from:

- Area 1. English Traditions/English Literature (3 units minimum): Choose from ENGL 363, 455, 456, 458, 459, 462, 467A, 467B
- Area 2. English Traditions/American Literature (3 units minimum): Choose from ENGL 370A, 370B, 474, 475, 476, 477A, 477B
- Area 3. World Traditions (3 units): Choose one from CHIN 370, C/LT 234, 236, 330A, 330B, 403, 440, FREN 335, 336, GERM 315, 316, 470, JAPN 370, RUSS 310, SPAN 330, 341
- Area 4. Multiple Voices (3 units): Choose from AIS 340, B/ST 140, 343, CHLS 405, C/LT 404, 415I, ENGL 375, 382, W/ST 382
- Area 5. Other Forms and Genres (3 units): Choose from B/ST 346, C/LT 342, 405, 410, 452, 453, ENGL 481, 482, JOUR 315

## Language Arts

Provides students with special appreciation for languages, literatures, and their relation to culture through study in three areas: Language perspectives, which involves the study of languages (and/or language) and their relationships to literary and cultural patterns; theory and/or criticism which provides the theoretical tools for the analysis and explanation of those relationships and language process which involves additional practice in the creative and technical aspects of producing linguistic products. (The following core classes are highly recommended for students selecting this concentration: COMM 335 in Area I, Group 2; ANTH 412I in Area IV, B, Group 3; PHIL 100, 160, 203, 204 or 305 in Area V, B, Group 1 and ENGL 200 in Area VI, Group 3a. No more than 3 units of lower division (100-200) course work may apply toward the concentration.)

Complete 15 units from:

- Area 1. Language and Culture (3 units): Choose from ANTH 413, 475, B/ST 180, ENGL 423, 426, LING 413, 423, 426, 363I, 470, SOC 485I, COMM 309, 330, W/ST 475
- Area 2. Language and Literature (3 units): Choose from AIS 340, A/ST 320, B/ST 140, 343, CHIN 370, CHLS 405, CLSC 291, C/LT 403, 404, 410, 440, 453, ENGL 382, 431, FREN 335, 336, GERM 315, 316, 470, JAPN 370, RUSS 310, SPAN 330, 341, W/ST 382
- Area 3. Language/Theory and Criticism (3 units): Choose from C/LT 361, ENGL 318I, 384, 410, 484, PHIL 361, 484, R/ST 301, FEA 318I, COMM 300, 301, 306, 333, THEA 426
- Area 4. Language and Process (3 units): Choose from B/ST 450, ENGL 205, 206, 317, 405, 406, 417, COMM 331, 358, THEA 380, 480
- Area 5. Additional Selected Study (3 units): Choose from ENGL 375, LING 472, COMM 355

## Language Other Than English

Provides opportunity for students to gain access to advanced preparation in reading, writing and speaking a selected language other than English. Provides insights into

second language acquisition and the intimate relationships linking language, cognition and culture. Students select one language in which to complete the following requirements:

Complete 15 units from:

Area 1. Advanced Language Study (6 units): Choose from CHIN 301, 302, FREN 312A, 312B, GERM 301, 302, ITAL 312A, 312B, JAPN 301, 302, RUSS 312, 399, SPAN 312, 313

Area 2. Conversation (3 units): Choose from CHIN 490, FREN 214, GERM 305, ITAL 214, JAPN 311, RUSS 314, SPAN 314

Area 3. Literature (3 units): Choose from CHIN 370, FREN 335, 336, GERM 315, 316, ITAL 490, JAPN 471, RUSS 310, SPAN 330, 341

Area 4. Additional Study (3 units): Choose from CHIN 490, FREN 314, 411, 414, GERM 303, 401, ITAL 314, 490, JAPN 312, 350, 461, RUSS 499, SPAN 322

## Mathematics

Provides advanced study of mathematics consistent with the philosophy of the California Framework in Mathematics and the Standards of the National Council of Teachers of Mathematics for the mathematics content taught through the middle grades. (The following core courses are REQUIRED for students choosing this concentration: MATH 122 in Area II, Group 2; MATH 278 in Area VI, Group 3b. Students choosing the Mathematics concentration must complete MATH 355 in the concentration—in lieu of MATH 111 in the core—with a "C" or better grade prior to registering for NSCI 402 in the core program.)

Complete 15 units from:

Area 1. Calculus (4 units): MATH 123

Area 2. Geometry (3 units): MATH 355

Area 3. Additional Selected Study (9 units): Choose from MATH \*310, 311, 340, \*341 (\*Especially recommended for those considering adding on a Single Subject Mathematics credential at a later time.) A maximum of one other upper division mathematics course may be substituted for one of the courses in Area 3 on the written recommendation of a mathematics education advisor. (Such substitution may require the completion of an additional lower division prerequisite: MATH 224, Calculus III).

## Natural Science

Assures a broad knowledge base across the natural sciences with focus upon areas of immediate scientific importance and human concern especially relevant to those who seek to become elementary school teachers. Will provide students with fundamental skills and abilities to deal confidently with a wide variety of scientific viewpoints applied to various important issues, as well as concrete and significant examples of scientific thinking. Students should complete all lower division (100-200) core requirements in Areas I (Mathematics) and II (Natural Sciences) prior to beginning course work in this concentration. (Before proposing this concentration consult with the Liberal Studies Office as to its status vis a vis approval by the Commission on Teacher Credentialing)

Complete 15 units from:

Area 1: Chemistry (4 units): CHEM 100

Area 2. Astronomy (4 units): ASTR 100, 100L

Area 3: Historical Geology (4 units): GEOL 240

Area 4: Interdisciplinary Study (3 units): Choose from BIOL/GEOL 303I, MICR 300I

## U.S. Multicultural Studies

Students should learn from their earliest school years that our nation is composed of people whose backgrounds are rooted in cultures from around the world, and they should develop respect for the dignity of all people and ways of life. This concentration will help potential teachers to recognize that the history of community, state, region and nation must reflect the experience of men and women of different racial, religious and ethnic groups in our pluralistic society. (The following core course is REQUIRED for students choosing this concentration: AIS, ASAM, B/ST, CHLS or W/ST 319 in Area IV, A, Group 3. Courses selected should include all four major U.S. ethnic groups. No more than 3 units of lower division (100-200) course work may apply toward the concentration and no course used to satisfy a core requirement may be used to satisfy a concentration requirement.)

Complete 15 units from:

Area 1. Education in an Ethnic Perspective (3 units): Choose from AIS 361, ASAM 310, B/ST 420, CHLS 340

Area 2. Multicultural Perspectives (3 units): Choose from ANTH 412I, 421, EDP 432, FCS 336, HDEV 401, COMM 330, W/ST 401I

Area 3. Ethnic Studies (9 units): No more than one course may be selected from 100-200 level courses and from any one department (courses cross-listed with CHLS will be considered CHLS department courses in this context). Choose from AIS 100, 101, 200, 320, 340, 420, ASAM 220, 340, 345, 370, 380, B/ST 110, 180, 370, 400, 410, CHLS 300/HIST 470, CHLS 310, CHLS 350/SOC 340, CHLS 352/SOC 341, CHLS 390I, 400

## Visual and Performing Arts

Allows students to develop skills in responding to the arts as well as in creating and performing. Courses will examine the history of traditional Western fine arts as well as the role the arts play in another cultural tradition. All four components of the California Framework for the Visual and Performing Arts are addressed: Aesthetic perception, creative expression, arts heritage and aesthetic valuing.

Complete 15 units from:

Area 1. Perception, Expression, Heritage, Valuing (6 units): ART 302 (Course no longer offered. See Liberal Studies director for substitution.), MUS 385

Area 2. Fine Arts History (6 units): If a Theatre course was taken in the Core, include at least one Dance course here. Choose from ART 401, 408, 409, 410, 416, 417, 423, 424, 425, 426, 427, 436, 437, DANC 110, 435I, MUS 363I, 364I, 390, 393, THEA 346, THEA/C/LT 421I, 422I

Area 3. Multicultural and Ethnic Arts (3 units): Choose from AIS 320, 420, ART 335I, 455, 456, 457, 466, 467, 468, 469, 470, B/ST 346, 363, MUS 490

## TRACK II

Students in this track complete a Core program (87 units minimum) and a Concentration (24-32 units). The Track II program is both a major and an approved General Education program. This means that both General Education and major requirements are satisfied by completion of the Track II program. A minimum of six units of interdisciplinary course work (courses with an I suffix) must be completed in the major—in either the core, the concentration or a combination of both. Course work used to meet the specific requirements of the core may also be used to meet the specific requirements of a concentration to a maximum of 12 units of such “double counting” or “overlapping.” (Although one course may satisfy two requirements at the same time, the units earned apply to the total units required for the degree only once.) Minimum units for the Liberal Studies major, Track II, could vary from 99-119 units depending on choice of concentration and potential for overlapping core and concentration requirements.

The Track II Core consists of a minimum of 87 units distributed across seven areas: I. Language and Communication Studies (minimum 18 units); II. Natural Science and Mathematics (minimum 18 units); III. National and World Citizenship (minimum 18 units); IV. Social and Behavioral Science Foundations (minimum 9 units); V. Literary, Visual and Performing Arts (minimum 12 units); VI. Cultures, Values and Beliefs (minimum 9 units) and VII. Health Well-Being, Life-Management: (minimum 3 units). Only one course per core area may be taken credit-no credit within university maxima of 24 units overall and 12 at the upper division (300-400) level.

The Track II Concentration consists of 24-32 units of course work in a selected discipline. A minimum of 15 of the concentration units will be in upper division (300-400) course work with the exception of the Biology and Mathematics concentrations where only 12 upper division units are required. Only one concentration course may be taken credit-no credit.

### Requirements

#### Track II Core

A minimum of 87 units as specified in Areas I, II, III, IV, V, VI and VII. Only one course per core Area may be taken credit-no credit within university limitations of 24 overall, 12 at the upper division (300-400) level.

Area I: Language and Communication Studies (minimum 18 units)

Group 1. Composition in English: a) Choose one course from ASAM 100, B/ST 100, CHLS 104, ENGL 100, ENGL 100W; b) Choose one course from B/ST 450, ENGL 101, 205, 206, 300, 317, 407, 417, 418, THEA 380

Group 2. Oral Communication in English: Choose one course from COMM 130, 132, 210, 331, 334, 335

Group 3. Language and Critical Thought: Choose one course from A/ST 190, ENGL 200, HIST 201, PHIL 170, PSY 230, COMM 131+131W, \*USP 100 (\*USP 100 is limited to students in the University Scholars Program)

Group 4. Language Study Other than English: Complete a two semester sequence in one language from CHIN 101, 102, 201, 202, FREN 101A, B, 201A, B, GERM 101A, B, 201A, B, GK 101A, B, 301A, B, ITAL 101A, B, 201A, B, JAPN 101, 102, 201, 202, LAT 101A, B, 301A, B, RUSS

101A, B, 201A, B, SPAN 101A, B, 201A, B (This is not a proficiency requirement, but a requirement for one sequential year of language study beyond current level of mastery. Choose the language and level appropriate to prior preparation. If prepared for more advanced 300 level of study or higher, substitutions of higher level language courses for those above can be made.)

Area II: Natural Science and Mathematics (minimum of 18 units):

Group 1. Mathematics: Choose two courses from MATH \*103, 112, 114, 115, 117, 119A, 119B, 122, 123 (\*MATH 103 is not open to students who have completed a higher math course or its equivalent.)

Group 2. Natural Sciences: a) Choose one course from A/P 107, 207, BIOL 200, 211A; b) Choose one from ASTR 100+100L, CHEM 100, 111A, GEOL 102+104 or 105, PHYS 100A, 104, 151, PHSC 112

Group 3. Additional Study in Science or Math: Choose two courses, at least one of which is at the upper division (300-400) level, from any of the courses listed in Area II, Groups 1 and 2 not completed, or from A/P 308I, 401, ASTR 101, 200, 370I, BIOL 201, 211B, BIOL/GEOL 303I, CHEM 111B, C/LA /HDEV 250, ET 202, GEOG 140, GEOL 160,160+160L, 163, 190, 191, 240, MATH 180, 224, 233, 247, 310, 330, 340, 341, 355, 370A, 380, MICR 101, 300I, MICR/PHIL 302I, MICR 303, NSCI 375I, 377I, PHSC 331, PHYS 100B, 152, PHYS/HIST 400I, PSY 210, 346I, SOC 255 (For upper division work special attention is directed to the range of Interdisciplinary (I) courses offered in the College of Natural Sciences and Mathematics; these are highly recommended.)

Area III: National and World Citizenship (minimum 18 units):

Group 1. Basic Studies: a) Choose one course from HIST 172, 173, 300; b) Choose one course from POSC 100, 391, \*326 (POSC 326 is limited to students who have completed a U.S. Government course in a state other than California or have Advanced Placement Credit in U.S. Government and must meet Title V state and local government requirements); c) Choose one course from ECON 300, 368

Group 2. U.S. Diversity: Choose one course from: AIS 319, ANTH 329, 419, ASAM 200, 319, B/ST 210, 319, 325, CHLS 319, 350, 352, POSC 323, SOC 340, 341, 346, W/ST 319

Group 3. National Citizenship: Choose one course from B/ST 381, C/LA 492A, EDP 492, GEOG 401I, HIST 474I, 480, LING 472, POSC 210, 308, 327, 328, 420, 423, 424, 482, 486, PSY 375, SOC 449I, COMM 441I, 442I, U/ST 401I

Group 4. World Citizenship: Choose one course from ANTH 307I, 314, ECON 306I, GEOG 307I, 470, HIST 307I, I/St 478, 478, PHIL 351, POSC 215, 220, 306, 353, 371, 485, SOC 350

Area IV: Social and Behavioral Science Foundations (minimum 9 units)

Group 1. Psychology/Sociology: Choose one course from PSY 100, SOC 100, 142

Group 2. Geography/Cultural Anthropology: Choose one course from ANTH 120, GEOG 100, 100L, 160

Group 3. History: Choose one course from HIST 111, 112, 131, 132

Area V: Literary, Visual and Performing Arts (minimum 12 units)

Group 1. Visual and Performing Arts: Choose two courses from two different arts from AIS 320, ART 110, 113A, 113B, 115B, 115C, 335I, B/ST 155, 160, 363, DANC 110, 435I, MUS 190, 290, 363I, 364I, 390, 490, THEA 113, 122, THEA/C/LT 124, 324I, THEA/CLSC 421I

Group 2. Literature: a) Choose one course from B/ST 140, CHLS 205, C/LT 230, 234, 236, ENGL 180, 184, 250A, 250B; b) Choose one course from AIS 340, B/ST 343, 346, CHIN 370, CHLS 405, C/LT 330A, 330B, 342, 346, 403, 404, 405, 415I, 430, 440, ENGL 363, 370A, 370B, 375, 382, 385, 386, FREN 335, 336, GERM 315, 316, 470, JAPN 370, JOUR 315, R/ST 425I, SPAN 330, 341, W/ST 382

Area VI: Cultures, Values and Beliefs (minimum 9 units)

Group 1. Western Tradition: Choose one course from either (a) or (b): a) CLSC 310I, C/LT/HIST 310I, 312I, 414I, HIST 323I/MUS 365I, HIST 335, 477A, 477B; b) HIST 371IPHIL 100, 160, 160L, 203, 204, 330, 352, 354, 360, 361, 363, R/ST 102, 383I, 396, R/ST 482I

Group 2. Non-Western Traditions: Choose one course from either (a) or (b): a) ANTH 321, 323, 324, 331, 332, 333, 335, A/ST 300I, 301I, 393I, 495I, HIST 341A, 341B, 382A, 382B, 383A, 383B, 385, 386, 431; b) AIS 335, ASAM 380, B/ST 353, PHIL 306, 307, R/ST 103, 331I, 341I, 343, 344, 351

Group 3: Additional Study (3 units): Choose another course from those listed in Group 1a, 1b, 2a, and 2b not completed.

Area VII: Health, Well-Being and Life Management (minimum 3 units)

Choose one course from ANTH 150, ECON 308, 309I, EDP 191, 357, FCS 232, 309I, 312I, 323, FIN 309I, HSC 210, 420I, 421, 422, 423, 425I, 427, 429, HDEV 307I, 357I, KPE 157, NRSG 481I, REC 320, 340I, SW 330, 331, SOC 461I, 462, 463, W/ST 101, 440

## Track II Concentration

A minimum of 24 units of which 15 must be at the upper division (300-400) level (with the exception of Biology and Mathematics where only 12 units at the upper division are required) from one of the disciplinary programs below. A maximum of 12 units of course work used to meet requirements of the core may be used to satisfy the requirements of the concentration. In such "double-counting," one course may satisfy two requirements but the units apply to total degree requirements only once. Unit requirements in some concentrations exceed the 24 unit minimum; no concentration requires more than 32 units. Only one course in a concentration may be taken credit-no credit.

### American Indian Studies

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (6 units): Choose from AIS 100, 101, 200

Area 2. Selected Area Study (12 units): Choose from AIS 320, 335, 340, 361, 420, 440, 490, 497, 499

Area 3. Additional Support and Area Study (6 units): Choose from courses in Areas 1 and 2 not completed or from: ANTH 321, 322, 347, 349, ART 456, 457, CHLS 380, 420, HIST 372

### American Studies

Inactive, no new students admitted.

### Anthropology

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (6 units) : ANTH 110, 120

Area 2. Additional Lower Division Study (3 units): Choose from ANTH 140, 170

Area 3. Upper Division Foundation Study (6 units): ANTH 313, 314

Area 4. Biological Anthropology (3 units): Choose from ANTH 318, 363, 435

Area 5. Sociocultural Anthropology (3 units): Choose from ANTH 351, 413, 416, 421, 436

Area 6. Comparative Cultures (3 units): Choose from ANTH 321, 322, 323, 324, 331, 332, 333, 335, 345, 347, 349

### Art/Art History

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (9 units): Choose three courses from ART 113A, 113B, 115B, 115C

Area 2. Principles and Practices (3 units): Choose from ART 307, 308, 309, 335I, 435

Area 3. Western Art (3 units): Choose from ART 401, 408, 409, 410, 416, 417, 423, 424, 425, 426, 427, 436, 437, 438, 439

Area 4. Non-Western Art (3 units): Choose from ART 455, 456, 457, 465, 466, 467, 468, 469, 470

Area 5. Additional Upper Division Study (6 units): Choose from courses listed in Areas 3 and 4 not completed.

### Art/Studio

Special admissions deadlines apply.

Complete a minimum of 27 units with 12 at the upper division (300-400) level from:

Area 1. Foundation Study (12 units): ART 131, 181, 182, 187

Area 2. Art History (3 units): Choose from ART 437, 438, 439

Area 3. Selected Upper Division Study (12 units): Choose from ART 327A, 327B, 328A, 328B, 354A, 354B, 355A, 355B, 357A, 357B, 370, 376, 378, 379, 381, 385, 387, 388, 428A

### Asian American Studies

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (6 units): ASAM 200, 220

Area 2. Upper Division Foundation Study (7 units): ASAM 345, 380

Area 3. Additional Selected Study (11 unit minimum): Choose from ASAM 310, 330, 340, 370 490, 499



## Biology

Complete a minimum of 32 units with 12 at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (20 units): BIOL 211A, 211B, CHEM 111A, 111B

Area 2. Selected Upper Division Study (12 units minimum): Choose from BIOL 313, 314, 315, 316, 324, 328, 332, 333, 351, 413, 417, 421, 423, 424, 425, 427, 438, 439, 453, 460, 490, 490L, 496

## Black Studies

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Introduction (3 units): B/ST 110

Area 2. History (3 units): Choose from B/ST 120, 121

Area 3. Selected Lower Division Study (3 units): Choose from B/ST 155, 160, 200, 210

Area 4. Humanities (6 units): Choose from B/ST 340, 343, 346, 450

Area 5. Social Studies (9 units): Choose from B/ST 304, 325, 330, 332, 335, 337, 400, 410

## Chicano-Latino Studies

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (9 units): Choose from CHLS 100, 101, 205, 230

Area 2. Upper Division Foundation Study (9 units): CHLS 300/HIST 470, 310, 350/SOC 340

Area 3. Culture Study (3 units): Choose from CHLS 309I, 395, 405, 420

Area 4. Social Inquiry (3 units): Choose from CHLS 340, 352, 380, 400, 415, 421

## Comparative Literature

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study, Breadth (6 units): Choose from C/LT 234, 330A, 330B

Area 2. Foundation Study, Depth (3 units): Choose from C/LT 430, 449

Area 3. Genre Study (6 units): Choose from C/LT/THEA 124, C/LT 232, 320I, C/LT/THEA 324I, C/LT 346, 405, 453, CLSC/THEA 421I

Area 4. Comparative Literary Study (3 units): Choose from C/LT 236, 403, 404, 440, 448, 452

Area 5. Literary Movements or Periods (3 units): Choose from C/LT 349, 431, 432, 437, 438

Area 6. Literature and the Other Arts (3 units): C/LT 250, C/LT/HIST 310I, C/LT 410, 412I, 413I, 451I

## Economics

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (6 units): ECON 201, 202

Area 2. Upper Division Foundation Study (6 units): ECON 308, 360I

Area 3. Additional Selected Study (12 units): Choose additional upper division Economics classes exclusive of ECON 309I which may not be taken for concentration credit. (With Economics Department approval, ECON 300 and an additional upper division Economics course may be substituted for ECON 201 and 202.)

## English/Creative Writing

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (8 units): ENGL 184, 370B

Area 2. Introductory Study (3 units): Choose from ENGL 205, 206

Area 3. Advanced Study (6 units): Choose from ENGL 405, 406, 407

Area 4. Additional Selected Study (7 units minimum): Choose from ENGL 370A, 375, 384, 385, 386, 459, 467A, 467B, 469, 474, 475, 476, 477A, 477B, 479, THEA 380, 480

## English/Language and Composition

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (14 units): ENGL 184, LING 325, 420, 421

Area 2. Literature (4 units): Choose from ENGL 250A, 250B, 370A, 370B

Area 3. Additional Selected Study (6 units): Choose from ENGL 300, 317, 410, 423, ENGL/LING 426

## English/Literature

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (8 units): ENGL 184, 363

Area 2. American Literature Survey (4 units): Choose from ENGL 370A, 370B

Area 3. British Literature (3 units): Choose from ENGL 451, 452, 453, 455, 456, 458, 459, 462, 463, 467A, 467B, 468

Area 4. American Literature (3 units): Choose from ENGL 474, 475, 476, 477A, 477B, 478

Area 5. Additional Selected Study (minimum 6 units): Choose additional courses from those listed in Areas 2, 3 and 4 above or from C/LT 330A, 330B, ENGL 250A, 250B, 375, 384, 469, 479, 481, 482

## English/Technical Writing

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (7 units): ENGL 184, 317

Area 2. Report Forms (6 units): Choose from ENGL 417, 418, 419

Area 3. Language Study (4 units): ENGL 320, LING 325

Area 4. Additional Selected Study (minimum 7 units): Choose from ART 307, 309, ET 300, ENGL 384, 405, 406, 407, ENGL/LING 423, ENGL 491, 498N (Science as Literature), FEA 303, 380, 404, HIST/PHYS 400I, IS 301

## French

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (12 units): FREN 312A, 312B, 314, 411

Area 2. Additional Selected Study (12 units): Choose additional courses in French. Lower division (100-200) courses are only appropriate if taken prior to FREN 312A or its equivalent.

## Geography

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Lower Division Foundation (9 units): Choose from GEOG 100, 140, 160

Area 2. Methods and Techniques (3 units): GEOG 380

Area 3. Systematic Geography (6 units, 3 from (a) and 3 from (b)): a) Choose from GEOG 460, 466, 470; b) Choose from GEOG 440, 442, 444, 452, 455, 460, 466, 470 (No course used to satisfy (a) may be used to satisfy (b).)

Area 4. Regional Geography (6 units, 3 from (a) and 3 from (b)): a) Choose from GEOG 304, 306; b) Choose from GEOG 304, 306, 309I, 316, 318, 320I, 326 (No course used to satisfy (a) may be used to satisfy (b).)

## German

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (15 units): GERM 301, 302, 315, 316, 401

Area 2. Additional Selected Study (minimum 9 units): Choose additional courses in German. Lower division (100-200) courses are only appropriate if taken prior to GERM 301 or its equivalent.

## History

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (3 units): HIST 301

Area 2. Area Study (18 units): Choose 6 units each from three different areas: World Area: Choose from HIST 111, 112, 492; European Area: Choose from HIST 131, 132, 313, 314, 316, 317, 318, 332, 333, 335, 336, 337, 339, 341A, 341B, 433, 437, 438, 441; British Area: Choose from HIST 151, 152, 351, 353, 356, 357, 451; Latin American Area: Choose from HIST 162A, 162B, 362, 364, 462, 463; United States Area: Choose from HIST 172, 173, 300, 371I, 372, 375, 376, 378, 379, 380, 469, 471, 472, 473, 474I, 477A, 477B, 478, 479, 480, 485A, 485B, 486, 489; Asian Area: Choose from HIST 382A, 382B, 383A, 383B, 384, 385, 386, 406, 407, 488

Area 3. Additional Selected Study (3 units): Choose an additional course from History Department offerings or from Area 2 courses not completed.

## Human Development

Students choosing this concentration must complete the following courses in the core program: ANTH 120, A/P 107 or 207, PSY 100, or complete them as prerequisite units to the concentration and elective units toward the degree.

Complete a minimum of 26 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (12 units): HDEV 307I, 357I, 401, 402

Area 2. Foundation Methodologies (8 units): HDEV/C/LA 250, HDEV 320

Area 3. Area Study (6 units): Choose 6 units from one area: Biological Foundations Area: Choose from ANTH 318, 319, A/P 401, PSY 241; Psychological Foundations Area: Choose from C/D 361, EDP 305, PSY 331, 332, 333, 336, 337, 341, 345, 351, 356, 370, 438, 463; Sociocultural Foundations Area: Choose from ANTH 352, ASAM 340, B/ST 410, CHLS 350/SOC 340, FCS 312I, 412, 413, SOC 100, 320, 345, 464; Child Development Area: Choose from FCS 311, 312I, 314, 411, 412, 413, 433; Gerontology Area: Choose from A/P 401, GERN 400I, SOC 464

## Italian

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (9 units): ITAL 312A, 312B, 314

Area 2. Additional Selected Study (15 units): Choose additional courses in Italian. Lower division (100-200) courses are only appropriate if completed prior to ITAL 312A or its equivalent.

## Japanese

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (12 units): JAPN 301, 302, 311, 312

Area 2. Additional Selected Study (12 units): Choose additional courses in Japanese. Lower division (100-200) courses are only appropriate if completed prior to JAPN 301 or its equivalent.

## Latin American Studies

Complete a minimum of 26 units with 15 at the upper division (300-400) level from:

Area 1. Language Study (8 units): SPAN 201A, 201B

Area 2. Discipline Emphasis (6 units): Choose 6 units from one department, a minimum of 3 units to be at the upper division (300-400) level, from: ANTH 323, 324, 345, HIST 162A, 162B, 362, 364, POSC 358, 359, 461I\* (\*Only those semesters when content emphasizes Latin American development.)

Area 3. Breadth Study (6 units): Choose 3 units each from two additional departments and courses listed in Area 2 or from GEOG 320I

Area 4. Additional Selected Study (6 units): Choose six additional units from courses listed in Area 2 and 3 or from: HIST 462, 463, SPAN 312, 313, 314, 341, 430, 441, 445, 491, 492

## Mathematics

Complete a minimum of 27 units with 12 units at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (15 units): MATH 122, 123, 224, 233

Area 2. Upper Division Foundation Study (6 units): MATH 364A, 380

Area 3. Additional Selected Study (6 units): Choose from MATH 310, 340, 341, 355, 361A, 381

## Music

Students choosing this concentration must demonstrate piano proficiency equivalent to MUS 120B, voice proficiency equivalent to MUS 122A, instrument proficiency equivalent to MUS 125 or complete the equivalency courses as corequisite units to the concentration and elective units toward the degree.

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (7 units): MUS 300, 390, 490

Area 2. Selected Historical Study (3 units): Choose from MUS 363I, 364I, 393

Area 3. Additional Selected Study (minimum 14 units):  
Choose from courses listed in Area 2 not completed or from MUS 300, MUS 422A, 425A, 460, 469, 492, 493, 495

## Philosophy

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (6 units): Choose from PHIL 342, 363, 382

Area 2. Historical Focus (3 units): Choose from PHIL 413, 414, 421, 422, 423, 424

Area 3. Movements and Perspectives (3 units): Choose from PHIL 354, 416, 417, 418, 419

Area 4. Additional Selected Study (12 units): Choose additional courses from Areas 1, 2 and 3 not completed or from other departmental offerings.

## Psychology

Impacted Program. Special Admissions criteria apply.

Complete a minimum of 26 units with 15 at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (11 units): PSY 100, 200, 210

Area 2. Basic Processes (3 units): Choose from PSY 331, 332, 333, 336, 337, 341, 342

Area 3. Personal and Social Processes (3 units): Choose from PSY 351, 356, 361, 365

Area 4. Additional Selected Process Study (3 units): Choose from Area 2 and 3 classes not completed.

Area 5. Applications (3 units): Choose from PSY 310, 314, 346I, 352, 354, 359, 366, 370, 375, 378, 381

Area 6. Additional Selected Study (3 units): Choose an upper level (300-400) course from Areas 2, 3, and 5 not completed or from other departmental offerings.

## Religious Studies

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (6 units): Choose from R/ST 100, 103, 202

Area 2. Western Religious Traditions (3 units): Choose from R/ST 311, 312I, 314, 315I, 322, 331I, 471I, 472I, 485, 490, 494

Area 3. Eastern Religious Traditions (3 units): Choose from R/ST 341I, 343, 344, 351

Area 4. Selected Upper Division Study (6 units): Choose from Areas 2 and 3 not completed or from R/ST 301, 302I, 375, 376I, 383I, 425I

Area 5. Additional Selected Study (6 units): Choose from courses in Areas 1, 2, 3 and 4 not completed or from ASAM 380, C/LT 342, HIST 333, PHIL 330, R/ST 499

## Russian

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (9 units): RUSS 310, 312, 314

Area 2. Additional Selected Study (15 units): Choose additional courses in Russian. Lower division courses are only appropriate if taken prior to RUSS 312 or its equivalent.

## Sociology

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Foundation Study (9 units): SOC 100, 142, 335I

Area 2. Statistics (3-4 units): Take SOC 255

Area 3. Ethnic and Gender Issues (3 units): Choose from SOC 325/W/ST 325, SOC 340/CHLS 350, SOC 346, 426, 485I

Area 4. Deviance and Social Control (3 units): Choose from SOC 345, SOC/SW 423, SOC 440, 441I, 448

Area 5. Social Change and Global Issues (3 units): Choose from SOC 350, 420, 427

Area 6. Additional Selected Study (3 units): Choose an upper level (300-400) from Areas 3, 4, and 5 not completed or from other departmental offerings.

## Spanish/Spanish American Literature

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Basic Language Study (6 units): SPAN 312, 313

Area 2. Foundation Study (6 units): SPAN 341, 445

Area 3. Selected Literary Study (6 units): Choose from SPAN 410, 441, 491

Area 4. Additional Selected Study (6 units): Choose additional courses in Spanish. Lower division courses are only appropriate if completed prior to SPAN 312 or its equivalent.

## Spanish/Spanish Linguistics and Culture

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Basic Language Study (6 units): SPAN 312, 313

Area 2. Foundation Study (6 units): SPAN 425 (course no longer offered. See Concentration Advisor for substitution), 426

Area 3. Linguistics and Culture Selected Study (6 units): Choose from SPAN 412, 427, 430, 445

Area 4. Additional Selected Study (6 units): Choose additional courses in Spanish. Lower division courses are only appropriate if completed prior to SPAN 312 or its equivalent.

## Spanish/Spanish Literature

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Basic Language Study (6 units): SPAN 312, 313

Area 2. Foundation Study (6 units): SPAN 330, 430

Area 3. Selected Literary Study (6 units): Choose from SPAN 410, 439, 491, 492

Area 4. Additional Selected Study (6 units): Choose additional courses in Spanish. Lower division courses are only appropriate if completed prior to SPAN 312 or its equivalent.

## Speech Communication

Complete a minimum of 24 units with 15 at the upper division (300-400) level from:

Area 1. Lower Division Foundation Study (9 units): COMM 130, 131+131W, 210

Area 2. Upper Division Foundation Study (9 units): COMM 300, 301, 309

Area 3. Selected Upper Division Study (3 units): Choose from COMM 331, 335

Area 4. Communication Contexts and Strategies (3 units): Choose from COMM 412, 432, 436, 437, 451

# LINGUISTICS

*College of Liberal Arts*

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Assistant Professors

Barbara LeMaster

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Taunya Reames

Students desiring information should contact the department office.

## Baccalaureate Minor in Linguistics (code 0-6833)

A minor in Linguistics consists of a minimum of 21 units, with at least one course selected from each of five subject area categories. Although not required for the minor, foreign language courses are recommended. In selecting courses, students should be aware that some courses have prerequisites, including language proficiency.

Courses which are counted for a major may not also be counted for a minor, but students who have taken a course from any category as a part of their major may substitute an elective with approval of the Department Chair.

### Requirements

Select one course from each category:

Category I Introduction: ANTH 170, LING 325, LING 363I;

Category II Phonology: C D 330, LING 420, FREN 414, GERM 303, SPAN 425;

Category III Syntax: LING 421, FREN 411, GERM 401, SPAN 426;

Category IV Psycholinguistics and Neurolinguistics: C D 361, ED P 454, LING 329, PSY 438;

Category V Language, Culture, and Society: ANTH 412I, 413, SOC 485I;

Electives to a program total of 21 units selected from: any course listed above, ANTH 470; CHLS 403; LING 423, 426, 428; PHIL 484; SPAN 412, 427, and variable/special topics courses on linguistics subjects offered through the participating departments. These topic courses are shown on an approved list available in the participating departments.

## Interdisciplinary Minor in Crosscultural Language and Academic Development Studies (code 0-9683)

The minor comprises courses that integrate studies of culture, language, learning and the academic environment, and human development. It is an interdisciplinary program designed to support career objectives related to public education in Crosscultural Language and Academic Development. The minor consists of a minimum of 18 units selected with an advisor. Courses in the department of the student's major may not be used.

1. One course from each of the following areas (12 units):

Culture: ANTH 421/LING 425 or EDP 432/EDEL 430

Language: EDP 454 or LING/CD 329

Schooling: EDP/LING 485

Development: EDP 301, EDP 302, HDEV 307I, or PSY 361

2. Six additional units, selected with an advisor, from the following:

Culture: AIS 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319, ANTH 329, ANTH 412I, ANTH/LING 413, ANTH 419, ANTH 421/LING 425, ANTH/WST 475, CHLS/ASAM 335I, EDP 432/EDEL 430

Language: ANTH 170, CHLS 402, EDP 454, LING/CD 329, LING/ENGL 327, LING 363I, LING 435, LING 472, LING 486.

Schooling: AIS 361, ASAM 310, B/ST 420, CHLS 340, EDP 305, EDP 350, EDP 476.

Development: EDP 301, EDP 302, HDEV 307I, PSY 361.

### Master of Arts in Linguistics (code 5-6833)

The program for the M.A. degree in linguistics is designed both for students who wish to pursue further graduate study and those seeking a terminal degree. The program seeks to blend theoretical and applied aspects of linguistics and draws from a variety of disciplines.

The M.A. degree in Linguistics offers three options and one concentration:

1. General Linguistics Option
2. Language and Culture Option
3. Teaching English as a Second Language Option
4. Special Concentration

Graduate assistantships and teaching assistantships may be available to qualified students.

#### Prerequisites

1. A bachelor's degree with a 2.75 GPA for the most recent 60 units;
2. 18 units of undergraduate coursework as follows (can be taken at CSULB):
  - A. Twelve (12) units in linguistics including syntax, phonology, language acquisition, language variation.
  - B. Six (6) units either in linguistics or in a related field (such as TESL, cross-cultural communication, cognition, artificial intelligence, or literature in another language).

#### Advancement to Candidacy

1. Satisfaction of the general university requirements for advancement to candidacy, including prerequisites, the Writing Proficiency Examination, and GPA.
2. Completion of the foreign language requirement, either:
  - A. Two courses of a foreign language at the upper division level, or the equivalent, or
  - B. Two courses of an Indo-European language and two courses of a non-Indo European language, or equivalent.
3. Completion of six units of course work within the program, exclusive of any classes used to meet prerequisites.
4. Approval of the candidate's graduate program by the Chair, the Associate Dean for Instructional Programs of the College of Liberal Arts, and any other individuals identified by relevant university policy.
5. Advancement must take place no later than the semester before the student graduates.

#### Requirements

1. A minimum of 30 units of approved upper division and graduate courses for the thesis option or a minimum of 33 units of approved upper division and graduate courses of the comprehensive examination option, including
2. A minimum of 21 units at the 500 or 600 level;

3. The completion of the five course core requirement for the degree;
4. The completion of requirements of one of the options designated in the program;
5. Completion of one of two culminating experiences:
  - A. A thesis and its accompanying oral defense and oral examination.
  - B. The comprehensive examination and its accompanying graduate paper (LING 697)
6. A GPA of 3.00 on all courses included in the program.

#### Core

1. Two courses from the following three: LING 620, 625, 633.
2. One course from the following: LING 540, 610, 650.
3. One course from the following: PSY 539, SPAN 524.
4. One course from the following: LING 580/ANTH 570, LING 595/ED P 595, LING 596.

### General Linguistics Option (code 5-6850)

This option is 15 units including all courses in the core categories 1 and 2 (LING 620, 625, 633, 540, 610, 650) and only one course each from Categories 3 and 4; and approved selections from ANTH 597; CD 665; ED P 573, 672; LING \*428, \*433, LING \*470/ANTH \*475, LING\*423/ENGL 423/523, LING \*426/ENGL 426/526, LING 533/ANTH 530, LING 575/ED P 578, 697, 698; PHIL 595; PSY 538; SPAN 527.

### Language and Culture Option (code 5-6851)

This option is 15 units. Students in this option are advised to take LING 540 as a part of their core: LING 533/ANTH 530, and either LING \*413/ANTH 413 or LING \*470/ANTH 475; and approved selections from ANTH 597, 630; ED P 573; LING \*428, LING \*423/ENGL 423/523, LING 575/ED P 578, LING 580/ANTH 570, LING 597/LING 697, LING 698.

### Teaching English as a Second Language Option (code 5-6852)

This option is 15 units. LING 500, LING 561, and either LING 575 or ED P 672 and approved selections from CD 560, 590; ED P \*454, 573; LING \*425/ANTH \*421, \*428, \*435, \*460, LING\*485/ED P 485, \*486, 562, 697, 698; PSY 538; SPAN 524, 527.

### Special Concentration

This concentration is 12-15 units. Students electing this concentration must [1] consult with the Program Director or Graduate Coordinator about their proposal; [2] submit a written justification for the course of study they wish to take, including [3] a list of the classes which are proposed to meet the objectives of this special program. Both the written justification and the course list are subject to approval. Other requirements of the program (e.g. a five course core, GPA, culminating experiences, etc.) cannot be waived or altered by use of the special concentration.

Students wanting graduate credit for certain 400-level courses must consult with the Graduate Advisor before enrolling.

Courses with an I suffix are not available for graduate credit.

Note: Graduate students are required to register for the higher (500-level) course whenever a course has a double number. Students may not repeat courses by taking them under different prefix designations, numbers or titles unless the course description specifically permits.

## Certificate in Teaching English as a Second Language (code 1-6050)

The Certificate in Teaching English as a Second Language (TESL) is open to students from any field who desire training for teaching English to speakers of other languages. While the program may be begun as an undergraduate, at least 18 units must be completed as a post-baccalaureate student.

### Recommendations

Students are strongly urged to include foreign language study as a part of their undergraduate curriculum, particularly those wishing the Language Development Specialist Certificate in addition to the TESL Certificate. Students planning to teach in California schools (K-12) must also include appropriate credential requirements in their total program.

### Prerequisites

1. A baccalaureate degree with a GPA of 2.50 on the last 60 units.
2. One course in basic English linguistics.

### Requirements

1. Twenty-four units, including:
  - A. 20 taken in residence;
  - B. 18 taken as a graduate student;
  - C. 12 taken at a 500-600 level.NOTE: Categories (a-c) combined need only equal 24 units.
2. A GPA of 3.0 on all work included in the program.
3. Passing of the CSULB Writing Proficiency Examination.
4. Eight courses, one each in eight different categories:
  - A. One course in basic ESL Methodology, LING 486;
  - B. One course in cross-cultural communication, selected from LING \*425 (ANTH \*421) or ED P 573;
  - C. One course in Language Acquisition, selected from CD 329, LING 329 or ED P 454;
  - D. One course in intermediate English linguistics, selected from LING 420 or 421;
  - E. One course in testing and assessment, selected from CD 460 or LING 562;
  - F. One course in curriculum, selected from LING 500 or LING 561;
  - G. One course in specialized methodology, selected from CD 590, LING \*460, LING 575, ED P 576;
  - H. Three units of a practicum (LING 593).

Students who have taken equivalent courses in the above categories but need units to complete certificate requirements may elect to take courses from the following: ANTH 4121, \*413; CD 330, 361, 363; EDEL 430; ED P 454; EDSE 401, 402, 435, 436; LING 423, 428, 650; PSY 438/538; SOC 4851; SPCH 309; SPAN 427/527.

Students wanting graduate credit for 400-level courses which have not been approved for graduate credit by the home department must consult with the Program Director or Graduate Advisor before enrolling. Courses with an "I" suffix are not available for graduate credit, but may be used for the Certificate if they were taken while the student was an undergraduate.

## Courses (LING)

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 325. Modern English Grammar (4)

Introduction to current descriptions of English grammar, with reference to structural and transformational models of American English as well as to traditional ones. Not open to students with credit in ENGL 325.

#### 327. Essentials of the English Language (3)

Prerequisites: ENGL 100 or its equivalent. Introduction to the essentials of English language study for credential candidates, including the history of the English language, key models of English grammar, and a variety of applied topics ranging from semantics and dialect study to current research in the teaching of English. Same course as ENGL 327.

#### 329. Introduction to Language Acquisition (3)

Introduction to the study of the acquisition of first and second languages. Linguistic perspectives on the development of phonological, syntactic, semantic, and pragmatic aspects of language. The influence of developmental stages, and social and cultural factors on the individual. Same course as C D 329.

#### 339. Linguistics for Crosscultural Academic Development [in Secondary School Settings] (3)

Principles of language structure, variation and usage for educators. Educational aspects of first and second language acquisition theories. Social and psychological influences on linguistic behavior in middle and high schools. Cultural and political issues affecting language attitudes, maintenance and shift. Traditional grading only.

#### 363I. Implications of Human Language (3)

Prerequisites: ENGL 100 and upper division status. This course examines human language from the perspectives of linguistics, psychology, and communicative disorders. Topics include relationships between languages of the world, language acquisition, and the social meaning of language and dialect differences. The implications of language for the individual and her/his social experience are examined through the methodologies of these disciplines.

#### \*413. Language and Culture (3)

Relation of language patterns to social life; problems of meaning in cross-cultural communication and language translation; practical application to business, government and religious contacts. Not open to students with credit in ANTH 440. Same course as ANTH 413.

#### 420. English Phonology (3)

Prerequisites: LING 325 or consent of instructor. Study of the phonology of American English, using articulatory phonetic, phonemic, and distinctive feature analyses. Not open to students with credit in ENGL 420 or 520. Traditional grading only. Lecture-problems.

#### 421. English Syntax (3)

Prerequisites: ENGL 325 or consent of instructor. Study of the morphology and syntax of American English, using structural, transformational, and recent models. Not open to students with credit in ENGL 421. Seminar. Traditional grading only.

- \*423. Semantics (3)  
Study of meaning in language. Same course as ENGL 423.
- \*425. Education Across Cultures (3)  
Cross cultural perspectives on education in modern society; problems in education of non-western peoples by those from western cultural backgrounds. Same course as ANTH 421.
- \*426. History of the English Language (3)  
Development of the English language from its beginnings to the present day. Same course as ENGL 426.
- \*428. Applied Linguistics (3)  
Prerequisites: LING 420 and 421. Linguistic research applied to the study and teaching of the English language. Not open to students with credit in ENGL 428/524. Traditional grading only.
- \*433. Survey of Discourse Analysis (3)  
Prerequisites: ENGL 325, an introductory linguistics course, or consent. An introduction to discourse analysis, the study of language structure from the viewpoint of its context of production. The place of discourse analysis in theoretical and applied linguistics. The structure of genres: conversation, narrative, exposition, and others; language in special settings; pragmatics and discourse; developmental issues. (Discussion) (Not open to students with credit in LING 530.) Traditional grading only.
435. Pedagogical Analysis of English (3)  
Prerequisite: Permission of instructor. Detailed analysis of the English language, based on the linguistic information necessary primarily to teach English as a second or foreign language. (Discussion) Traditional grading only.
441. Khmer Literacy for Khmer Speakers: Introduction (3)  
Prerequisite: Fluent oral skills in Khmer. First of a 4-course sequence. Introduction to Khmer writing system. Practice in reading, decipherment, vowels, consonants and syllable combinations. Oral practice, honorifics, culturally appropriate interaction. Traditional grading only. Same course as A/ST 441.
442. Khmer Literacy for Khmer Speakers: Intermediate A (3)  
Prerequisite: LING 441 or consent of instructor. Second of a 4-course sequence. Continued practice in Khmer writing system. Vocabulary development, reading and writing long sentences and simple text. Appropriate social and educational discourse. Traditional grading only. Same course as A/ST 442.
443. Khmer Literacy for Khmer Speakers: Intermediate B (3)  
Prerequisite: LING 442 or consent of instructor. Third of a 4-course sequence. Contextual reading for comprehension, culture and grammatical knowledge. Development of oral skills, through discussion of content, role play and verbal critique. Traditional grading only. Same course as A/ST 443.
444. Khmer Literacy for Khmer Speakers: Advanced (3)  
Prerequisites: LING 443 or consent of instructor. Fourth of a 4-course sequence. Composition and written translation. Preparation for BCLAD tests 5 & 6: Culture and Language of Emphasis. Reading authentic texts. Traditional grading only. Same course as A/ST 444.
- \*460. TESL Composition (3)  
Prerequisites: Passing of the Writing Proficiency Examination. Introduction to the rhetoric and composition of students with limited English proficiency. Attention to both the general principles of composition, and the specific issues that face students and teachers in an ESL context. Traditional grading only.
- \*470. Language & Gender in Cross-Cultural Perspective (3)  
Analysis of men's and women's communication in its social and cultural context; role of gender in interpreting conversational interactions in the U.S. and elsewhere; acquisition of gender differences; cultural dimensions of perceptions and stereotypes and their effect on communication. Same course as ANTH 475, W/ST 475.
472. Language and Discrimination (3)  
Survey and analysis of discrimination on the basis of language as component of racial, ethnic, gender, and class discrimination; focus on historical and contemporary examples; related analysis of bias toward so-called non-standard varieties of language; analysis of the language of racism and sexism.
485. Theoretical Foundations of Language Minority Education (3)  
Introduction to theoretical foundations of language minority instruction. Background on the historical and political context of the development of educational language policies. Same course as EDP 485.
- \*486. Foundations of Language Minority Instruction: Practice (3)  
Provides a general introduction to practical foundations of language minority instruction and provides background on historical development and use of current methods and techniques for language learning strategies. Classroom observations in off-campus or on-campus bilingual and English-as-a-second-language classrooms. Traditional grading only.
490. Special Topics in Linguistics (1-3)  
Prerequisite: Consent of instructor. Investigation of topics of current interest and concern to students in linguistics and allied areas. Topics will be announced in the Schedule of Classes. May be repeated for credit with different topics, but no more than six units may count toward the minor in linguistics.
500. Educational Linguistics (3)  
Prerequisites: 9 units of linguistics or permission of instructor. Graduate introduction to role of language and linguistics in contemporary education; analysis of context of language acquisition; attitudes toward multilingualism; language policies which set guidelines and expectations for instruction; cultural factors which influence language acquisition. (Discussion.) Traditional grading only. Same course as ED P 577.
533. Ethnography of Communication (3)  
Prerequisite: Graduate standing. Study of talk and other forms of communication from an ethnographic perspective. Emphasizes relevant methods and theories. Among the major topics presented from this perspective are language socialization, genres of speaking, intercultural communication, speech styles, strategic uses of language, and literacy. Traditional grading only. Same course as ANTH 530.
540. Sociolinguistics (3)  
Prerequisite: Nine units of linguistics or consent of instructor. Study of the linguistic and social antecedents, correlates, and consequences of language variation in the individual and society. Integration of theoretical models and practical fieldwork. (2 hrs seminar, 3 hrs lab.)
561. Second Language Curriculum Development (3)  
Prerequisite: LING 421 or permission of the instructor. Study of the content of second language instruction, from nongrammatical, communicative approaches to content-based instruction. The course will look at both K-12 and adult language instruction.
562. Second Language Testing and Assessment (3)  
Prerequisite: LING 421. Testing and assessment of second language learners, including both standardized tests and teacher-developed modes of assessment. Traditional grading only.
575. Literacy and Linguistics (3)  
Prerequisite: Six units in linguistics or permission of instructor. This course provides a general introduction to the field of literacy studies from a linguistic and sociocultural perspective. Among the major topics presented are the relationship between oral and written language; the acquisition of literacy; biliteracy; the relationship between literacy and socioeconomic/sociocultural factors; and the impact of societal expectations regarding literacy. Pedagogical implications of these issues are explored. Traditional grading only for Majors. Same course as ED P 578.
580. Linguistic Field Methods (3)  
Prerequisite: An introductory linguistics course. This course introduces the student to the practical study of unfamiliar languages. Through the help of a native speaker of a non-European language, the student will learn how to write down the sounds of the language and how to determine the structure of the language. Same course as ANTH 570.



590. Advanced Special Topics in Linguistics (1-3)  
Prerequisite: Consent of instructor. Advanced study of special topics of current interest and concern to students in linguistics and allied areas. Topics will be announced in the Schedule of Classes. May be repeated for credit with different topics, but no more than six units may count toward the Master's degree in linguistics.

593. Practicum in TESL (3)  
Prerequisite: LING 486. Experience in Teaching English as a second language supplemented by reading, research, and advising. Students must be available to be assigned to regularly scheduled courses in TESL five hours per week, as well as meeting with the instructor. Credit/No Credit grading only. Course may be repeated for a maximum of 6 units.

595. Qualitative Research Methods (3)  
This course provides an introduction to the theory and application of ethnographic and qualitative methods in educational settings with special emphasis on applications for educational linguistics, educational anthropology, and research related to language arts instruction. It surveys the basic rationale for qualitative/ethnographic inquiry as well as basic concepts and methods for applications in teacher-as-researcher approaches and for action research. Traditional grading only. Same course as ED P 595.

596. Research in Linguistics (3)  
Prerequisite: Advancement to candidacy for the M.A. in Linguistics. Principles and practice of quantitative and qualitative research design, analysis and reporting. Access to sources, evaluation of published research, application of tools. Traditional grading only. (Seminar, 2 hours; Laboratory, 3 hours.)

597. Directed Study in Linguistics (1-3)  
Prerequisite: Permission of instructor and advisor. Directed study on issues and topics in Linguistics. Not intended to replace available courses. Course may be repeated for a maximum of 3 units.

610. Historical Linguistics (3)  
Prerequisites: LING 420 and 421 or equivalent. Advanced study of language change, language families, and language relationships using the methods of comparative linguistics. Two hours seminar, two hours laboratory. Traditional grading only.

620. Seminar in Syntactic Theory and Analysis (3)  
Prerequisite: LING 421. Theories and practices of selected views of syntax in contemporary linguistics. Topic may vary from semester to semester. (Seminar, 2 hours; Laboratory, 3 hours.) Traditional grading only.

625. Seminar in Phonetics and Phonology (3)  
Prerequisite: LING 420. Theory and practice of selected views of phonetics and phonology in contemporary linguistics. (Seminar, 2 hours; Laboratory, 2 hours) Traditional grading only.

630. Seminar in Anthropological Linguistics (3)  
Prerequisite: Consent of instructor. Areas and methods of linguistic study and research, evaluation and intensive scrutiny. May be repeated for a maximum of six units. Same course as ANTH 630.

633. Discourse and Grammar (3)  
Prerequisite: LING 421 or consent of instructor. This graduate course situates discourse analysis in linguistic theory and method, and focuses on the relationship of discourse and grammar. Examined are (1) the relationship of morphosyntactic devices and discourse context; (2) information flow and its relations to grammar; (3) the pragmatic motivation for grammatical systems; and (4) the relationship of grammar and genre. (Discussion) Traditional grading only.

650. Seminar in Bilingualism (3)  
Prerequisites: LING 420, 421 or equivalents. Advanced study of the degrees and kinds of bilingualism and bilingual situations which exist. Implications of such distinctions for linguistics and education will be covered. Traditional grading only.

697. Directed Research (1)  
Prerequisite: Advancement to candidacy for the M. A. in Linguistics. Research in linguistics on a topic connected with the Comprehensive Examination for the degree. Traditional grading only. Course may be repeated for a maximum of 3 units.

698. Thesis (1-6)  
Prerequisite: Consent of graduate committee. Planning, preparation and completion of a thesis in linguistics.

# MARKETING

*College of Business Administration*

Department Chair

Richard L. Celsi

Department Office

CBA 354

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Faculty

Professors

Richard L. Celsi

Z. S. Demirdjian

Forrest E. Harding

Pamela Homer

Praveen Soni

Richard Spiller

Terrence H. Witkowski

Associate Professors

David Horne

Mary Wolfenbarger

Department Secretary

Linda DeLange

For all degree requirements see Business Administration. Students desiring information should contact the department office for referral to one of the faculty advisors.

## Courses (MKTG)

### Upper Division

#### 300. Marketing (3)

Recommended preparation: ECON 200 or 201 or 300. Interdependence of elements in the firm's marketing system. Relation of marketing system to other activities in the firm. Firm's role in domestic and world marketing environments. Economic and social effects on marketing. Human behavior as it affects marketing, marketing communications, marketing information systems, marketing management problems and their solutions.

#### 310. Retail Concepts and Policies (3)

An overview of the retail system. Retail decision making emphasized in relation to the following areas: store operation and management; merchandise assortment and pricing; store location and layout; advertising and sales communication; consumer analysis; retail information systems; retail accounting and control.

#### 330. Mass Marketing Communications: Advertising (3)

Principles and practices of advertising. Social and economic importance of advertising and its relation to modern business organization; importance of an advertising plan; preparation of advertisements, copy and layout, media planning and application of information technology.

#### 410. Services Marketing (3)

Prerequisite: MKTG 300. Applies marketing management techniques, marketing strategies, and processes for service evaluation and service quality improvement to the marketing of services in both profit and nonprofit organizations. Topics include the unique characteristics of services marketing, the management of services, the evaluation of service quality, techniques for service improvement, services marketing in global environments, and the use of marketing techniques to achieve service breakthroughs. Entrepreneurial and career opportunities in not-for-profit and profit oriented service organizations will also be explored.

#### 420. Sales Management (3)

Prerequisite: MKTG 300. Managing the sales force; sales analysis; forecasting techniques; account and territory management; negotiations; integrating the personal computer into the sales function; computer simulation of the decision process in sales management.

#### 430. Promotion Strategies (3)

Prerequisite: MKTG 300. Management of the promotional mix. Behavioral and data-based foundations for promotional strategies; budgeting; allocation of promotional resources; media models; integration of promotional strategies into the marketing mix; applications of information-based technologies and tools for analysis.

#### 465. Business To Business Marketing (3)

Prerequisite: MKTG 300. Analysis of industrial products, markets, institutions, and strategy. Comparison with consumer marketing. Emphasis on business-to-business negotiations and promotions. Integration and application of information technologies.

#### 470. Marketing Research (3)

Prerequisites: MKTG 300, IS 310. Fundamentals of marketing and industrial research as an aid to problem-solving in business. Familiarization with current industry research efforts. Data collection, interviewing, and report-generation software. Analysis of data. Project, instrument and sampling designs.

#### 480. International Marketing (3)

Prerequisite: MKTG 300. The study of marketing systems and marketing operations in various countries and multinational market groups. Impact of foreign environments and information technologies. In-depth international marketing studies and formulation of appropriate strategies.

#### 481. International Marketing Management (3)

Prerequisites: MKTG 300 and MKTG 480. MKTG 481 provides students with a problem solving approach to assessing and exploiting global marketing opportunities. The course focuses on developing a strategic marketing plan for entering/maintaining foreign markets. The course will be taught as a special topics seminar. Traditional grading only.

#### 490. Consumer Behavior (3)

Prerequisite: MKTG 300. Application of psychological, sociological, anthropological, and economic theories to the understanding of consumer behavior. Consideration of personality, attitudinal, group, social class, subcultural, and demographic factors. Review of comprehensive models.

#### 492. New Products/New Services (3)

Prerequisite: MKTG 300 or consent of instructor. Entrepreneurship; innovation management; the process and strategy of new product or services marketing; developing a business plan for a product or service introduction.

#### 494. Marketing Management (3)

Prerequisites: MKTG 300; senior marketing majors or consent of instructor. Strategies and techniques in marketing management. Application of prior material from marketing curriculum to problems and cases. Emphasis on problem identification and solution. Traditional grading only.

#### 495. Selected Topics (1-3)

Prerequisites: Consent of instructor and a GPA of 3.0 in marketing. Topics of current interest in marketing selected for intensive study. May be repeated for a maximum of 6 units. Topics will be announced in the Schedule of Classes.

#### 497. Directed Studies (1-3)

Prerequisites: Consent of instructor and Department Chair, on Dean's List and a 3.0 GPA or higher in marketing. Individual projects, study and research of advanced nature in marketing.

#### 663. Seminar in Advertising Policies (3)

Prerequisite: MKTG 500. Discussion and analysis of advertising situations, objective setting, creative strategies, media strategies and models, and evaluation. Applications of mass communication theories and marketing databases.

#### 665. Seminar in Marketing Research (3)

Prerequisites: MKTG 500 and IS 501. The role of research in the solution of marketing problems. Research methods in collecting, analyzing, and interpreting information for business use. Survey and experimental approaches included. Case studies and/or class projects required.

#### 666. Seminar in International Marketing (3)

Prerequisite: MKTG 500. Analysis of problems and opportunities in international marketing operations. Consideration of entry strategies, competitive strategies, domestication, and nationalization problems. Use of marketing information systems to evaluate opportunities and threats in foreign markets.

#### 668. Seminar in Consumer Behavior (3)

Prerequisite: MKTG 500. Topics in the behavioral sciences as they apply to marketing. Application of psychological, sociological, anthropological, and economic theories and models to the understanding of buyer behavior and the development of marketing strategy.

#### 669. Seminar In Strategic Planning (3)

Prerequisite: MKTG 661. The role and use of marketing research and information systems as the basis for development and implementation of marketing strategy. Case studies and/or class projects required.

#### 695. Selected Topics (3)

Prerequisites: MBA standing, consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering and, in the absence of significant duplication, the course may be repeated once for credit.

#### 697. Directed Studies (1-3)

Prerequisites: MBA standing, consent of instructor and Department Chair. Individual study under the direction of the faculty.

### Graduate Prerequisite Course

#### 500. Marketing Concepts (3)

Prerequisite: MBA standing required. Overview of the decision process in marketing. Consideration of functional areas and their interaction with the total operations of the firm. Application of information technology to the development of marketing strategy and planning.

### Graduate Division

#### 610. Seminar in Services Marketing (3)

Prerequisite: MKTG 500. Supplements Marketing 500 by focusing on problems and strategies specific to service businesses. Problems commonly encountered in service businesses (such as inability to inventory, difficulty in synchronizing demand and supply, difficulty in controlling quality) are addressed. Strategies used by successful services marketers to overcome these difficulties will be discussed. The emphasis is on services in general rather than on any particular industry. However, concepts are illustrated using cases, examples, and exercises in diverse service industries such as banking, health care, retailing, financial planning, consulting, professional services, and communication. Traditional grading only.

#### 661. Seminar in Marketing Policies (3)

Prerequisite: MKTG 500. The solving of practical, profit-oriented problems in marketing. Sophisticated case analysis and discussion. Application of marketing principles and technologies, including information systems, databases, behavioral theories, and management techniques.

# MATHEMATICS

*College of Natural Sciences and Mathematics*

Department Chair  
Samuel G. Councilman

Department Office  
FO3-120

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## Faculty

### Professors

M. Shafqat Ali  
John M. Bachar, Jr.  
Howard B. Beckwith  
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Samuel G. Councilman  
Linda J. DeGuire  
Carl H. Dorn  
Morteza Ebneshahrashoob  
Yihnan David Gau  
Bernard N. Harvey  
Melvin D. Lax  
Kau-Un Lu  
William G. Margulies  
Daniel G. Martinez  
Thomas A. McCullough  
Robert A. Mena  
Howard J. Schwartz  
James D. Stein  
Lindsay A. Tartre  
Robert C. Valentini  
Derming Wang  
Kenneth K. Warner  
Saleem H. Watson  
Robert R. Wilson

### Associate Professors

Joseph Bennish  
Bruce J. Chaderjian  
Harry D. Eylar  
Kent G. Merryfield  
Ngo N. P. Viet  
Arthur K. Wayman  
William K. Ziemer

Administrative Operations Analyst  
Linda Dixon

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Graduate Advisor, Undergraduate Advisor.

Mathematics is fundamental to all scientific knowledge, including not only the traditional natural sciences but increasingly the social and economic sciences. The increasing applicability of mathematical methods has been enhanced and accelerated by the development of the computer. Mathematics is also a vital aid to critical thinking and, at least to some, a thing of beauty in itself.

The Department of Mathematics offers instruction for students at all levels beyond high school mathematics. Its courses provide the computational and analytic skills needed for a variety of majors, as well as the advanced theoretical topics for specialists in mathematics. Its various degree options are intended to provide the student with the knowledge and techniques needed for scientific, management and statistical applications, and also the theoretical understanding needed for teaching, graduate study and lifelong professional growth. Beyond these, it hopes to instill a spirit of curiosity and healthy skepticism towards mathematical statements and results – a willingness to ask “is this true?” and “why?”, and to try to find the answers.

### *Concurrent and/or Summer Enrollment in Another College*

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the College of Natural Sciences and Mathematics must petition the appropriate department for prior approval to enroll in specific courses. This policy applies to concurrent enrollment or summer enrollment. University policy must also be complied with. See ‘Concurrent Enrollment’ and ‘Transfer of Undergraduate Credit’ in this Catalog. Courses not receiving prior approval will not be accepted for credit by the department.

### *Facilitated Enrollment into Classes*

All entering students who declare a major in a degree program offered by this Department need to participate in the College of Natural Sciences and Mathematics’ Science Safari to Success (for first-time freshmen) or EONS (Enrollment and Orientation in the Natural Sciences and Mathematics for transfer students) Program. These programs are held in June-July for those starting in the Fall Semester and in January for those starting in the Spring Semester. Department advisors will be available to provide an overview of the students’ chosen baccalaureate degree program, to assist with academic advisement, to provide information on the many career opportunities available, and to aid students in enrolling in classes. Contact the Student Access to Science Center (FO5-109) or Department Office for additional information.

### *Undergraduate Degree Programs*

The Mathematics Department offers four undergraduate degree programs in mathematical sciences.

## Bachelor of Science in Mathematics (code 3-6666) (124 units)

The student in this program is required to take a selection of fundamental courses in algebra and analysis. This program is the most flexible in that it has the greatest number of elective courses. Elective upper division courses are available which meet the needs of students preparing for a variety of goals, including careers in industry and government, secondary teaching and graduate study. Students who do not wish to complete the requirements for a formal option in applied mathematics or statistics may wish to elect courses in one or all of these areas as part of this degree program.

### Requirements

Lower Division: ENGL 101 or 317; MATH 122, 123, 224, 233, 247; CECS 175 or 242; PHYS 151 or 151P.

Upper Division: A minimum of 30 units of approved upper-division mathematics courses selected in consultation with a major advisor, to include MATH 341 or 347, 361A, 361B, 364A, 380 and 444 but not 311, 370A or 370B. To achieve flexibility, only 18 of the required 30 units are specified. Students should choose the remaining 12 units after discussing career goals and interests with an advisor. For additional information and to obtain an advisor, contact the Department Office.

## Option in Applied Mathematics (code 3-6608) (124 units)

The student who is most interested in the applications of mathematics has a choice of two suboptions: the first concentrates on the applications in science and engineering while the second concentrates on the applications to economics and management. In both suboptions, courses are specified in the major areas of applied mathematics and in the field of application. This option prepares students for careers in business, industry or government or for graduate study.

### Requirements

#### Suboption I: Area of Application is Science & Engineering

Lower Division: ENGL 101 or 317; MATH 122, 123, 224, 247; CECS 175; PHYS 151 or 151P, 152 or 152P; PHYS 154 or EE 211 or CE 205.

Upper Division: MATH 323, 361A, 361B, 364A, 364B, 380, 470. A minimum of 9 units from the following: MATH 381, 382, 423, 461, 463, 472, 479, 485. A minimum of 9 units from one of the following three groups:

- A. PHYS 310, 311, 340A, 340B, 350, 410, 422, 450;
- B. EE 310, 370, 382, 411, 460, 482;
- C. CE 335, 359, 437, 438, 458, 494; ME 371, 373.

#### Suboption II: Area of Application in Economics and Management

Lower Division: ENGL 101 or 317; MATH 122, 123, 224, 247; CECS 175; ECON 201 AND 202, or ECON 300.

Upper Division: MATH 323, 361A, 361B, 364A, 380, 381, 382, 485. A minimum of 6 units from the following courses: MATH 364B, 423, 463, 470, 479, 480. A minimum of 15 units from one of the following two groups:

- A. ECON 310, 311 required; and 9 units selected from ECON 333, 410, 411, 420, 422, 433, 486.
- B. ECON 333, MGMT 410 required; and 9 units selected from MGMT 411, 412, 413, 414, 426.

## Option in Statistics (code 3-6008) (124 units)

This option provides students with a foundation in statistical methods. The courses required insure that the student understands both how the techniques are mathematically derived and how they are applied. Statistical analysis is an essential part of any scientific investigation. It is a vital tool in monitoring the quality of products and services and in forecasting. This option prepares students for interesting and rewarding careers and for graduate study in statistics and other quantitative fields.

### Requirements

Lower Division: ENGL 101 or 317; MATH 122, 123, 224, 247; CECS 175 or 242; and any one of the following: PHYS 100A-B, or PHYS 151 or 151P and 152 or 152P; or PHIL 170 and 270; or 8 units of a foreign language, or 6 lower-division units in a field in which approved upper-division Statistics courses are also taken.

Upper Division: A minimum of 30 units of approved upper-division mathematics courses to include MATH 323, 361A, 380, 381, 382 and 480. MATH 361B is recommended. Six additional units must be taken in fields outside mathematics; these must be approved by a mathematics advisor. The following courses are approved statistics option electives: BIOL 456, 465; ECON 481, 486; GEOG 400; PSY 315, 411, 412; IS 460, 463; SOC 455. In addition, any student planning to pursue graduate studies in mathematics should take MATH 444.

## Option in Mathematics Education (code 3-6609) (124 units)

This option is for students preparing to teach mathematics at the secondary school level. Completion of this Option will meet all course requirements for the Single Subject Credential Major Program in Mathematics. Thirty units of post-baccalaureate coursework are also required for the Clear Single Subject Teaching Credential in Mathematics (see Single Subject Teacher Education Program in the College of Education for more specific information about courses and other requirements).

### Requirements

Lower Division: MATH 122, 123, 224, 233, 247; one of the following: MATH 278\*, CECS 174, CECS 175, CECS 242; ENGL 101 or 300 or 317; and one of the following sequences: PHYS 151 (or 151P) and 152 (or 152P); or PHIL 170 and 270; or eight units of a foreign language.

Upper Division: MATH 310, 341, 355, 361A\* or 364A, 380, 381, 410, 411, 444; 3 additional upper division Mathematics units excluding MATH 311, 370A, 370B; and EDSS 300M.

(\* denotes preferred course)

## Minor in Mathematics (code 0-6666)

### Requirements

MATH 122, 123, 224, 247 and 9 units of upper-division Mathematics courses to include MATH 361A, but not 370A.

## Minor in Applied Mathematics (code 0-6608)

### Requirements

The student must complete 28 semester units as follows:

Lower Division: MATH 122, 123, 224, 247

Upper Division: MATH 323, 364A or 370A, 380 and one course selected from MATH 364B, 381, 382, 423 or 470.

## Master of Science in Mathematics (code 6-6666)

### Prerequisites

1. A bachelor's degree in mathematics from an accredited college or university; or
2. A bachelor's degree with a minimum of 24 upper division units in mathematics;
3. Courses must include MATH 247, 361A-B, 364A and 444, or their equivalents. Deficiencies will be determined by the graduate advisor after consultation with the student and study of transcript records.

### Advancement to Candidacy

In addition to University requirements, the student must have completed all prerequisite courses listed above with no grade less than "C". Students must have passed the Writing Proficiency Examination (WPE) and should file for Advancement upon completion of at least six units of the Program, with at least a 3.0 GPA.

### Requirements

1. A minimum of 24 graduate and approved (\*) upper division units in mathematics including:
  - A. One of the sequences MATH 540A-B, 550A-B, 560A-B, 561A-B, and 562A-B;
  - B. Two additional courses selected from 540A, 550A, 560A, 561A, 562A;
  - C. A minimum of 18 units at 500/600 level, including at least 15 units of graduate courses in mathematics exclusive of MATH 697 and/or 698;
2. Six units of approved upper division (as indicated by asterisk) or graduate electives to total 30 units for the degree;
3. Complete one of the following:
  - A. Pass a comprehensive written examination in two areas of mathematics.
  - B. Subject to the approval of the Graduate Committee of the Department of Mathematics, write a thesis in mathematics and defend it orally.  
Specific requirements for passing of the comprehensive examinations can be found in the Graduate Study Booklet which is available from the Mathematics Department.

## Option in Applied Mathematics (code 6-6608)

### Prerequisites

1. A bachelor's degree in mathematics, physics, or engineering, or a bachelor's degree with at least 24 upper division units in mathematics from an accredited college or university.
2. A grade of "C" or above in MATH 247, 323, 361A-B, 364A, and 380, or their equivalents. Deficiencies will be determined by the graduate advisor.

### Advancement to Candidacy

In addition to University requirements, the student must have completed all prerequisite courses listed above, with no grade less than "C". Students must have passed the Writing Proficiency Examination (WPE) and should file for Advancement upon completion of at least six units (and no more than nine units) of the Program, with at least a 3.0 grade point average.

## Requirements for the Master of Science in Applied Mathematics

1. A minimum of 30 graduate and upper division units approved by the graduate advisor and including:
  - A. MATH 479, 570, and 576;
  - B. At least 9 units, of which at least 3 must be numbered above 500, of applied mathematics courses selected from MATH 364B, 381, 382, 423, 470, 480, 485, 575, 577, 581, and 584. (A MATH 495 or 695 course whose content is applied mathematics may also be selected if it is approved by the graduate advisor prior to registration.)
  - C. At least 6 units of analysis courses selected from MATH 463, 472, 560A, 561A, and 562A or 461 but not both;
  - D. At least 18 units of graduate mathematics courses (numbered 500 or above) including any such courses used to meet requirements (A), (B), and (C) above and including at least 15 units other than MATH 697 or 698.
2. Complete one of the following:
  - A. Pass a comprehensive written examination in two subjects of Applied Mathematics;
  - B. Subject to the approval of the proposal by both the Applied Mathematics Committee and the Graduate Committee of the Department of Mathematics, write a thesis in applied mathematics and defend it orally.  
Specific requirements for passing of the comprehensive examinations can be found in the Graduate Study Booklet which is available from the Mathematics Department.

## Courses (MATH)

For students entering the university Fall 1983 and thereafter, satisfying the Entry-Level Math (ELM) requirement (see "Undergraduate Programs" section of this Catalog) is a prerequisite for all mathematics courses except MATH 001 and 010. An ELM test score of 400 or lower dated May 1992 or later or a non-passing pre-May 1992 ELM test score is required for MATH 001. An ELM test score between 410 and 540 dated May 1992 or later or proof of successful completion of MATH 001 subsequent to May 1992 is required for MATH 010.

### Lower Division

#### 001. Elementary Algebra and Geometry (3)

Prerequisite: A May 1992 or subsequent ELM test score of 400 or lower or a non-passing pre-May 1992 ELM test score. Topics include arithmetic review, elementary algebra, and some basic geometry concepts. Cannot be taken for credit toward a university degree. Credit/No Credit grading only. (Lecture 3 hrs.) Not open to students who are exempt from the ELM or who have not yet taken the ELM but are required to do so.

#### 010. Intermediate Algebra (3)

Prerequisite: An ELM score between 410 and 540 dated May 1992 or later, or proof of successful completion of MATH 001 subsequent to May 1992. Topics include polynomial, rational, and radical expressions and equations; rational exponents; solutions and graphs of linear, quadratic, and rational inequalities; systems of linear equations; operations, inverses, and graphs of functions; logarithmic and exponential functions and their applications. Cannot be taken for credit toward a university degree. Credit/No Credit grading only. (Lecture 3 hrs.) Not open to students who are exempt from the ELM or who have not yet taken the ELM but are required to do so.

### 101. Trigonometry (3)

Prerequisites: MATH 010 or two years of high school algebra. Trigonometric functions and applications. Complex numbers. (Lecture 3 hrs.) Not open to students with credit in MATH 117 or 122. (CAN MATH 8)

### 103. Mathematical Ideas (3)

Prerequisites: 3 years of high school mathematics including algebra, geometry and intermediate algebra (or MATH 010), or the equivalent. Non-technical course surveying a variety of concepts in undergraduate mathematics. Topics will include elementary logic, algebra of sets, numeration systems, rational and real numbers, modular number systems, elementary combinatorics, probability and statistics. (Lecture 3 hrs.) Not open to students with credit in any MATH course numbered greater than 103, or the equivalent. (CAN MATH 2)

### 110. Mathematics for Elementary Teachers I (3)

Prerequisite: Three years of high school mathematics including algebra, geometry and intermediate algebra (or MATH 010), or the equivalent. Problem solving and analysis of the structure and operations of the real number system; comparisons with other numeration systems are included. Enrollment limited to Liberal Studies majors or teaching credential students. (Lecture 3 hrs.) (CAN MATH 4)

### 111. Mathematics for Elementary Teachers II (3)

Prerequisites: MATH 110 and one year of high school geometry. Problem solving with informal geometry in two and three dimensions: measurement, similarity, tessellations, constructions, trigonometry and an introduction to Euclidean and non-Euclidean geometries. (Lecture 3 hrs.) Not open for credit to Mathematics majors.

### 112. College Algebra (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010), or the equivalent. Study of algebra including linear and quadratic equations and systems; matrices and determinants; theory of equations; polynomial, exponential and logarithmic functions and their graphs; permutations and probability. Designed for students majoring in a life or social science. (Lecture 3 hrs.) Not open to students with credit in MATH 117 or 122.

### 114. Finite Mathematics (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010), or the equivalent. Combinatorial techniques and introduction to probability. Equations of lines and systems of linear equations, matrices, introduction to linear programming. (Lecture 3 hrs.) Not open to students with credit in MATH 233 or 380. (CAN MATH 12)

### 115. Calculus for Business (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010), or the equivalent. Functions, derivatives, optimization problems, graphs, partial derivatives. Lagrange multipliers, integration of functions of one variable. Applications to business and economics. Emphasis on problem-solving techniques. (Lecture 3 hrs.) Not open to students with credit in MATH 115B, 115S, 119A, 120 or 122. (CAN MATH 34)

### 117. Precalculus Mathematics (4)

Prerequisites: Three and one half years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010), and one-half year of trigonometry (or MATH 101), or the equivalent. Polynomials, exponential, logarithmic, and trigonometric functions. Complex numbers, mathematical induction, binomial theorem, conic sections. (Lecture 3 hrs., problem session 2 hrs.) Not open to students with credit in MATH 122. (CAN MATH 16)

### 119A. Survey of Calculus I (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010), or the equivalent. Functions, limits and continuity, differentiation and integration of functions of one variable including exponential, logarithmic, and trigonometric functions. Graphing, optimization, parametric equations, integration by substitution and by parts,

numerical integration. Applications to the life sciences. Emphasis on problem solving rather than theory. (Lecture 3 hrs.) Not open to students with credit in MATH 115, 115B, 115S, 120, or 122. (CAN MATH 30)

### 119B. Survey of Calculus II (3)

Prerequisite: MATH 119A or 122. Functions of several variables, partial derivatives, optimization. First order differential equations, second order linear homogeneous differential equations, systems of differential equations. Probability, random variables, difference equations. Introduction to vectors, matrices, Gaussian elimination, determinants. Applications to the life sciences. Emphasis on problem solving rather than theory. (Lecture 3 hrs.) Not open to students with credit in MATH 116, 123, or 224. (CAN MATH 32)

### 120. Calculus for Technology (4)

Prerequisite: Three and one-half years of high school mathematics including one year of geometry, two years of algebra, and one semester of trigonometry, or the equivalent. Real and complex numbers and functions; limits and continuity; differentiation and integration of functions of one variable. Introduction to calculus of several variables. Applications to science and technology. (Lecture 3 hrs., problem session 2 hrs.) Not open to students with credit in MATH 122.

### 122. Calculus I (4)

Prerequisites: A grade of "C" or better in MATH 117 or four years of high school mathematics including two years of algebra, one year of geometry, one-half year of trigonometry and one additional senior-level course. Derivatives and applications of the derivative. Integration and applications of integration. (Lecture 3 hrs., problem session 2 hrs.) (CAN MATH 18)

### 123. Calculus II (4)

Prerequisite: A grade of "C" or better in MATH 122. Transcendental functions. Techniques of integration. Introduction to differential equations. Infinite series. Parametric equations. Polar coordinates. (Lecture 3 hrs., problem session 2 hrs.) (CAN MATH 20)

### 180. Elementary Statistics (3)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010), or the equivalent. Nature of statistics and probability theory, description of sampled data. Random sampling, normal distribution assumption and its consequences; tests of hypotheses and estimation; correlation, regression, analysis of variance. Non-parametric methods. (Lecture 3 hrs.) (CAN STAT 2)

### 201. Mathematical Software and Technology (3)

Prerequisite: MATH 122. Basic elements of spreadsheets: rearranging and combining worksheets, functions, charts, graphs, macros, basic data analysis and mathematical applications. The logical structure of the graphing calculator and its various menus: customizing and programming it. Introduction to a scientific word processor and typing technical equations. Introduction to mathematical software including elementary programming and its applications. (Lecture 2 hrs., problem session 2 hrs.)

### 224. Calculus III (4)

Prerequisite: A grade of "C" or better in MATH 123. Vectors and three-dimensional analytic geometry. Partial derivatives and Lagrange multipliers. Multiple integrals. Vector calculus, line and surface integrals. Green's Theorem, Stokes' Theorem and the Divergence Theorem. (Lecture 3 hrs., problem session 2 hrs.) (CAN MATH 22)

### 233. Fundamental Concepts for Advanced Mathematics (3)

Prerequisite: A grade of "C" or better in MATH 123. Fundamentals of logic and set theory, counting principles, functions and relations, induction and recursion, introduction to probability, elementary number theory, congruences. (Lecture 3 hrs.)

### 247. Introduction to Linear Algebra (3)

Prerequisite or corequisite: MATH 224. Matrix algebra, solution of systems of equations, determinants, vector spaces including function spaces, inner product spaces, linear transformations, eigenvalues, eigenvectors, quadratic forms and applications. Emphasis on computational methods. (Lecture 3 hrs.) (CAN MATH 26)

278. Computer Applications in Mathematics for Teachers (3)  
Prerequisite: MATH 110 or higher. Course designed for pre-service or in-service teachers. Laboratory experience with an appropriate programming language, such as Logo and/or HyperTalk; computer software evaluation; survey of teacher tools, such as spreadsheets and databases; problem solving in mathematics using technology; integration of computer technology into the mathematics classroom. (Lecture 3 hrs.) Not open to computer science majors or non-waiver program mathematics majors.

#### 297. Directed Study (1-3)

Prerequisite: Consent of instructor. Designed for students who wish to undertake special study, at the lower division level, which is not a part of any regular course, under the direction of a faculty member. Individual investigation, studies or surveys of selected problems.

### Upper Division

#### 310. History of Early Mathematics (3)

Prerequisite: MATH 123. History of mathematics through the seventeenth century, including arithmetic, geometry, algebra, and the beginnings of calculus. Interconnections with other branches of mathematics. (Lecture 3 hrs.)

#### 311. Topics of Enrichment in Mathematics for the Elementary Teacher (3)

Prerequisites: MATH 110 and either MATH 111 or 122 or consent of instructor. Enrichment topics in mathematics for the elementary teacher, such as theory of arithmetic, numeration systems, elementary logic, mensuration, metric system, topological equivalence, probability and statistics and network theory. (Lecture 3 hrs.) Not open for credit to mathematics majors.

#### 323. Introduction to Numerical Analysis (4)

Prerequisites: MATH 224 and a course in computer programming. Numerical solution of nonlinear equations, systems of linear equations, and ordinary differential equations. Interpolating polynomials, numerical differentiation, and numerical integration. Computer implementation of these methods. (Lecture-discussion 3 hrs., problem session 2 hrs.)

#### 330. Introduction to Mathematical Logic (3)

Prerequisite: MATH 123. Symbolic methods of propositional calculus, general theory of inference, transition from formal to informal proofs, theory of definition, elementary set theory and axiomatic methods. (Lecture 3 hrs.)

#### 333. Discrete Structures and Combinatorics (3)

Prerequisites: MATH 233 and 247. Advanced counting techniques, generating functions, graph theory, coding theory, additional topics in combinatorics. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

#### 340. Theory of Algebraic Equations (3)

Prerequisite: MATH 123. Complex numbers, general theorems on algebraic equations, the discriminant, location and approximation of roots of equations, solution of the cubic and quartic equations; determinants and their application to simultaneous linear equations, symmetric functions. (Lecture 3 hrs.)

#### 341. Number Theory (3)

Prerequisites: MATH 123 and at least one of MATH 233, 247, 310; recommended, 233 or 247. Divisibility, congruences, number theoretic functions, Diophantine Equations, primitive roots, continued fractions. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

#### 347. Linear Algebra (3)

Prerequisites: MATH 224, 233, and 247. An in-depth study of linear transformations, vector spaces, inner product spaces, quadratic forms, similarity and the rational and Jordan canonical forms. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

#### 355. College Geometry (3)

Prerequisite: MATH 123. Transformations, motions, similarities, geometric objects, congruent figures, the axioms of geometry, and additional topics in Euclidean and non-Euclidean geometry. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

#### 361A. Introduction to Mathematical Analysis I (3)

Prerequisite: MATH 224 and MATH 233 or 247. Rigorous study of calculus and its foundations. Structure of the real number system. Sequences and series of numbers. Limits, continuity and differentiability of functions of one real variable. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

#### 361B. Introduction to Mathematical Analysis II (3)

Prerequisite: MATH 361A. Riemann integration. Topological properties of the real number line. Sequences of functions. Metric spaces. Introduction to the calculus of several variables. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

#### 364A. Ordinary Differential Equations I (3)

Prerequisites: MATH 224, prerequisite or corequisite MATH 247. First order differential equations; undetermined coefficients and variation of parameters for second and higher order differential equations, series solution of second order linear differential equations; systems of linear differential equations; applications to science and engineering. (Lecture 3 hrs.)

#### \*364B. Ordinary Differential Equations II (3)

Prerequisites: MATH 364A or 370A. Existence-uniqueness theorems; Laplace transforms; difference equations; nonlinear differential equations; stability, Sturm-Liouville theory; applications to science and engineering. (Lecture 3 hrs.)

#### 370A. Applied Mathematics I (3)

Prerequisite: MATH 224. First order ordinary differential equations, linear second order ordinary differential equations, numerical solution of initial value problems, Laplace transforms, matrix algebra, eigenvalues, eigenvectors, applications. (Lecture 3 hrs.) Not open for credit to mathematics majors.

#### 370B. Applied Mathematics II (3)

Prerequisite: MATH 370A. Arithmetic of complex numbers, functions of a complex variable, contour integration, residues, conformal mapping; Fourier series, Fourier transforms; separation of variables for partial differential equations. Applications. (Lecture 3 hrs.) Not open for credit to mathematics majors.

#### 380. Probability and Statistics (3)

Prerequisite: MATH 224. Frequency interpretation of probability. Axioms of probability theory. Discrete probability and combinatorics. Random variables. Distribution and density functions. Moment generating functions and moments. Sampling theory and limit theorems. (Lecture 3 hrs.)

#### \*381. Mathematical Statistics (3)

Prerequisites: MATH 247 and 380. Estimation and hypothesis testing. Maximum likelihood and method of moments estimation. Efficiency, unbiasedness, and asymptotic distribution of estimators. Neyman-Pearson Lemma. Goodness-of-fit tests. Correlation and regression. Experimental design and analysis of variance. Non-parametric methods. (Lecture 3 hrs.)

#### \*382. Random Processes (3)

Prerequisites: MATH 247 and 380. Further topics in probability. Markov processes. Renewal theory. Random walks. Queueing theory. Poisson processes. Brownian motion. (Lecture 3 hrs.)

#### 410. History of Modern Mathematics (3)

Prerequisites: MATH 247, 310 and at least three out of MATH 233, 341, 355, 361A, 380. The history of mathematics from the seventeenth century through the first half of the twentieth century. Development of calculus, analysis, and geometry during the time period. Other topics discussed may include the history of probability and statistics, algebra and number theory, logic and foundations. (Lecture 3 hrs.)

#### 411. Topics and Issues in Secondary School Mathematics (3)

Prerequisites: MATH 310, 341, 355, 380, 410, and 444, and EDSS 300M (MATH 410 or EDSS 300M may be taken concurrently), or consent of the instructor. Examination and analysis of topics and issues in the secondary school mathematics curriculum from an advanced standpoint. Topics will include problem solving, mathematical connections, mathematical structures, mathematical conjecture and proof, mathematical communication at various levels, use of manipulatives and technology, assessment alternatives. Instructional experiences involving mathematics required in college-age settings. Observation/interview experience involving



mathematics required in non-educational settings. Portfolio assemblage required. Intended for students preparing to enter the Single Subject Credential Program. (Lecture 2 hrs., activity 3 hrs.)

**\*423. Intermediate Numerical Analysis (3)**

Prerequisites: MATH 247 and 323. Numerical solutions of systems of equations, calculation of eigenvalues and eigenvectors, approximation of functions, solution of partial differential equations. Computer implementation of these methods. (Lecture 3 hrs.)

**444. Introduction to Abstract Algebra (3)**

Prerequisites: MATH 233 and 247 and at least one of MATH 341 or 347. Groups, subgroups, cyclic groups, symmetric groups, Lagrange's theorem, quotient groups. Homomorphisms and isomorphisms of groups. Rings, integral domains, ideals, quotient rings, homomorphisms of rings. Further topics in groups, rings and fields as time permits. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.) Not open to students with credit in MATH 444A.

**\*451. Differential Geometry (3)**

Prerequisite: MATH 364A or 370A. Structure of curves and surfaces in space, including Frenet formulas of space curves; frame fields and connection forms; geometry of surfaces in Euclidean three space; Geodesics and connections with general theory of relativity. (Lecture 3 hrs.)

**\*461. Introduction to Complex Analysis (3)**

Prerequisite: MATH 361A. Theory and applications of complex variables. Analytic functions, integrals, power series and applications. (Lecture 3 hrs.) Not open to students with credit in MATH 562A.

**\*463. Multivariable Calculus (3)**

Prerequisites: MATH 247 and 361B. Topology of Euclidean spaces. Partial derivatives. Derivatives as linear transformations. Inverse and implicit function theorems. Jacobians, vector calculus, Green's and Stokes' theorems. Variational problems. (Lecture 3 hrs.)

**\*470. Introduction to Partial Differential Equations (3)**

Prerequisite: MATH 370A or 364A. First and second order equations, characteristics, Cauchy problems, elliptic, hyperbolic, and parabolic equations. Introduction to boundary and initial value problems and their applications. (Lecture 3 hrs.)

**\*472. Fourier Analysis (3)**

Prerequisite: MATH 364A or 370A. Theory of Fourier series and Fourier transforms with applications to Physics and Engineering. Square integrable functions and Parseval's and Plancherel's identities. Convolution. The Fourier transform in one and several dimensions, with applications to partial differential equations. Introduction to distribution theory, the discrete Fourier transform and fast Fourier transforms. (Lecture 3 hrs.)

**\*479. Mathematical Modeling (3)**

Prerequisites: MATH 247; 364A or 370A; and two additional upper-division mathematics courses or consent of instructor. Application of mathematics to develop models of phenomena in science, engineering, business and other disciplines. Evaluation of the benefits and limitations of mathematical modeling. (Lecture 3 hrs.)

**\*480. Regression Analysis (3)**

Prerequisite: MATH 247, 380, prerequisite or corequisite MATH 381. Simple linear regression: estimation and inference, prediction, analysis of residuals, detection of outliers, use of transformations. Multiple linear regression: influence diagnostics, multi-collinearity, selection of variables, simultaneous estimation and inference, validation techniques. Use of statistical software for data analysis. (Lecture 3 hrs.)

**\*485. Mathematical Optimization (3)**

Prerequisite: MATH 247 and at least one of MATH 323, 347 or 380. Linear and nonlinear programming: simplex methods, duality theory, theory of graphs, Kuhn-Tucker theory, gradient methods and dynamic programming. (Lecture 3 hrs.)

**\*495. Topics in Modern Mathematics (3)**

Prerequisite: Consent of instructor. Topics of current interest from mathematics literature.

**\*497. Directed Studies (1-3)**

Prerequisites: Junior or senior standing and consent of instructor. Readings in areas of mutual interest to student and instructor which are not a part of any regular course. A written report or project may be required. May be repeated to a maximum of three units of credit.

**Graduate Division**

**540A. Abstract Algebra I (3) F**

Prerequisites: MATH 444. Group theory including symmetric groups; group actions on sets; Sylow theorems and finitely generated abelian groups; ring theory including polynomial rings, division rings, Euclidean domains, principal ideal domains and unique factorization domains. (Lecture 3 hrs.)

**540B. Abstract Algebra II (3) S**

Prerequisites: MATH 540A. Modules; Field extensions; Finite fields; Splitting fields, Galois theory. Commutative ring theory including chain conditions and primary ideals. Topics of current interest. (Lecture 3 hrs.)

**550A. Topology I (3) S**

Prerequisite: MATH 361B. Fundamentals of point-set topology: metric spaces and topological spaces; bases and neighborhoods; continuous functions; subspaces, product spaces and quotient spaces; separation properties, countability properties, compactness, connectedness; convergence of sequences, nets and filters. (Lecture 3 hrs.)

**550B. Topology II (3) F**

Prerequisite: MATH 550A. Further topics in point-set topology: local compactness, paracompactness, compactifications; metrizable; Baire category theorem; homotopy and the fundamental group. Topics may also include uniform spaces, function spaces, topological groups or topics from algebraic topology. (Lecture 3 hrs.)

**560A. Functional Analysis I (3) F**

Prerequisites: MATH 361B and 247. Linear spaces, metric and topological spaces, normed linear spaces; four principles of functional analysis: Hahn-Banach, Open Mapping, Uniform Boundedness, and Closed Graph theorems; adjoint spaces; convergence in normed spaces, conjugate spaces, and spaces of operators; Banach Fixed Point theorem; Hilbert spaces; selected applications. (Lecture 3 hrs.)

**560B. Functional Analysis II (3) S**

Prerequisites: MATH 560A or consent of instructor. Spectral theory of operators on normed spaces; special operators; elementary theory of Banach algebras; selected topics from applied functional analysis. (Lecture 3 hrs.)

**561A. Real Analysis I (3) S**

Prerequisite: MATH 361B. The theory of measure and integration, focusing on the Lebesgue integral on Euclidean space, particularly the real line. Modes of convergence. Fatou's Lemma, the monotone convergence theorem and the dominated convergence theorem. Fubini's theorem. (Lecture 3 hrs.)

**561B. Real Analysis II (3) F**

Prerequisite: MATH 561A or consent of instructor.  $L^p$  spaces of functions. Holder's inequality. Minkowski's inequality. Norm convergence, weak convergence and duality in  $L^p$ . Further topics from convergence of Fourier series, measure-theoretic probability, the Radon-Nikodym theorem; other topics depending on time and interest. (Lecture 3 hrs.)

**562A. Complex Analysis I (3) F**

Prerequisite: MATH 361B. (MATH 461 is recommended.) Axiomatic development of real and complex numbers; elements of point set theory; differentiation and analytic functions, classical integral theorems; Taylor's series, singularities, Laurent series, calculus of residues. (Lecture 3 hrs.)

**562B. Complex Analysis II (3) S**

Prerequisite: MATH 562A. Multiple-valued functions, Riemann surfaces; analytic continuation; maximum modulus theorem; conformal mapping with applications, integral functions; gamma function, zeta function, special functions. (Lecture 3 hrs.)

570. Partial Differential Equations (3) S  
Prerequisites: MATH 361A, 361B, 364A, and one of 370B, 470, 472. Cauchy's problem; classification of second order equations; methods of solution of hyperbolic, parabolic, and elliptic equations. (Lecture 3 hrs.)
575. Calculus of Variations (3) S  
Prerequisites: MATH 364A or 370A, and MATH 361B. Classical theory. Necessary and sufficient conditions for extrema of multiple integrals. Hamilton-Jacobi theory. Applications to eigenvalue problems. Direct methods. Pontryagin maximum principle. Principle of optimality. (Lecture 3 hrs.)
576. Numerical Analysis (3) F  
Prerequisites: MATH 323, 361B and 364A. Advanced numerical methods. Introduction to error analysis, convergence, and stability of numerical algorithms. Topics may include solution of ordinary differential equations, partial differential equations, systems of linear and nonlinear equations, and optimization theory. (Lecture 3 hrs.)
577. Numerical Solution of Partial Differential Equations (3) S  
Prerequisites: MATH 423 or MATH 576 or consent of instructor. A survey of finite difference methods for solving hyperbolic, parabolic, and elliptic PDE'S, with analysis of their accuracy, convergence, and stability properties. Topics include selected initial-value and boundary-value problems, characteristics, domain of dependence, von Neumann's method of stability analysis, the matrix method of stability analysis, and solution of large scale sparse linear systems by direct and iterative methods. Introduction to the finite element method. (Lecture 3 hrs.)
581. Experimental Design and Analysis (3) F  
Prerequisite: MATH 381 or consent of instructor. The design of experiments to permit efficient analysis of sources of variation with application to quality assurance. Factorial and fractional factorial designs; block designs; confounding. Fixed and random effect models. Effects of departure from assumptions; transformations. Response surface techniques. Taguchi methods. (Lecture 3 hrs.) Not open to students with credit in MATH 580.
584. Statistical Quality Control (3) F  
Prerequisites: MATH 381 or consent of instructor. An introduction to the methods of statistical quality control. Topics covered include control charts, acceptance sampling, process capability analysis, and some aspects of experimental design. (Lecture 3 hrs.)
695. Seminar in Mathematics (3) F,S  
Prerequisites: Consent of instructor. Presentation and discussion of advanced work, including original research by faculty and students. Topics to be announced in the Schedule of Classes. May be repeated to a total of six units.
697. Directed Studies (1-3) F,S  
Prerequisite: Consent of instructor. Research on a specific area in mathematics. Topic for study to be approved and directed by advisor in the mathematics department.
698. Thesis (2-4) F,S  
Prerequisite: Completion of at least one 500 and/or 600 level mathematics course. Formal report of research or project in mathematics.

# MECHANICAL ENGINEERING

## *College of Engineering*

Department Chair  
Ortwin Ohtmer

Department Office  
ECS-651

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(562) 985-4407

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### Faculty

#### Professors

Mihir K. Das  
Simon deSoto  
Ramin Esfandiari  
C. Barclay Gilpin  
Karl-Heinrich Grote  
Min-ten Jahn  
Ernest R. Mijares  
Edward Miller  
Ortwin Ohtmer  
Leonardo Perez y Perez  
Hamid R. Rahai  
Reza Toossi  
Jalal Torabzadeh  
Bruce J. Torby  
Hillar Unt  
Hung V. Vu  
J. Richard Williams  
Hsien-Yang Yeh

#### Adjunct Faculty

Stuart D. Hann  
Shozo Koshigoe  
Feng S. Ku  
Chester R. Kyle  
Mark N. Larson  
John L. Mason  
Paul Van Valkenburgh  
Khang H. Vu

Undergraduate Advisor  
Hillar Unt

General Education Advisor  
Hillar Unt

Graduate Advisor  
C. Barclay Gilpin

Department Secretary  
Leanne Hayes

Students desiring detailed information should contact the department office for referral to one of the faculty advisors: Industrial-Management Engineering Coordinator, Materials Engineering Coordinator, Ocean Engineering Coordinator, Certificate in Industrial Plastics Processing and Design Director, Certificate in Energy Conversion and Power Systems Engineering Director, Undergraduate Advisor, Graduate Advisor.

All upper division Mechanical Engineering courses require proficiency in FORTRAN programming. Before attempting any upper division courses, students are expected to have completed satisfactorily all lower division major courses. It is a departmental policy that a grade of "C" or better must be achieved in all prerequisites to all departmental courses.

Majors must take a minimum of 32 units of basic science and mathematics; students should see the departmental advisor early to determine whether they must take a biological science course to complete their science requirement.

Admission to any of the graduate programs requires a minimum GPA of 2.7 in the last 60 units attempted.

### *Advisory and Development Councils*

The Department of Mechanical Engineering is supported by a Professional Advisory and Development Council. This council consists of outstanding engineers and executives from industry and government in Southern California. Its function is to form a liaison between the University and industry and to keep the administration and faculty informed of modern engineering practices.

### *ABET Accreditation*

The Bachelor of Science in Mechanical Engineering program is accredited by the Accreditation Board for Engineering and Technology (ABET) (Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710). Students enrolling in this program are strongly advised to contact an undergraduate advisor as early as possible about the details of the ABET requirements in math/sciences, humanities and social sciences areas.

### **Bachelor of Science in Manufacturing Engineering (code 3-4305)**

For requirements, see the description in the College of Engineering part of this Catalog.

### **Bachelor of Science in Engineering**

#### **Option in Materials Engineering (code 3-4352) (136 units)**

Modern engineering applications in all fields require new materials with properties well beyond those obtainable with the alloys available several years ago. New materials are needed for such diverse applications as the air transports, undersea deep submergence vessels, magnetic and semiconducting devices. Scientific knowledge in this area has expanded recently at a rate comparable to that experienced by the field of electronics. The materials option is offered to meet the demand for materials oriented engineers.

Course work is directed toward understanding of the properties of materials in terms of their atomic structure, and emphasis is placed on the behavior of materials in engineering applications. The laboratories have excellent equipment for studies in this field and include facilities for the determination of crystal structure, microscopic and X-ray diffraction, and Scanning Electron Microscope examination of solids, thermal and mechanical treatment and the determination of properties at low and high temperatures.

#### Requirements

Lower Division: CHE 200; CHEM 111A, 111B; CE 205; EE 211, 211L; MATH 122, 123, 224; ENGR 101; ME 172, 205, 272; PHYS 151, 152, 154.

Upper Division: CHE 415; CE 406; ECON 300; EE 320; MATH 370A; ME 322, 323, 330, 371, 373, 374, 375, 405, 409, 459, plus approved engineering elective courses to total a minimum of 136 units.

For information concerning admission to this program, please contact Dr. Hillar Unt, Undergraduate Advisor, Dept. of Mechanical Engineering.

#### Option in Industrial-Management Engineering (code 3-4342) (136 units)

This is an interdisciplinary degree in which both the College of Business Administration and the College of Engineering provide courses which will enable the student to have a technical engineering background plus a good foundation in business and management practices. The option consists of the core engineering courses through the junior year with an addition of business courses in accounting, business law, management, inventory practices and operations research. The elective structure within this option is such that the student may specialize in either engineering, or a combination of both engineering and business.

#### Requirements

Lower Division: ACCT 201; CHEM 111A; CE 205; EE 211, 211L; FIN 222; MATH 122, 123, 224; ENGR 101; ME 172, 205; PHYS 151, 152.

Upper Division: CE 406; ECON 300; FIN 324; IS 310; MATH 370A; MGMT 300, 310; ME 305, 322, 330, 331, 371, 373, 376, 390, 459, 476, 490, and approved electives to total at least 136 units.

For information concerning admission to this program, please contact Dr. Hillar Unt, Undergraduate Advisor, Department of Mechanical Engineering.

#### Option in Ocean Engineering (code 3-4358) (136 units)

Administered by the Mechanical Engineering Department, the ocean engineering option is designed to provide students with an understanding of the ocean environment and knowledge of the drastic effects this environment can have upon engineering endeavors. The curriculum is built around a strong basic core of mathematics, physics and engineering science. This is followed by more advanced courses in electronics, analytical mechanics, fluid mechanics, thermodynamics, materials and corrosion, ocean environment and underwater systems.

Laboratory facilities consist of a 26-foot research vessel "Ucello di Mare" operated by the College of Engineering. A larger ocean-going ship "Yellow Fin" is available to the ocean engineering students, plus an inventory of modern electronic, acoustic systems and ocean measurement instruments for study and experience afloat.

This University is a member of the Southern California Ocean Studies Consortium of The California State University.

For information concerning admission to this program, please contact Dr. Hillar Unt, Undergraduate Advisor, Dept. of Mechanical Engineering.

#### Requirements

Lower Division: CHEM 111A; CE 205; EE 211, 211L; MATH 122, 123, 224; ENGR 101; ME 172, 205, 265; PHYS 151, 152.

Upper Division: CE 335, 336, 406; ECON 300; GEOL 465; MATH 370A; ME 305, 330, 331, 365, 366, 371, 373, 374, 376, 407, 426, 459, 463, 465, 467, 468, 469, 476, to total at least 136 units.

#### Bachelor of Science in Mechanical Engineering (code 3-4350) (136 units)

The realm of mechanical engineering is so extensive that training must be broad and basic, providing grounding in fundamentals which an engineer requires in order to gain competence in any specialized field. In view of this, mechanical engineering curriculum includes ample foundation courses in mathematics, physics, chemistry, and design graphics. These are followed by courses in energy conversion, thermodynamics, fluid mechanics, mechanics and strength of materials, metallurgy, design, computer-aided design/ computer-aided manufacturing (CAD/CAM). Opportunity to explore further a particular area of interest is provided by additional elective courses in the senior year.

The laboratories of the department are provided with modern equipment for undergraduate instruction in the following areas: instruments and measurements, fuels and lubricants, materials and metallurgy, thermodynamics and heat power, vibration, design, and acoustics, strength of materials, design, CAD/CAM, control systems and manufacturing.

Some industry sponsored scholarships are available to upper division mechanical engineering students. Further information is available in the department office.

#### Requirements

Lower Division: CHEM 111A; CE 205; EE 211, 211L; MATH 122, 123, 224; ENGR 101; ME 172, 205, 272; PHYS 151, 152.

Upper Division: CE 335, 336, 406; ECON 300; MATH 370A; ME 305, 322, 323, 330, 331, 336, 337, 371, 373, 374, 375, 376, 405, 409, 431, 459, 471, 472, 476, to total at least 136 units.

## Certificate in Industrial Plastics Processing and Design (code 1-1100)

Director  
Edward Miller

Professors  
Mihir K. Das, C. Barclay Gilpin, Lloyd Hile, Edward Miller, Hillar Unt, Hsien-Yang Yeh

The Certificate Program in Industrial Plastics Processing and Design is an interdisciplinary program sponsored by the Mechanical Engineering and Chemical Engineering Departments. Polymeric materials rank as second in tonnage use currently of all materials, and indications are that in the near future they may surpass metals in total usage. There is a definite need for personnel familiar with the processing and special design considerations necessary to properly make use of the special properties of this broad class of materials. The program permits a student to study in detail the industrial production processes, material testing procedures, economics of the polymeric industry and degradation of polymeric. All students in the program complete an individual project, consisting of the design of an item, choice of proper polymeric material for the particular application, choice of the processing operation and construction of the necessary molding tools and testing of the completed device. Contact the Department of Mechanical Engineering.

### Requirements

1. A bachelor's degree in engineering. The certificate may be awarded concurrently with the degree.
2. Satisfactory completion of 22 units minimum of the courses listed below: Polymeric Processing: CHE 200, 425; ME 429, 471 and either 472 or 476; and a minimum of 3 units in either CHE 490 or ME 450. Properties of Polymers: ME 373, 374 and 424/524.
3. Approval of the certificate committee for admission to the certificate program. An advisor will be appointed to you at that time.
4. The advisor's approval of your completion of the special project.

## Certificate Program in Energy Conversion and Power Systems Engineering (code 1-4000)

Director  
Hillar Unt

Faculty  
R. Das, S. deSoto, H. Nour, E. Mijares, H. Rahai, R. Toossi, J. Torabzadeh, and H. Unt

The 27-unit certificate program in "Energy Conversion and Power Systems Engineering" is an undergraduate program designed to prepare Electrical and Mechanical Engineering students to become proficient in the analysis and design of power generating systems, such as direct conversion, coal burning, hydraulic, nuclear, solar, wind, and various other types of power plants.

### Requirements

1. Consultation with program advisors in Electrical or Mechanical Engineering Departments and preparation of a program planner;

2. Completion of the following core courses: CE 335, EE 350, EE 452, ME 330, ME 336, ME 431;
3. Completion of 9 units from the following list of elective courses: EE 453, 455, 458, 460, 550, 551, 552, 553, ME 405, 510, 538;
4. Completion of a Bachelor of Science degree in an approved major. This certificate may be awarded concurrently with or subsequently to baccalaureate degree.

## Master of Science in Mechanical Engineering (code 6-4350)

Built on a broad and basic undergraduate instruction, the graduate level courses and the graduate degree, Master of Science in Mechanical Engineering, develop competence in the fields of design and manufacturing, dynamics and controls, materials and composites, mechanics and Finite Element Methods, and thermal systems. Modern laboratories in CAD, fluid power and mechanics, heat power, control systems, manufacturing, plastics, design, thermodynamics, heat flow, metallurgy, and mechanical properties of materials are maintained for undergraduate and graduate instruction, and graduate research. Design rooms, excellent laboratories within the other engineering departments, computer facilities, and good machine shops supplement the mechanical engineering facilities.

Additional details may be found in the Schedule of Classes. For further information and complete degree requirements contact the Chair, Mechanical Engineering Department.

Some graduate laboratory and teaching assistantships are available to qualified graduate students. Applications should be sent to the department office.

### Prerequisites

1. A bachelor's degree in an accredited curriculum in mechanical engineering, with a minimum GPA of 2.70; or:
2. A bachelor's degree in engineering with a minimum GPA of 2.70, a natural science or other appropriate discipline with the requirement that essential undergraduate prerequisites in mechanical engineering be satisfied;
3. Graduate students must consult with the graduate advisor for information concerning procedures and requirements for appropriate approval of their courses of study prior to enrolling in their graduate programs;
4. The Writing Proficiency Examination (WPE) must be taken and passed during the first semester in residence. Failure to pass WPE will prevent registration in engineering courses in subsequent semesters. Courses taken after the semester without having passed the WPE will not be counted toward any graduate engineering degree.

### Advancement to Candidacy

1. Removal of all undergraduate deficiencies as determined by the Department Graduate Advisor;
2. Students may, at the discretion of the Department Graduate Advisor, be required to take examinations in their chosen areas.

### Requirements

Completion of a minimum of 30 units beyond the bachelor's degree in upper division and graduate courses approved by the student's Department Graduate Study Committee including:

1. A minimum of 21 units in engineering or mathematics courses with 18 units of 500- and/or 600-level courses in mechanical engineering;
2. Six units of electives selected from approved upper-division or graduate courses from appropriate areas;
3. Completion of an acceptable thesis. The thesis will be waived if the candidate has published a technical paper of a quality equivalent to a thesis.

### Master of Science in Engineering (code 6-4301)

The Mechanical Engineering Department administers two emphases under the Master of Science Engineering. See the department for further information.

#### Management Engineering Emphasis

A special management perspective is required for the successful generation of technical products and services, and thus the Master of Science in Engineering: Program in Management Engineering is offered by the College of Engineering at California State University, Long Beach.

In order to plan, design, direct and control technical projects, technical managers must be capable of inspiring and developing professional personnel. They must be able to integrate planning, manufacturing and budgetary concerns of the project and be able to easily communicate with general management.

The Emphasis in Management Engineering primarily admits students with a traditional engineering background. It emphasizes the management of engineering-based endeavors and does not require undergraduate business courses as prerequisites for graduate work.

Well-suited for working students, graduate courses in management engineering are offered in the late afternoon and evening. An individualized program is developed according to each student's undergraduate degree, area of interest, or some well-defined industrial application; interdisciplinary approaches are encouraged.

The graduate program supports innovative thesis topics that enable the degree candidate to be knowledgeable about new applications and/or areas in management engineering.

The graduate Emphasis in Management Engineering at California State University, Long Beach seeks to:

- Provide industry and government with engineers who have essential management knowledge and skills.
- Provide engineers with career advancement opportunities in project management and the management of research, manufacturing and other technical enterprises.
- Educate engineers as managers who can effectively plan and implement technological projects.

#### Systems Engineering Emphasis

Systems engineering is the discipline by which definition, planning and design of complex systems is conducted. Significant need exists in industry to increase Systems Engineering understanding, expertise and related tool set knowledge. Customers, including the Department of Defense, are focusing more closely on Systems Engineering capability and the ability to plan and execute complex programs.

### Ph.D. in Engineering Mathematics (code 8-4303)

For requirements, see the description in the College of Engineering part of this Catalog.

## Courses (M E)

### Lower Division

172. Engineering Design Graphics (3)  
Graphics concepts and visualization. Graphic expressions using CAD software, emphasis on industrial practice involving part and assembly drawings for actual products, standards, tolerances, surface finishes, and other attributes on drawings, production drawings, projects involving complete design of systems and subsystems. (Lecture-problems 2 hrs., design laboratory 3 hrs.) Traditional grading only. (CAN ENGR 2)
205. Computer Methods in Mechanical Engineering (2)  
Prerequisite: MATH 122; PHYS 151. Application of computer programs (FORTRAN, C) to engineering problem solving; structured approach to problems; input-output concepts for both numerical and graphical results. (Lecture-problems 1 hour, laboratory 3 hours.) Traditional grading only.
265. Engineering in an Ocean Environment (3)  
Prerequisites: Sophomore Standing. Study of problems involved in engineering projects in, on and under the ocean. Environmental considerations and engineering contributions to development and use of ocean resources. (Lecture-problems 3 hours).
272. Introduction to Manufacturing Processes (2)  
Prerequisite: ME 172. Comprehensive survey of modern techniques in manufacturing processes. Basic manufacturing processes, nature and properties of materials; production of metals; foundry, casting and heat treatment; welding, powder metallurgy (sintering), plastics, metrology; working of metals, press work; machine tool elements, numerical control; metal cutting and turning; drilling, boring, milling; shaping planning, sawing broaching; grinding, sanding; gears and gear-cutting, threads and thread-cutting. (Lecture-problems 2 hours, design laboratory 3 hours.) Traditional grading only.

### Upper Division

305. Numerical Methods in Mechanical Engineering (3)  
Prerequisite: ME 205; MATH 370A. Advanced numerical methods applied to the solution of mechanical engineering problems. Roots of algebraic and transcendental equations. Solution of simultaneous linear algebraic equations. Parametric notation of analytical curves, surfaces, and splines. Numerical integration and differentiation. Numerical integration of ordinary differential equations; initial-value problems, boundary-value problems. Partial differential equations. Individual and/or group projects. (Lecture-problems 3 hours.) Traditional grading only.
322. Engineering Materials and Materials Processes (3)  
Prerequisites: CHEM 111A, MATH 123, ME 172. Structure and properties of crystalline materials. Phase and transformation diagrams. Heat treatments and mechanical processing. Manufacturing methods of metals, alloys, polymers, composites, ceramics, and semiconductors. Traditional grading only. (Lecture-problems 3 hours.)
323. Engineering Metallurgy I Laboratory (1)  
Prerequisites: ME 322; ENGL 100 or equivalent. Study of the effects of thermal treatments and mechanical processes on the microstructure and properties of metals and alloys. Computer-aided analysis, statistical nature and reliability of test results. (Laboratory 3 hours.) Traditional grading only.
324. Material Removal and Tool Selection (3)  
Prerequisite: ME 172. Fundamentals of material removal utilizing computer-aided manufacturing (CAM). Fundamentals of computer numerical control (CNC) including NC code. APT programming, tool paths, and cutter location files. Application of these fundamentals to lathes, milling machines, grinders, laser cutting, etc. Selection of tools based on CNC, materials and requirements. Metallurgy of tools. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
330. Engineering Thermodynamics I (3)  
Prerequisites: MATH 224; PHYS 151 and CHEM 111A. Laws of thermodynamics; properties of liquids, gases and vapors; sources of energy and conversion to work; introduction to heat transfer and psychrometry. (Lecture-problems 3 hours.) Traditional grading only.

**331. Engineering Thermodynamics I Laboratory (1)**

Prerequisites: ME 330; ENGL 100 or equivalent. Measurements of thermodynamic properties, fluid flow and heat transfer; calorimetry; accuracy of measurements; statistical analysis of experimental data; professional laboratory reports. (Laboratory 3 hours.) Traditional grading only.

**336. Power Plant Design (3)**

Prerequisite: ME 330. Design of power production systems, including steam power plants, gas turbines and auxiliary power units. Survey of alternate power sources including wind, solar, geothermal, ocean thermal and biomass. Group and/or individual design projects. (Lecture-problems 2 hours, design laboratory 3 hours.) Traditional grading only.

**337. Engineering Thermodynamics II Laboratory (1)**

Prerequisite: M E 336. Measurements of energy and power, Testing and evaluation of the performance of thermodynamic equipment. (Laboratory 3 hours.)

**365. Ocean Engineering I (3)**

Prerequisite: MATH 370A and M E 265 or consent of instructor. Probabilistic methods in ocean engineering. Spectral methods, introduction to wave theories; transfer function concepts; applications in ocean engineering design. (Lecture-problems 3 hours.)

**366. Ocean Engineering II (3)**

Prerequisites: MATH 370A; M E 265 or consent of instructor. Major elements in ocean engineering design. Theory and problems relating to ocean vehicles; marine acoustics; elements in the design of positioning and mooring systems. (Lecture-problems 3 hours.)

**\*371. Analytical Mechanics II (Dynamics) (3)**

Prerequisites: CE 205, ME 205 or CE 206. Newton's Laws and the principles of work and energy and impulse and momentum applied to the study of particle and rigid body motion. Engineering application with emphasis on plane motion problems. individual and/or group projects involving in-depth numerical analysis. (Lecture-problems 3 hours.) Traditional grading only.

**373. Mechanics of Deformable Bodies (3)**

Prerequisite: CE 205. Application of the principles of mechanics to the design of structural and machine members and connections; stress analysis of beams and columns. Properties and strength of engineering materials. Design projects. (Lecture-problems 3 hours.) Traditional grading only.

**374. Mechanical Properties of Materials Laboratory (1)**

Prerequisites: ME 373, ENGL 100 or equivalent. Physical and mechanical properties of engineering materials and their relationship to structural elements; accuracy of measurements; statistical analysis of experimental data; professional laboratory reports. (Laboratory 3 hours.) Traditional grading only.

**375. Kinematics and Dynamics of Mechanisms (4)**

Prerequisites: ME 272, 322, 371. Fundamentals of linkages, cams, gears and gear trains. Velocity and acceleration analysis of machines leading to dynamic loading of machine parts; dynamic analysis and balancing of rotating machines; internal combustion engine balancing. Individual design projects. (Lecture-problems 3 hours, design laboratory 3 hours.) Traditional grading only.

**376. Modeling and Analysis of Dynamic Systems (3)**

Prerequisite: ME 371; MATH 370A. Modeling and analysis of dynamic systems including mechanical, electrical, electro-mechanical, and hydraulic systems. Use of complex algebra and Laplace transforms. Mathematical modeling of dynamic systems in state-space. Linear systems analysis in time and frequency domains. Introduction to feedback control systems. (Lecture-problems 3 hours.) Traditional grading only.

**379. Industrial Systems Engineering (3)**

Prerequisites: Upper Division Standing and ME 376, or consent of the instructor. Overview of the Industrial Systems Engineering process. Defining customer requirements and systematic tracking of progress through product delivery. Product improvement processes. (Lecture-problems 3 hours.) Traditional grading only.

**390. Safety and Reliability in Systems Design I (3)**

Prerequisites: ME 205; MATH 370A, or consent of instructor. Introduction to probabilistic design analysis; safety and reliability analyses and tools to assess the adequacy of the designs; identification of critical elements of the design and practical design guidance; compliance with the requirements. Coherent use of reliability concepts, tools, and reliability programs to produce reliable and safe system designs. Group projects involving the design of a reliable and safe "real-life" system. (Lecture-problems 3 hours.) Traditional grading only.

**\*405. Special Topics in Mechanical Engineering (3)**

Prerequisite: Senior standing in mechanical engineering or consent of instructor. Selected topics from recent advances in mechanical engineering. Typical subjects covered are computer-aided design/computer-aided manufacturing (CAD/CAM), fundamentals of environmental sciences for mechanical engineers, and robotics. Course content may vary from year to year and can be repeated once for credit with the consent of the department. (Lecture-problems 3 hours.) Traditional grading only.

**A. CAD/CAM**

Fundamentals of computer-aided design/computer-aided manufacturing (CAD/CAM). Creating, reading and understanding databases for solid models. Assemblies and sub-assemblies. Design and analysis of mechanisms with linkages, gears, springs, dampers. Finite Element Modeling of parts, assemblies, and mechanisms. CAM, 3-axis milling, APT. Design optimization.

**B. Robot Programming and Automation**

Major components of a robot and robotic applications. Translational, rotational motion and motion conversions. Modeling of mechanical systems and kinematic chains. Physical control elements, forces encountered and sensors. Software and hardware considerations including robot programming. Robot design examples.

**C. Environmental Engineering and Atmospheric Science**

The history, technology, control programs, and current regulatory developments relating to combustion generated air pollution. Topics include: thermodynamics and kinetics of combustion, flame structures, pollutant formations, emissions from automobiles and power plants, furnaces and incinerators, particulate, unburned hydrocarbons, oxides of nitrogen and carbon, control technologies, meteorological considerations, atmospheric processes, ozone layers, and air pollutant dispersion models. (Lecture-problems 3 hours.) Traditional grading only.

**D. Hybrid Electrical Vehicles System Design**

Prerequisites: Senior standing in mechanical engineering or consent of instructor. The history, technology, and future of hybrid vehicles and the role they will play in the future. Students will be exposed to a wide range of topics related to advanced transportation and electric/hybrid vehicles. Students will also be involved in group projects which may involve testing, manufacturing, and modeling of various components for hybrid vehicles. Effects of aerodynamic forces, manufacturing considerations, energy management, ergonomics and economics on overall design of the vehicles are investigated.

**E. HVAC Systems Design and Equipment**

Prerequisites: ME 330, CE 335. Design of air conditioning systems, the design process, occupant comfort, load calculations, components and control, all air systems, air and water systems, and all water systems.

**\*407. Modern Developments in Ocean Engineering (1-3)**

Prerequisite: Senior standing in Ocean Engineering or consent of instructor. Selected topics on recent advances in Ocean Engineering. Content will vary. May be repeated once for credit to a maximum of six units with consent of the department. (Lecture-problems 1 to 3 hours.)

**408./508. Principles of Systems Engineering (3)**

Prerequisite: Graduate Engineering standing or consent of instructor. Systems Engineering history, concepts, and industry and government practices. Systems architecture, integration, optimization and tools. Related concepts of systems life cycle, integrated logistics, total quality management, and integrated product development. (Lecture-problems 3 hours.) Traditional grading only.

**\*409. Modern Computational Aspects in Mechanical Engineering (1-3)**

Prerequisite: Senior standing or consent of instructor. Computational aspects of various branches of Mechanical Engineering. Typical subjects covered are finite element analysis of structures, fluids, or heat transfer; boundary element analysis. May be repeated once for credit to a maximum of six units with the consent of the department. (Lecture-problems 1 to 3 hours.) Traditional grading only.

**A. Finite Element Methods I**

Finite Element Methods for beam and truss elements. Systems of ordinary differential equations and their solution in a Finite Element Formulation. Variational Formulation of the Finite Element Method. Static and Dynamic Analysis of complex structures idealized by TRUSS-BEAM and PLANE STRESS Elements. Rigid elements in an elastic environment. Automatic mesh generation for 1D, 2D, 3D structures. Traditional grading only.

**424./524. Engineering Principles and Properties of Plastics (3)**

Prerequisites: ME 373. Nature of polymers, physical and mechanical properties of plastics. Polymerization reactions and production. Properties of co-polymers, polymer solutions. Visco-elastic properties of polymeric. Additional projects will be required from M.S. students. (Lecture-problems 3 hours.) Traditional grading only.

**\*425. Chemical and Electrochemical Manufacturing Processes (3)**

Prerequisites: ME 322, 330; or CHEM 371A or consent of instructor. Theory of electrochemical processing. Electroplating and electroless plating solutions, processes and equipment. Anodizing and other surface treatments. Carburizing, nitriding atmospheres and equipment. Diffusion in solids. The effect of surface treatments on mechanical properties. Same course as CHE 435. (Lecture-problems 3 hours.) Traditional grading only.

**\*426. Corrosion Engineering (3)**

Prerequisites: ME 322 or CHEM 371A or consent of instructor. Principles of oxide film growth and electrochemical corrosion, corrosion testing, environmental and metallurgical effects on corrosion, environmental stress cracking, corrosion control and prevention. Same course as CHE 436. (Lecture-problems 3 hours.) Traditional grading only.

**428. Forming Processes and Failure Analysis (3)**

Prerequisite: ME 322. Forming processes for metals and alloys including forging, rolling, extrusion, drawing, sheet-metal forming and punch-press. Integration of forming with robots and CAD/CAM. Forming processes for polymers including compression molding, injection molding, extrusion, blow molding, vacuum forming and mold design using CAD. Failure analysis using non-destructive testing, optical microscope and electron microscope. (Lecture-problems 3 hours.) Traditional grading only.

**\*429. Manufacturing of Plastics and Composites (3)**

Prerequisite: ME 373. Nature of polymers, physical and mechanical properties of plastics. Polymerization reactions and production. Properties of co-polymers, polymer solutions. Visco-elastic properties of polymeric. Manufacturing and production of composite materials and structure selection of appropriate materials, stress-strain relations, stiffness, strength of components. (Lecture-problems 3 hours.) Traditional grading only.

**\*431. Heat Transfer Systems Design (3)**

Prerequisites: ME 305, 330; CE 335; completion of Writing Proficiency Exam. Analysis of heat transfer by conduction, convection and radiation. Investigation of steady state and transient heat transfer systems. Computer methods. Individual or group design projects involving real-life problems in heat transfer such as electronic packaging, heat exchangers, heat engines, refrigerators, and thermal systems analysis. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**438./538. Fundamentals of Heating, Ventilating, Air Conditioning and Refrigeration (3)**

Basic HVAC System Calculations, Thermodynamics and Psychrometrics, design conditions and load estimating, residential and

non-residential heating and cooling load calculations, energy estimating methods, duct and pipe sizing, and life cycle costs. (Lecture-problems 3 hours.) Additional projects required for ME 538. Traditional grading only.

**445./545. Advanced Robotics (3)**

Prerequisites: ME 405B or consent of instructor. Basic methodology for analysis and design of robotic manipulation and classification of robots. Transformations, kinematics and dynamics, trajectory planning and control of robots, force control, sensors, robot programming languages, robots in flexible manufacturing systems. Additional projects required for ME 545. (Lecture-problems 3 hours.) Traditional grading only.

**\*450. Special Problems (1-3)**

Prerequisite: Senior standing. Assigned topics in technical literature or laboratory projects and reports on same.

**\*459. Professional Practice Seminar (1)**

Prerequisites: Senior standing or consent of instructor. Professional practice of engineering, social and moral responsibilities of engineers, codes of conduct, legal issues and governmental regulations, licensure, graduate studies. Individual projects with requirement for oral and written presentation. (Lecture-problems 1 hour.) Traditional grading only.

**\*463. Principles of Naval Architecture I (3)**

Prerequisite: M E 366 or consent of instructor. Basic principles and design calculations in naval architecture; terminology, hull form geometry, buoyance, stability, trim, stability in damaged condition, load line and tonnage rules and introduction to design of ship structures. (Lecture-problems 3 hours.)

**\*464. Principles of Naval Architecture II (3)**

Prerequisite: M E 463 or consent of instructor. Fundamentals of the resistance and propulsion of ships, model testing. Theory and practice of propeller design. Fundamentals of ship maneuvering and control. Behavior of ships in waves. (Lecture-problems 3 hours.)

**\*465. Ocean Engineering Laboratory I (1)**

Prerequisites: M E 365, 463, WPE or consent of instructor. Ocean engineering experimentation both in the laboratory (wave tank) and at sea on board the Mechanical Engineering research vessel "Ucello di Mare." (Laboratory 3 hours.)

**\*467. Current Developments in Ocean Engineering (3)**

Prerequisite: M E 465. Study of ocean engineering developments and ocean environmental problems as they occur. Analysis of real and hypothetical ocean systems design projects. Current events in the field will be used to illustrate and amplify realistic design experience for the student. (Lecture-problems 3 hours.)

**\*468. Design of Ocean Engineering Systems (3)**

Prerequisite: Senior standing in Engineering, WPE. Project approach to ocean engineering systems design stressing creative and methodical techniques in problem definition, design conception and problem solutions. (Lecture-problems 3 hours.)

**\*469. Ocean Structures (3)**

Prerequisites: M E 365, 373 and CE 335 or consent of instructor. Introduction to hydrodynamic forces due to wave excitation; random process and ocean wave spectrum methods; ocean structure response prediction by response transfer function techniques, applications to design. (Lecture-problems 3 hours.)

**\*471. Analysis and Design of Machine Components (3)**

Prerequisites: ME 374, 375; completion of Writing Proficiency Exam. Application of the principles of mechanics and physical properties of materials to the proportioning of machine elements, including consideration of function, safety, production and economic factors. Group and/or individual design projects of mechanical systems and/or subsystems. (Lecture-problems 2 hours, design laboratory 3 hours.) Traditional grading only.

**\*472. Design of Mechanical Engineering Systems (3)**

Prerequisites: ME 330, 373, 375; CE 335, completion of Writing Proficiency Exam. Project approach to mechanical engineering systems design stressing creative and methodical techniques in problem definition, design conception and problem solution. Development of an actual prototype or system meeting customer



needs. Formal project reports and oral presentation to a peer group. Projects may be part of a local, state or national design contest. Capstone experience in mechanical engineering design. (Lecture-problems 2 hours, design laboratory 3 hours.) Traditional grading only.

**474./574. Computer-Aided Manufacturing (3)**

Prerequisites: ME 322, 405A. Fundamental concepts in automation. High volume discrete parts production systems. Numerical control manufacturing systems. Computer process monitoring. Direct digital control. Group techniques. Flexible manufacturing systems. Additional projects will be required from M.S. students in a wide-range of Engineering applications. (Lecture-problems 3 hours.) Traditional grading only.

**\*476. Mechanical Control Systems I (4)**

Prerequisite: ME 376. Feedback control systems in mechanical engineering. Modeling, analysis, and design. System performance and design criteria: stability, transient response, frequency response and compensation, root locus. Introduction to nonlinear control systems, state space analysis and design. (Lecture-problems, 3 hours.)

**\*480. Petroleum Engineering (3)**

Prerequisites: Senior standing in engineering or science. Overview of petroleum engineering operations, properties of petroleum reservoir rocks, single-phase and multiphase fluid flow through porous media. Properties of reservoir fluids. Field trips. (Lecture-problems 3 hours.)

**\*490. Safety and Reliability in Systems Design II (3)**

Prerequisite: ME 390 or consent of instructor. Application of the probabilistic design analysis and theory to real case studies of system design using safety and reliability tools and analysis to set design criteria, assess system design, determine failure modes and critical elements, provide practical design experience and demonstrate compliance with the requirements. Group and/or individual projects involving complete design of reliable and safe systems. (Lecture-problems 2 hours, design laboratory 3 hours.) Traditional grading only.

**495./595. Rapid Product Development (3)**

Prerequisites: ME 405A, 409A. Rapid product development using solid modeling features. Creating different design proposals for a specified development period. Manufacturing the design models (complex 3-D parts or mechanisms) via rapid prototyping. Simplified finite element analysis and optimization of different design proposals. Selecting a final design model. Quality control process via a 3-D scanner and data acquisition software for checking tolerances and dimensions of complex parts or assembled mechanisms. Product readiness for casting, mold flow analysis or machining via CAM. Additional projects will be required from M.S. students. (Lecture-problems 3 hours.) Traditional grading only.

## Graduate Division

**501. Engineering Analysis I (3)**

Prerequisite: MATH 370A. Vector analysis, series solutions of differential equations (special functions), boundary value problems and characteristics function representation, partial differential equations, methods of formulating and solving problems in engineering. (Lecture-problems 3 hours.) Traditional grading only.

**502. Engineering Analysis II (3)**

Prerequisite: MATH 370A. Analysis of mechanical engineering problems by matrix theory and complex variables; numerical techniques. (Lecture-problems 3 hours.) Traditional grading only.

**503. Introduction to Computer Simulation of Mechanical Systems (3)**

Prerequisites: M E 305 or consent of instructor. Introduction to simulation and modeling of mechanical systems, classical theory, modal analysis and numerical methods. Simulation languages. Model construction. Computer exercises and examples. (Lecture-problems 3 hours.) Traditional grading only.

**505. Linear and Dynamic Programming for Engineering Applications (3)**

Prerequisite: Graduate engineering standing. The principles of linear programming, transportation, and assignment problems, dynamic programming, deterministic inventory models, probability and stochastic processes and Markov chains for engineering applications. (Lecture-problems 3 hours.) Traditional grading only.

**506. Engineering Management and Policy (3)**

Prerequisite: Graduate engineering standing. Analysis of the principles and theory of engineering administrative organizations, information systems, management functions, decision making tools, strategies and administrative policy formulations. (Lecture-problems 3 hours.) Traditional grading only.

**507. Engineering Project Management (3)**

Prerequisite: Graduate engineering standing. Theory and philosophies of project management, principles of internal and industrial organization planning and control systems, motion in time study, industrial statistics, industrial research as aid to decision making. (Lecture-problems 3 hours.) Traditional grading only.

**508./408 Principles of Systems Engineering (3)**

Prerequisite: Graduate Engineering standing or consent of instructor. Systems Engineering history, concepts, and industry and government practices. Systems architecture, integration, optimization and tools. Related concepts of systems life cycle, integrated logistics, total quality management, and integrated product development. (Lecture-problems 3 hours.) Traditional grading only.

**510. Solar Engineering (3)**

Prerequisite: M E 336, 431. Origin, nature and availability of solar energy. Review of the fundamentals of radiation heat transfer. Solar energy thermal processes. Radiation characteristics of opaque materials. Flat-plate collectors. Focusing collectors. Energy storage-solar energy applications. Design of: (1) solar water heating systems, (2) solar heating and cooling systems, (3) solar power generation systems. (Lecture-problems 3 hours.) Traditional grading only.

**511. Integrated Design and Advanced Manufacturing for Systems Engineering (3)**

Prerequisite: Consent of instructor. The Systems Engineering process and true Concurrent Engineering from the manufacturing perspective. Integrated design and advanced manufacturing process including pilot lines and engineering labs in manufacturing. Manufacturing engineering; manufacturing planning and scheduling; business systems supporting the manufacturing process; manufacturing techniques and minimization of inventory; rapid prototyping; materials handling. Technology and process roadmaps; integrated design and advanced manufacturing directions, impact of various material types (e.g., composites); understanding "time-to-market" strategies, impacts, and time-based competition; quality attributes, trends, QFD and ISO 9000; automation and robotics. (Lecture-problems, 3 hours.) Traditional grading only.

**512./612. Computer Aided Design in Mechanical Engineering (3)**

Prerequisites: ME 405, 501, 502. (Master's students register in ME 512 or 612; Ph.D. students register in ME 612). Computer graphics in CAD/CAM. Includes geometrical transformations, viewing in three dimensions, modeling and object hierarchy, representation of 3D shapes, shading models and imaging databases and data transfer. Additional projects required for ME 612. (Lecture-problems 3 hours.) Traditional grading only.

**521. Engineering Metallurgy II (3)**

Prerequisite: M E 322. Properties and uses of structural steels, heat treatable steels, titanium alloys, nickel and cobalt base alloys; refractory metals, ultra high strength steels, stainless steels and metal matrix composite materials. Introduction to designing for fracture resistance. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

- 524./424. Engineering Principles and Properties of Plastics (3)  
Prerequisites: M.E. 373. Nature of polymers, physical and mechanical properties of plastics. Polymerization reactions and production. Properties of co-polymers, polymer solutions. Isoelastic properties of polymers. Additional projects will be required from M.S. students. (Lecture-problems 3 hours.) Traditional grading only.
527. Metals and Plastics Manufacturing Processes (3)  
Prerequisite: M E 322. Theory of metal forming and plastics processing. Includes metal forging and rolling, metal and plastics extrusion, plastics injection molding, casting. Discussion of appropriate manufacturing methods. (Lecture-problems 3 hours.) Traditional grading only.
529. Composite Materials (3)  
Prerequisites: M E 305, 322, 373, 524. Manufacturing and production of composite materials and structure selection of appropriate materials, stress-strain relationships, stiffness, strength of components. (Lecture-problems 3 hours.) Traditional grading only.
532. Convective Heat and Mass Transfer (3)  
Prerequisites: M E 431, 501. Solutions to the laminar and turbulent convective heat transfer problems; external flows, internal flows, free convection and mass transfer from external surfaces. (Lecture-problems 3 hours.)
536. Statistical Thermodynamics (3)  
Prerequisites: M E 330, 501 or equivalent. Fundamentals of statistical mechanics; quantum mechanics and statistics as applied to thermodynamics; behavior of gases and solids; chemical equilibrium. (Lecture-problems 3 hours.) Traditional grading only.
537. Advanced Fluid Dynamics I (3)  
Prerequisites: CE 335, ME 431. Dynamics of ideal, real and compressible flows, potential flow, vortex flow, the Navier Stokes equations, integral and differential equations for laminar flow, exact solutions for laminar flow, steady and unsteady compressible flows. (Lecture-problems 3 hours.) Traditional grading only.
- 538./438. Fundamentals of Heating, Ventilating, Air Conditioning and Refrigeration (3)  
Basic HVAC System Calculations, Thermodynamics and Psychrometrics, design conditions and load estimating, residential and non-residential heating and cooling load calculations, energy estimating methods, duct and pipe sizing, and life cycle costs. Additional projects are required for ME 538. (Lecture-problems 3 hours.) Traditional grading only.
540. Measurement Techniques in Fluid Mechanics and Heat Transfer (3)  
Experimental uncertainty, electrical transducers and pressure measurements, thermocouples and other temperature measurement devices, resistance bridges, amplifiers and filters, optical measurement devices, digital image processing, holography and laser doppler velocimeter. (Lecture-problems 3 hours.)
541. Transport Processes in Porous Media (3)  
Prerequisite: Graduate Standing in engineering. Fundamentals of mass, momentum and heat transfer through porous media; flow characteristics of porous structures; principles of single-phase and multi-phase flow in porous media; flow of immiscible and miscible fluids, hydrodynamic dispersion in porous structures, deterministic and stochastic modeling of flow in porous media. (Lecture-problems 3 hours.) Traditional grading only.
543. Linear Finite Element Analysis (3)  
Prerequisites: ME 409, 501, 502. Finite Element (FE) forms of differential equations. Boundary value problems, energy theorems, matrix displacement method, and finite difference method. Generation of FE stiffness-, mass-, and damping-matrices; isoparametric concept. Dynamic response of damped elastic structures, modal and direct integration analysis. Standard engineering command language, automatic adaptation to STRUDL, NASTRAN and ANSYS. FE fluid flow and heat transfer analysis. (Lecture-problems 3 hours.) Traditional grading only.
- 544./644. Advanced Control of Mechanical Systems (3)  
Prerequisite: ME 476. (Master's students register in ME 544 or 644; Ph.D. students register in ME 644). Advanced topics in analysis and design of modern control systems in mechanical engineering. Topics include state space, Riccati equation, Liapunov equation, Linear Quadratic Regulator (LQR), Kalman filter. Introduction to multivariable feedback systems, Linear Quadratic Gaussian (LQG), Loop Transfer Recovery (LTR), optimal control, robust control, H infinity control theory. Optimization via calculus of variations, Pontryagin's minimum principle. Control of distributed-parameter systems with applications to structural dynamics. Additional projects required for ME 644. (Lecture-problems 3 hours.) Traditional grading only.
- 545./445. Advanced Robotics (3)  
Prerequisites: ME 405B or consent of instructor. Basic methodology for analysis and design of robotic manipulation and classification of robots. Transformations, kinematics, dynamics, trajectory planning and control of robots, force control, sensors, robot programming languages, robots in flexible manufacturing systems. Additional projects required for ME 545. (Lecture-problems 3 hours.) Traditional grading only.
561. Automotive Engineering (4)  
Prerequisites: M E 330, 371, 373 or consent of instructor for non-engineering majors. Analysis and design of automotive equipment. Theoretical and practical aspects of combustion, fuels, power plants, drivetrains, vehicles, performance testing, safety, maintenance and economics. Correlation of design with performance. Laboratory testing will be conducted to verify theoretical developments. (Lecture-problems 3 hours, Laboratory 3 hours.) Traditional grading only.
- 574./474. Computer-Aided Manufacturing (3)  
Prerequisites: ME 322, 405A. Fundamental concepts in automation. High volume discrete parts production systems. Numerical control manufacturing systems. Computer process monitoring. Direct digital control. Group techniques. Flexible manufacturing systems. Additional projects will be required from M.S. students in a wide-range of Engineering applications. (Lecture-problems 3 hours.) Traditional grading only.
575. Advanced Dynamics with Robot Applications (3)  
Prerequisites: ME 371, Math 370A. Detailed study of rigid body dynamics with emphasis on robot arm analysis. Three-dimensional kinematic analysis. Rotational and homogeneous transformations. Eulerian angles. Denavit Hartenberg representation. Kinematic chains. Recursive formulas. Euler's moment equations and gyro-dynamics. Multi-body analysis. Lagrange's equations. Hamilton's Principle. Special topics. (Lecture-problems 3 hours.) Traditional grading only.
576. Engineering Vibrations I (3)  
Prerequisites: ME 376. Fundamentals of mechanical vibrations, types of oscillatory motions. Single-Degree-of-Freedom (SDOF) and Multiple-Degree-of-Freedom (MDOF) systems. Free and forced vibrations, damping, vibration isolation, vibration measuring instruments, Modal analysis. Lagrange's equations. Introduction to Finite Element Method and modal testing. Traditional grading only. (Lecture-problems 3 hours.)
577. Advanced Mechanics of Deformable Bodies (3)  
Prerequisites: M E 373, 374, 471 or consent of instructor. Analysis of stress and deflection in unsymmetrical bending, shear center for beams, curved beams. Stress concentration, deformation beyond the elastic limit. Energy method; Castigliano's Theorem; Rayleigh-Ritz technique. (Lecture-problems 3 hours.) Traditional grading only.
578. Creep and Fatigue (3)  
Prerequisites: M E 322, 373, or consent of instructor. Phenomena of creep and fatigue; effect on stress distribution in structural elements; buckling caused by creep; effects of space environment on fatigue; cumulative fatigue damage at normal and elevated temperatures. (Lecture-problems 3 hours.) Traditional grading only.
579. Engineering Acoustics (3)  
Prerequisites: ME 376, 502. Theory and application of acoustical principles to generation, transmission, measurement and control of sound. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

**595./495. Rapid Product Development (3)**

Prerequisites: ME 405A, 409A. Rapid product development using solid modeling features. Creating different design proposals for a specified development period. Manufacturing the design models (complex 3-D parts or mechanisms) via rapid prototyping. Simplified finite element analysis and optimization of different design proposals. Selecting a final design model. Quality control process via a 3-D scanner and data acquisition software for checking tolerances and dimensions of complex parts or assembled mechanisms. Product readiness for casting, mold flow analysis or machining via CAM. Additional projects will be required from M.S. students. (Lecture-problems 3 hours.) Traditional grading only.

**612./512. Computer Aided Design in Mechanical Engineering (3)**

Prerequisites: ME 405, 501, 502. (Master's students register in ME 512 or 612; Ph.D. students register in ME 612). Computer graphics in CAD/CAM. Includes geometrical transformations, viewing in three dimensions, modeling and object hierarchy, representation of 3D shapes, shading models and imaging databases and data transfer. Additional projects required for ME 612. (Lecture-problems 3 hours.) Traditional grading only.

**621. Advanced Materials Engineering (3)**

Prerequisite: M E 527 or consent of instructor. Imperfection in metals, dislocation theories of strength of metals, cold working, preferred orientation and texture due to deformation and recrystallization, transformation. (Lecture-problems 3 hours.) Traditional grading only.

**622. Fracture of Engineering Materials (3)**

Prerequisite: M E 527 or 577 or consent of instructor. Mechanics of fracture, fracture toughness in brittle and ductile materials, macroscopic and microscopic aspects of crack propagation, stress corrosion cracking, hydrogen embrittlement, fatigue, creep, rupture and designing for fracture resistance. (Lecture-problems 3 hours.) Traditional grading only.

**629. Design of Composite Structures (3)**

Prerequisites: M E 529. Fatigue and creep of components, design guidelines for composite structures. Bolted and bonded joints. Design of selected configurations. (Lecture-problems 3 hours.) Traditional grading only.

**631. Viscous Flow Theory (3)**

Prerequisites: M E 431, 501, 502 and 537. Introduction to viscous flow, integral and differential equations for laminar flow, exact solutions for laminar flow, transition to turbulent flow, wall bounded and free turbulent shear flows. (Lecture-problems 3 hours.) Traditional grading only.

**632. Thermal Radiation (3)**

Fundamentals of thermal radiation, properties of matter, radiative exchange in enclosures, equation of transfer for radiative transfer in absorbing emitting, and scattering media. (Lecture-problems 3 hours.)

**633./733. Mathematical Modeling Interaction Problems (3)**

Prerequisites: ME 501, 502, 532, 537, 544 and 579. Mathematical description of physical phenomena and interaction problems with a focus on the following topics: Fluid-Structure, Fluid-Heat Transfer, Acoustic-Structure, and Control Systems-Structure. Discretization of the problems using Boundary Element and Finite Element Methods or related numerical procedures. Required topics for Ph.D. students: advanced numerical solutions for boundary value problems based on integral equations and variational methods (Energy Theorems). (Lecture-problems, 3 hours.) Traditional grading only.

**636./736. Analytical Thermo-dynamics (3)**

Prerequisite: ME 536, or consent of instructor. (Master's students register in ME 636 or 736; Ph.D. students register in ME 736). Non-equilibrium thermodynamics, kinetic theory of gases; transport process; shock waves; chemical rate processes and radiative gas dynamics. Additional projects required for ME 736. (Lecture-problems 3 hours.) Traditional grading only.

**637. Advanced Fluid Dynamics II (3)**

Prerequisites: ME 431, 501, 537. Transition to turbulent flow, wall bounded and free turbulent shear flows, numerical methods for turbulent flow, turbulence modeling. (Lecture-problems 3 hours.) Traditional grading only.

**640. Inviscid Flows II (3)**

Prerequisites: M E 637 or consent of instructor. Compressible inviscid flow equations, flow equation for small perturbations, Prandtl-Glauert transformation, small-disturbance, full potential and Euler equations for transonic flows. (Lecture-problems 3 hours.) Traditional grading only.

**642. Combustion Processes (3)**

Prerequisites: ME 501, 521, and 536. Fundamentals of combustion, chemical equilibrium, conservation equations, chemical kinetics, diffusion flames, air pollution. (Lecture-problems 3 hours.)

**643./743. Nonlinear Complex Structures and Mechanisms (3)**

Prerequisite: ME 543. Analysis and optimization of frame-, plate-, and shell structures with STRUDEL, NASTRAN and ANSYS, sensitivity analysis. Generation and idealization of complex structures. Buckling analysis. Strength of structural elements, theory of yield and ultimate failure, stress concentrations. Nonlinear stress analysis, nonlinear material, large deflection, plastic deformation, nonlinear buckling, composite structures. Thermoelasticity. Non-linear dynamic analysis, flutter analysis, random analysis. Required topics for Ph.D. students: advanced numerical methods for flutter and random analysis. (Lecture-problems, 3 hours.) Traditional grading only.

**644./544. Advanced Control of Mechanical Systems (3)**

Prerequisite: ME 476. (Master's students register in ME 544 or 644; Ph.D. students register in ME 644). Advanced topics in analysis and design of modern control systems in mechanical engineering. Topics include state space, Riccati equation, Liapunov equation, Linear Quadratic Regulator (LQR), Kalman filter. Introduction to multivariable feedback systems, Linear Quadratic Gaussian (LQG), Loop Transfer Recovery (LTR), optimal control, robust control, H infinity control theory. Optimization via calculus of variations, Pontryagin's minimum principle. Control of distributed-parameter systems with applications to structural dynamics. Additional projects required for ME 644. (Lecture-problems 3 hours.) Traditional grading only.

**647. Modal Analysis (3)**

Prerequisite: M E 576. A thorough coverage of modal analysis techniques. Digital signal processing, including Fast Fourier Transform, Hilbert Transform, Structural dynamics theory, complex modes, state space, damping, nonsymmetries, modal parameter estimation techniques, and application of modal measurement methods suitable for practical vibration analysis problems. (Lecture-problems, 3 hours.) Traditional grading only.

**648. Engineering Calculation Methods for Turbulent Flow (3)**

Prerequisites: M E 631, 633 or consent of instructor. Introduction to numerical methods for the solution of boundary-layer equations. Solution of two-dimensional internal and external boundary-layer problems. Unsteady flows, Calculation of stability and transition. (Lecture-problems 3 hours.) Traditional grading only.

**649. Turbulence (3)**

Prerequisites: M E 631 or consent of instructor. Nature of turbulent flows, dynamics of turbulence, statistical description, homogeneous turbulence and spectral dynamics characteristics of turbulent shear flows. (Lecture-problems 3 hours.) Traditional grading only.

**671./771. Random and Nonlinear Vibrations (3)**

Prerequisite: ME 576. (Master's students register in ME 671 or 771; Ph.D. students register in ME 771). Characterization and transmission of random vibration; failure due to random vibration. Classification of nonlinear problems; exact, graphical and approximate solutions, singular points, stability. Additional projects required for ME 771. (Lecture-problems 3 hours.) Traditional grading only.

**672. Stress Analysis in Design (3)**

Prerequisites: M E 577. Modes of failure and failure criteria. Stability of mechanical models, elastic bars and frames by kinetic and energy approaches; design of columns, beam columns and framed columns. Plastic collapse and limit analysis. Experimental methods of stress analysis. (Lecture-problems 3 hours.) Traditional grading only.

673. Theory of Elasticity and Plasticity (3)

Prerequisite: ME 577. Equations of the mechanics of elastic bodies. Plane problem. Bending, torsion, and extension of Prismatic Bodies. Three-dimensional problem. Propagation of waves in elastic media. Approximate methods. Theory of plasticity. (Lecture-problems 3 hours.) Traditional grading only.

676. Engineering Vibrations II (3)

Prerequisite: ME 576. Free, forced, and self-excited vibrations. Modal analysis of continuous systems, including exact and approximate solutions. Rayleigh's quotient, Rayleigh-Ritz, Galerkin, collocations, Finite Element Methods. Vibrations in rotating and reciprocating machines. Response of structures to random and shock loads. Transfer function and frequency response methods. Vibration control of discrete systems and flexible structures, including large space structures. (Lecture-problems, 3 hours.) Traditional grading only.

677./777. Digital Simulation in Engineering (3)

Prerequisites: ME 405, 409. (Master's students register in ME 677 or 777; Ph.D. students register in ME 777). Program bank at an engineer's workstation. 3D-modeling and animation of real structures. Multimedia; Rapid Prototyping; Optimization of heat transfer-, fluids-, electrodynamic-, and structural problem solutions. Internal structure of a program bank. Dynamic data structure-, program structure-, and secondary storage control-statements. Status and location information of dynamic arrays, support of graphical interactive dialog. Maintenance and modification of a program bank. Additional projects required for ME 777. (Lecture-problems 3 hours.) Traditional grading only.

691. Directed Studies (1-3)

Study of information in engineering and scientific literature on a current topic under the direction of a faculty member. Preparation of a written report based on this reading. Traditional grading only.

695. Seminar in Mechanical Engineering (3)

Prerequisite: Consent of instructor. Presentation of research in special fields: (a) engineering mechanics (b) heat transfer and thermodynamics (c) fluid mechanics (d) aeronautics and astronautics. May be taken in different areas for a maximum of six units of credit. Traditional grading only.

697. Directed Research (1-3)

Prerequisite: Graduate standing in mechanical engineering. Theoretical and experimental problems in mechanical engineering requiring extensive analysis. Traditional grading only.

698. Thesis (2-6)

Prerequisite: Enrollment is limited to students advanced to candidacy or eligible for it. Department Graduate Advisor must be consulted and an Independent Study Agreement form submitted for each semester of enrollment. Planning, preparation, and completion of a thesis in mechanical engineering. May be repeated to a total of 6 units.

733./633 Mathematical Modeling Interaction Problems (3)

Prerequisites: ME 501, 502, 532, 537, 544 and 579. Mathematical description of physical phenomena and interaction problems with a focus on the following topics: Fluid-Structure, Fluid-Heat Transfer, Acoustic-Structure, and Control Systems-Structure. Discretization of the problems using Boundary Element and Finite Element Methods or related numerical procedures. Required topics for Ph.D. students: advanced numerical solutions for boundary value problems based on integral equations and variational methods (Energy Theorems). (Lecture-problems, 3 hours.) Traditional grading only.

736./636. Analytical Thermodynamics (3)

Prerequisite: ME 536, or consent of instructor. (Master's students register in ME 636 or 736; Ph.D. students register in ME 736). Non-equilibrium thermodynamics, kinetic theory of gases; transport process; shock waves; chemical rate processes and radiative gas dynamics. Additional projects required for ME 736. (Lecture-problems 3 hours.) Traditional grading only.

743./643. Nonlinear Complex Structures and Mechanisms (3)

Prerequisite: ME 543. Analysis and optimization of frame-, plate-, and shell structures with STRUDL, NASTRAN and ANSYS, sensitivity analysis. Generation and idealization of complex structures. Buckling analysis. Strength of structural elements, theory of yield and ultimate failure, stress concentrations. Nonlinear stress analysis, nonlinear material, large deflection, plastic deformation, nonlinear buckling, composite structures. Thermoelasticity. Nonlinear dynamic analysis, flutter analysis, random analysis. Required topics for Ph.D. students: advanced numerical methods for flutter and random analysis. (Lecture-problems, 3 hours.) Traditional grading only.

771./671. Random and Nonlinear Vibrations (3)

Prerequisite: ME 576. (Master's students register in ME 671 or 771; Ph.D. students register in ME 771). Characterization and transmission of random vibration; failure due to random vibration. Classification of nonlinear problems; exact, graphical and approximate solutions, singular points, stability. Additional projects required for ME 771. (Lecture-problems 3 hours.) Traditional grading only.

777./677. Digital Simulation in Engineering (3)

Prerequisites: ME 405, 409. (Master's students register in ME 677 or 777; Ph.D. students register in ME 777). Program bank at an engineer's workstation. 3D-modeling and animation of real structures. Multimedia; Rapid Prototyping; Optimization of heat transfer-, fluids-, electrodynamic-, and structural problem solutions. Internal structure of a program bank. Dynamic data structure-, program structure-, and secondary storage control-statements. Status and location information of dynamic arrays, support of graphical interactive dialog. Maintenance and modification of a program bank. Additional projects required for ME 777. (Lecture-problems 3 hours.) Traditional grading only.

# MEDIEVAL AND RENAISSANCE STUDIES

*College of Liberal Arts*

## Director

Anthony Battaglia

## Telephone

(562) 985-7982

## Program Office

Education 1, Room 50

Sharon Olson

985-4546

## Faculty

### Professors

Dorothy Abrahamse (History)

Arthur M. Axelrad (English - Emeritus)

Conrad Barrett (Classics)

Anthony Battaglia (Religious Studies)

A. Robert Bell (English)

David Cressy (History)

Clorinda Donato (Romance, German, Russian Languages and Literatures)

Robert H. Eisenman (Religious Studies)

Frank Fata (Comparative Literature)

Kristine K. Forney (Music)

Edward A. Gosselin (History)

J. Charles Jernigan (Comparative Literature)

Irene Marchegiani Jones

(Romance, German, Russian Languages and Literatures)

Stephen R. Knafel (English)

Lawrence S. Lerner (Physics and Astronomy)

Diane L. Martel (Art)

### Associate Professors

Faya Causey (Art)

Stanley Jones (Religious Studies)

Julia Miller (Art)

The Center for Medieval and Renaissance Studies sponsors activities that explore the complex culture of the Middle Ages and the Renaissance. It sponsors a regular lecture series featuring speakers from on- and off-campus as well as an annual event, usually lasting several days, to commemorate a person, place, or event of significance from these periods; recent topics have included Richard III, Florence and Rome 1200-1600, The Sensual Culture of Venice, 1066 And After That, and La Felicissima Armada. The Center also offers courses on a wide range of medieval and Renaissance issues, supports faculty research both here and abroad, and is associated with most of the local and national societies relevant to research in these fields.

In addition, the Center has established an interdisciplinary program which offers students interested in these periods the opportunity to pursue a course of study leading to a Certificate in Medieval and Renaissance Studies. Courses which are used to meet the certificate requirements may be counted, where applicable, toward the General Education requirements, the major, and minor requirements.

Interested students should apply to the Director, MHB-618, or to members of the supporting faculty for further information.

## Certificate in Medieval and Renaissance Studies (code 1-6010)

### Requirement

1. A bachelor's degree with an approved major. (Certificate may be completed prior to the completion of the B.A. requirement or while in the process of working toward an advanced degree.)
2. Consultation and approval of the program with a faculty advisor.
3. Intermediate level language proficiency on the college level, including a course in medieval or Renaissance literature of the language. It is expected that the language selected will be Latin, but with the consent of the advisor, Anglo-Saxon, French, German, Italian, Spanish or Greek may be substituted.
4. Twenty-four units selected from the following courses. Students should elect to concentrate in either the medieval or Renaissance period.
  - A. Required courses (12 units): one of the following sequences for six units: HIST 316, 317, or 317, 332, or 332, 333. One of the following literature courses for three units: C/LT 431, 432; ENGL 451, 452. One of the following Art history courses for three units: ART 409, 410, 423, 424, 425.
  - B. Nine units selected from the following courses: ART (history) 408, 409, 410, 423, 424, 425, 499Q\*; C/LT 349\*, 422, 430, 431, 432, 449\*, 450\*; ENGL 426, 431, 451, 452, 462, 463, 468A, 469\*; FREN 470, 471; GERM 315; GK 490\*, 499\*; HIST 301, 316, 317, 318, 331, 332, 333, 341A, 351, 353, 411, 431, 432, 490\*, 495\*, 499\*; LAT 490\*, 499\*; MUS 360; PHIL 403; POSC 301, 302; R/ST 314, 331I, 471I, 472I, 490\*, 494\*, 495\*; SPAN 330; THEA 321, 422I, 490\*. Graduate courses: ART 611\*; ENGL 550, 551, 652, 681; FREN 604, 685; GERM 511; HIST 510\*, 611, 631\*; MUS 560, 561; PHIL 630\*, 690\*; SPAN 525, 535, 538; THEA 621\*.
  - C. Three units of directed research on a medieval or Renaissance topic in any of the following courses: ART (history) 497, C/LT 499, ENGL 499, FREN 499, GERM 499, GK 499, HIST 498, MUS 499, R/ST 499, PHIL 499, SPAN 499, THEA 498. Graduate courses: ART (history) 697, ENGL 697, FREN 697, GERM 652, 697, HIST 697, PHIL 697, SPAN 697, THEA 694.

\*Within an approved medieval or Renaissance topic only certain special studies topics may be repeated for credit with approval.

# MILITARY SCIENCE

*College of Health and Human Services*

Program Director

Lieutenant Colonel Jerry W. Pearce

Program Office

ET 104

Faculty

Assistant Professor

Major Kevin Sandri

Captain Dan Dorchinsky

Senior Instructor

Master Sergeant Max Klinock

Sergeant First Class Rod Dalton

The Army Reserve Officers Training Corps (Army ROTC) program offers leadership and management training to CSULB students which consists of courses taught by active duty Army personnel. This dynamic four-year program of instruction develops the mental and physical abilities of students in preparation for positions of leadership with the military and civilian communities. Students may enroll for academic elective credit without incurring any military service obligation. The curriculum includes military leadership and management courses; courses which provide an awareness of the heritage of the U.S. Military; the Armed Forces' role in national defense strategy; professional military subjects; and military ethics. The program is oriented towards preparing the student for a military career. Students desiring to attain a highly sought-after commission as a Second Lieutenant in the U.S. Army must meet eligibility requirements and complete the Military Science/Army ROTC (Reserve Officer Training Corps) Advanced Course. To be eligible for the Commissioning Program, a student must be enrolled full time (12 units) at CSULB, have at least two years remaining as a university student, be physically qualified, complete the advanced course and graduate prior to reaching their 30th birthday.

## *Financial Assistance*

Many opportunities for financial assistance are available to students. Three areas of opportunities are: ROTC cadets who sign a contract for Advanced Phase, students who earn an ROTC scholarship, and cadets who train with Reserve or National Guard units. ROTC cadets who sign a contract to participate in the Advanced Course of ROTC receive a \$150 a month allowance. Highly competitive two-, three-, and four-year ROTC scholarships are available. The scholarship provides payment of full tuition, books, supplies, and the \$150 a month allowance for the duration of the scholarship. Students interested in scholarship competition should contact the Military Science Program at the time of application to the university. Reserve or National Guard training provides two additional sources of financial assistance: approximately \$150 a month for one weekend drill and approximately \$145 a month tuition assistance from the Army Reserve or National Guard "New GI Bill" benefits.

## *Equipment and Uniforms*

All necessary equipment, uniforms and textbooks for participation in the Military Science/ROTC program are furnished to the student by the United States Government free of charge. Title to this property, other than expendable items, remains with the government. Students entering into active commissioned service after graduation are granted a special \$300 uniform allowance.

## *Four-Year Program*

The four-year program curriculum is divided into two parts. The Basic Course is primarily for freshmen and sophomores, and the Advanced Course is for junior and senior level students. In special cases, the Advanced Course is available to students working towards graduate degrees.

## *Basic Course*

The Basic Course is a one to two-year period where students may, without obligation, investigate the ROTC Program and the military as a full- or part-time career. Students may enter and leave during any semester. The curriculum for the Basic Course is consists of the lower division courses listed below. To become an ROTC cadet during the Basic Course requires the student be registered for a Military Science class, completion of an ROTC enrollment form (obtained at the Military Science Department, Technology Education, Room 108), and an interview with the ROTC Enrollment Officer. Because this course is for students to examine the ROTC Program without obligation, participation in ROTC activities is encouraged but not mandatory. Advancement into the Advanced Course is accomplished either by successfully completing the Basic Course classes, completing ROTC Summer Basic Camp or completing any military basic training program.

## *ROTC Summer Basic Camp*

One method to qualify for the Advanced Course is to successfully complete the challenging six-week ROTC Summer Basic Camp. Students normally attend Basic Camp between their second and third academic years. It is important that

potential transfer students who plan to participate in the two-year ROTC program make their intentions known directly to the Military Science Program no later than April of the year they plan to register at the university even though this date may precede the date of their final acceptance by the university.

The government will provide a transportation allowance to and from Basic Camp and will also receive approximately \$600 during the six weeks. All equipment, uniforms, room and medical care are furnished free while at camp. No military obligation is incurred as a result of attendance. It is recommended though that the student be committed to pursuing a career in the military either in an active or reserve capacity.

### **Basic Training**

Outstanding students who have successfully served on active duty, regardless of the branch of service, are qualified to enter the Advanced Course. Also, students who have been, or are members of Reserve or National Guard units and have completed basic training are qualified for the Advanced Course. Students may be required to take certain lower division classes even after enrollment in the Advanced Course.

### **Advanced Course**

The Advanced Course is a two-year period where ROTC cadets receive advanced leadership and management training. The cadets receive many hours of hands-on, practical leadership experiences to prepare them for a military career or a management position in the civilian sector. To become a cadet in the Advanced Course a student must complete the Basic Course or ROTC Summer Basic Camp or Basic Training. The cadet must also make a commitment to attend all required training activities and sign a contract to accept a commission in the United States Army. In return for the student's commitment, the Military Science Department will provide \$150 a month, classroom instruction, real leadership opportunities, and continuous feedback on each cadet's leadership progress. A six-week summer training camp, between the two years of the Advanced Course, will be provided for testing and developing each cadet's leadership abilities. All equipment, uniforms, room, board, and medical care are furnished free while at this camp. The cadets will also receive pay at the rate of one-half of Second Lieutenant's basic pay. Upon successful completion of the Advanced Course and graduation from the university, the cadet will be eligible to be commissioned as a Second Lieutenant in the United States Army.

### **Required Related General Education Subjects**

1. Written Communications  
(Category A) ENGL 100
2. Human Behavior  
(Category D) HIST 162A or 162B or POSC 100
3. Computer Literacy
4. Mathematical Reasoning  
(Category B) MATH 103 or 110

## **Courses (M S)**

### **Lower Division**

#### **101. U.S. Defense Establishment (3)**

Examines the military services, government agencies and private defense industries which collectively provide for our national defense. Explores the organization, interaction and influence of the U.S. Defense Establishment as a social, economic and political institution. (Lecture-Discussion). (Laboratory required of AROTC cadets only.)

#### **103. Military Map Reading (1)**

A comprehensive study of military map reading skills, using: topographic and standard military map symbols; UTM grid coordinates and military map overlays; map distances; grid and magnetic azimuths; map intersection, map resection, or modified map resection methods; and terrain association, daylight or night conditions, with a lensatic compass, or field expedient means. (1 Hour Lecture-Discussion) (2 Hour Laboratory required of AROTC Cadets only.) Traditional grading only.

#### **211. Introduction to Military Operations and Basic Tactics (1)**

Fundamentals of operations and tactics employed in the U.S. Army: fire and maneuver, operations orders, patrolling; offensive and defensive operations. (Lecture-Discussion.) (Laboratory required of all AROTC Cadets only.)

#### **212. Basic Principles of Small Unit Leadership (1)**

An overview of basic psychological principles related to military leadership: effective communication, individual motivation and development, human needs, power and influence, and introduction to management skills. (Lecture-Discussion.) (Laboratory required of all AROTC Cadets only.)

### **Upper Division**

#### **301. Military Leadership and Management I (3)**

Examines current leadership theories and models and their applicability for junior military officers. Emphasize specific interpersonal skills, counseling, oral and written communications, supervision, and preparation and conduct of training. Traditional grading only. (3 Hour Lecture-Discussion) (2 Hour Laboratory required of AROTC Cadets only.)

#### **302. Leadership and Management II (3)**

Examines current leadership theories and models and their applicability for junior military officers. Emphasizes specific interpersonal skills: counseling, oral, and written communications. Traditional grading only. (Lecture-Discussion.) (Laboratory required of AROTC students only.)

#### **401. Staff Operations (1)**

Examines the organizational structure, functions and operating procedures of the military staff. Focus is on the role of the principle staff officers and procedures they use to develop staff estimates, recommendations and development of plans to execute commander's decisions. (1 Hour Lecture-Discussion-Practical Exercise.) Traditional grading only.

#### **411. U.S. Military History (3)**

Survey course in American military history from the origin of the U.S. Army to present; principles of war and their application in U.S. military history, leadership and the U.S. military heritage. (Lecture-Discussion.) (Laboratory required of AROTC Cadets only.)

#### **412. Officership and Professionalism (3)**

Examines the role of United States Army Officers and their responsibility to society. The course focus is on military ethics, Uniformed Code of Military Justice System, the logistics, supply and intelligence systems, post and installation support, and the transition to the Officers Corps. (3 Hour Lecture-Discussion.) (3 Hour Laboratory required of AROTC Cadets only.) Traditional grading only.

#### **497. Independent Studies (1-3)**

Prerequisites: Program Director must grant permission and student must obtain prior approval of topic. Individual studies with faculty supervision in an area of Military Science specialization. Limited to a maximum of 3 units per semester. May be repeated for a total of six units. Traditional grading only. (Discussion-Laboratory.)

# MANAGEMENT AND HUMAN RESOURCES MANAGEMENT

*College of Business Administration*

Department Chair

David J. Abramis

Department Office

CBA 314

Telephone

(562) 985-4753

Faculty

Professors

David J. Abramis

Filemon C. Campo-Flores

Phillip S. Chong

Charles D. Hamburger

John F. Herrmann

Salah M. Kukalis

Ralph J. Lewis

Jonathan S. Monat

Roger R. Stanton

Associate Professors

Eric Hansen

Dan L. Madison

Assistant Professor

Josh A. Arnold

Alan Ellstrand

Patricia Lynch

Secretary

Vacant

For all degree requirements see Business Administration.

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## Management Courses (MGMT)

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### 300. Principles of Management (3)

Prerequisite: Recommended: IS 310. Analysis of principles and theories of management, organization theory, planning and control techniques. Consideration will be given to management of the overall organization and the production/operations systems of organizations.

### 326. Management and Society (3)

Issues of concern to business managers in dealing with the social environment. Analysis of business responsibility to stockholders, employees, customers, the government, and society. Issues include: profits, consumerism, product safety, pollution, government regulation, and social accountability.

### \*405. International and Comparative Management (3)

Prerequisites: MGMT 300. Analysis of the functions of management in international business; comparative management studies, and the impact of the environment on management performance.

### 406. International Business Policy (3)

Prerequisite: MGMT 300. An integrative course designed to provide insight into the scope, complexity, and problems of formulating and implementing multinational strategies and policies. Will integrate such areas of study as international economics, economic development, international marketing, international finance, and multinational planning, organization, and control. Will also cover such topics as framework of international transactions, economic and political integration, the competitiveness of countries, relations with host societies, and country studies. Cases and research projects will be used extensively. Traditional grading only.

### \*410. Materials Management (3)

Prerequisites: MGMT 300. Analysis of basic frameworks for managing material flows into, within, and out of organizations. Study of inventory models for independent demand items, material requirement planning, and distribution systems. Heavy emphasis on learning supported by MRP II tools and other computer resources.

### 411. Production Planning (3)

Prerequisites: MGMT 300. Analysis of demand management and production planning problems. Study of forecasting tools and techniques using available computer resources. Concepts of aggregate planning, master scheduling, and capacity planning will be examined using the framework of an MRP II system.

### 412. Production Control (3)

Prerequisites: MGMT 300. Analysis of tools and techniques for scheduling, controlling, and evaluating manufacturing activities at the shop-floor level. Shop order release, dispatching, priority control, queue management, and input/output monitoring will be simulated using MRP II software. Job sequencing and scheduling techniques will be examined and available software and simulations employed. Just-in-time production, Kanban control, and optimized-production-technology (OPT) will be presented.

### 413. Managing Quality for Productivity (3)

Prerequisites: MGMT 300 and recommended IS 310. Analysis of the relationship between productivity and quality. Examination of the quality-assurance function, statistical quality control, and lot inspection. Study of the relationship between productivity improvement, product quality, and manufacturing strategy.

### 414. Purchasing Management (3)

Prerequisites: MGMT 300. Analysis of functions, principles, and tools of purchasing management. Study of the relationships of purchasing to other management functions. Use of MRP II systems to simulate purchasing decisions, monitor performance, and track costs.



#### 421. Management of Small Business Enterprises (3)

Prerequisite: MGMT 300 or equivalent. Learn how to start a new business. Be an entrepreneur in a free enterprise environment, or an intrapreneur in an existing organization. You will use state-of-the-art theory to plan and evaluate business startups. You will test your ideas with successful entrepreneurs and will learn how to do your own business plan.

#### 425. Business Strategy and Policy (3)

Prerequisites: ACCT 310 or 320, MGMT 300, MKTG 300, FIN 362. This course is designed to integrate and apply knowledge, theories and techniques derived from the study of business disciplines. The case method and business simulations are used to formulate business strategies and plans. Written reports are required.

#### 426. Management and Information Systems (3)

Prerequisites: Senior standing. Evaluations of concepts for evaluation and design of decision support systems, management decision models, socio-technical strategies for implementing information system changes.

#### \*430. Project Management (3)

Prerequisite: MGMT 300. This course describes how ideas are selected for projects and how the projects are implemented. It explores the role of the project team member, the project manager, and the various ways projects can be organized and planned. The project implementation tasks of budgeting, scheduling, monitoring and controlling are explored including computerized network models and project management software packages. Final project analysis and termination are addressed.

#### \*451. Management and Performance Evaluation Analysis (3)

Prerequisites: MGMT 300 and HRM 360. Examination of the efficiency and effectiveness of economic, organizational and human factors in achieving stated organizational objectives. Topics include designing the evaluation, organizational matters associated with the evaluation, data gathering, analyzing and performing the evaluation, preparing recommendations, and reporting the results. The course will acquaint students with concepts and procedures that facilitate decision making, policy formulation, and other managerial functions.

#### \*453. Management Systems (3)

Prerequisite: MGMT 300. Focuses on general systems theory as related to business and industry. Emphasis is placed on the functions of the sub-systems of the enterprise and the interactions of these sub-systems from an integrative point of view. Design philosophies for identifying and measuring elements of sociotechnical systems. Methods of modeling, analyzing, and evaluating business systems are examined for their applicability to real situations including technological change and social change models. Cases, games, and computer simulation techniques may be employed as appropriate.

#### \*454. Organization Theory (3)

Prerequisite: MGMT 300. Examination of the design and adaptation of organizations. Tools for analysis and design are developed from the general principles and theory of organization and the forces from inside and outside the organizations that help to shape it. The structure of organization is explored from many perspectives and functions. The organization is viewed as a goal implementation device, a system of authority, a political system, and an information and coordination device. Cases and computer simulations of real business and non-profit organizations may be used as appropriate.

#### 455. Managerial Decision Making Processes (3)

Prerequisites: MGMT 300 and either HRM 360 or 361. Managerial decision making is presented as a complex process that involves setting objectives, identifying and evaluating alternative courses of action, choosing and implementing the decision, and controlling results. Recent research is used to explain the influence of task, people, organization, and environment on the decision process. This course will help students become better decision makers by improving their understanding of decision making processes.

#### 495. Selected Topics (1-3)

Prerequisites: GPA of 3.0 in HRM courses, plus consent of instructor. Topics and issues of critical importance to human resource management. Topics for each semester are announced in Schedule of Classes. Focus on the development of critical thinking, writing, and speaking skills. May be taken up to 6 units.

#### 497. Directed Studies (1-3)

Prerequisites: Consent of instructor and Department Chair. Study of advanced nature in management.

#### Graduate Prerequisite Course

#### 500. Business Policies, Operations and Organizations (3)

Prerequisite: MBA standing. Recommended preparation: IS 310 or 410. Theory and philosophies of administrative organizations systems, information systems, management functions, decision making, strategy and policy formulation, operations planning, and control systems.

#### Graduate Division

#### 510. Management for Engineers (3)

The transition of the engineer to manager; planning and organizing technical activities; selecting and managing projects, selecting and managing teams, techniques of control and communication. Not open to MBA students.

#### 511. Project Management (3)

Theory and philosophies of project management. The problems of assembling an effective team and the control issues, techniques, and tools appropriate for the preproject proposal stage to program conclusion are examined. Not open to MBA students.

#### 512. Engineering Management Information Systems (3)

Study of the development and management information systems used by middle and higher management of technological and scientific organizations in the control of many facets of their function. Not open to MBA students.

#### 513. Cases in Engineering Management (3)

A course that permits application of newly acquired technical skills. It involves cases from engineering, technical or scientific programs of industrial firms or government agencies. The cases may be from new ventures as well as mature firms in both product and process development. Not open to MBA students.

#### 541. Industrial Logistics (3)

Prerequisites: MBA standing, plus MGMT 500 or equivalent. Systems analysis and synthesis of the general logistics system containing the marketing, production, and transportation activities. Emphasis placed on definition of system components of outputs, activities and inputs and the specification and quantification of the major functional relationships interrelating these components.

#### 542. Enterprise Structure and Operation (3)

Prerequisites: MBA standing and MGMT 500 or equivalent. Systems analysis and synthesis of the general enterprise system composed of the logistics, money, information, talent and decision sub-systems. Emphasis on the examination of the components of each of the sub-systems and how they interrelate in the operation of the total enterprise. Systems approach of defining outputs, activities and inputs is used as the vehicle for analysis.

#### 543. International Business Policy (3)

Prerequisites: MBA standing, plus MGMT 500 or equivalent, 9 hours recommended of 500/600 level courses in the area of international business. Analysis of current theory and principles of international business management pertaining to problems of formulating policy and developing strategies and tactics in the multinational corporation; case studies, readings, logistic analysis and research report.

#### 645. Seminar in Management Policy and Problems (3)

Prerequisites: MBA standing plus MGMT 500 or equivalent. History of management thought, business organizations, strategies and policies, executive control; managerial problems.

646. Seminar in Organization Analysis (3)  
Prerequisites: MBA standing, plus MGMT 500 or equivalent. The management function; audit of management performance.
647. Seminar in Management Planning and Control Systems (3)  
Prerequisites: MBA standing, plus MGMT 500 or equivalent. Analysis of planning and control systems in management. Cases and problems will be examined.
695. Selected Topics (3)  
Prerequisites: MBA standing. Topics to be announced in the Schedule of Classes. Topics change each offering and in the absence of significant duplication the course may be repeated once for credit.
697. Directed Studies (1-3)  
Prerequisites: MBA standing, plus consent of instructor. Individual study under the direction of the faculty.

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### Human Resources Management Courses (HRM)

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360. Organizational Behavior (3)  
An overview of the dynamics of human behavior in organizations and implications for managing people at work. Topics include motivation, personality and attitudes, human perception, groups and teams, norms, power and politics, conflict, learning, communication, job design, organizational culture, organizational change, leadership and cross-cultural issues.
361. The Human Resource Function (3)  
An overview of human resource functions that are designed to attract, motivate, develop and retain employees. Topics include human resource planning, job analysis, recruitment, selection, placement, appraisal, compensation and benefit administration, training and development, communications, labor management relations and the international environment. Discussion, case studies and student presentations are used to develop critical thinking and problem-solving skills.
- \*440. Collective Bargaining (3)  
Prerequisite: HRM 361. Examination of the roles of management, labor and government in structuring work environments. Nature of the process of negotiation and conflict resolution in organizations.
- \*445. Compensation Administration (3)  
Prerequisite: HRM 361. Compensation and benefits management is viewed as an integrating human resource management process. Emphasis is on the development and administration of equitable compensation and benefit programs which will retain a productive workforce. Examined are job analysis and evaluation, pay structures, salary surveys, individual compensation, incentive, systems and benefits administration. Discussion, case studies, simulations.
446. Leadership and Motivation in Organizations (3)  
Prerequisite: HRM 360. Critical examination of the determinants of effective leadership and successful methods of motivating employees to achieve organizational goals. Special attention given to identifying appropriate styles of leadership and methods for developing and applying leadership skills. An interactive class using case studies, research, and simulation exercises.
- \*458. Managing Organizational Culture and Cultural Diversity (3)  
Prerequisites: HRM 360 or HRM 361. This course examines the impact of diversity, culture, and ethnic origin on the work experience, and is designed to better prepare individuals to meet the challenge of cultural diversity in organizations. Attention is given to how language, gender, race, tradition, education, economic structure, and organizational philosophy interact to create a set of rules for acceptable behaviors in complex organizations. Open dialogue, debate, outside research, and group presentations.
460. Current Issues in Human Resource Management (3)  
Prerequisite: Either HRM 360 or HRM 361. Critical examination of current and emerging issues concerning the management and development of people and organizations. Interactive course

involving discussion, projects, and outside research. Topics include motivation, leadership, job performance, hiring, compensation, planning, selection, staffing, training, performance appraisal, careers, and quality of work life.

- \*462. Labor-Management Relations (3)  
Overview of the principles and practices influencing labor-management relationships. Development, aims, structure, and functions of labor and employer organizations; the collective bargaining process; labor law and governmental intervention; impasse resolution; unions and minorities; employee organizations in government and professional sectors; comparative international systems.
- \*463. Organizational Training and Development (3)  
Prerequisite: HRM 360 or HRM 361. Review of the field of training and development including learning theory, training needs assessment, design and delivery of training and development programs, evaluation, and program management. Includes career development and organizational development. Case studies, research, simulation exercises, and student presentations.
- \*465. Personnel Selection and Appraisal (3)  
Prerequisite: HRM 361. Critical examination of theories and techniques guiding personnel selection and appraisal processes. Students develop expertise in determining staffing needs, conducting job analyses, writing job descriptions, developing recruitment strategies, affirmative action plans, and designing resumes. Attention is given to designing effective appraisal systems and conducting productive performance appraisals. Cases and simulations.
495. Selected Topics (3)  
Prerequisite: GPA of 3.0 in HRM courses, plus consent of instructor. Topics and issues of critical importance to human resource management. Topics for each semester are announced in Schedule of Classes. Focus on the development of critical thinking, writing, and speaking skills.
497. Directed Studies (1-3)  
Prerequisites: Consent of instructor and Department Chair, and 3.0 GPA or higher in human resources management courses. Individual projects, study and research of advanced nature in human resources management.

### Graduate Prerequisite Course

500. Human Resources Management (3)  
Prerequisites: MBA standing. Dynamics of human behavior in organizations and implications for managing people. Includes: leadership, motivation, perception, personality and attitudes, work in groups and teams, organizational change, job design, business ethics, norms and socialization, power and politics, conflict, communication, learning, and organizational culture. Emphasizes practical application of theoretical knowledge.

### Graduate Division

510. Behavioral Science for Engineers (3)  
Prerequisites: MBA standing. Examination of the individual, groups and organizational structure designs, and interpersonal relationships that are peculiar to managing and directing professionals. Emphasis on managerial applications of Behavior Science concepts and research findings. Not open to MBA students.
650. Seminar in Labor-Management Relations (3)  
Prerequisites: MBA Standing plus HRM 500 or equivalent. An analysis of the development and functions of labor unions and other organizations representing workers, and discussion of the strategic issues related to them. Focus will be on the national labor and human resource policy, and on the mission and strategic focus of labor and employing organizations. Particular topics will include contract negotiation and administration, compensation and benefits patterns, labor and employment law, quality of life issues, and the impact of internalization of the economy. Discussion, cases, presentations, and simulations.

652. Seminar in Human Resources Management (3)

Prerequisites: MBA standing, plus HRM 500 or equivalent. From a general manager's perspective, an examination of those decisions and actions that impact upon managing people. Problems of productivity, employee commitment, employee development, employment law, and compensation are considered. Processes emphasized include staffing, training, and development, performance appraisal, counseling, leadership and motivation, reward systems, participation and delegation, and discipline. Discussion, cases, simulations, and presentations.

654. Seminar in Negotiation and Conflict Management (3)

Prerequisites: MBA standing, plus HRM 500 or equivalent. An examination of various forms of opposition interactions within organizations. Focuses upon interpersonal, intragroup, and intergroup conflict by distinguishing between functional and dysfunctional conflict, identifying sources and causes of conflict, and examining alternative styles and methods of conflict management. Discussion, cases, simulations, and presentations.

655. Seminar in Motivation and Organization Change (3)

Prerequisites: MBA standing, plus HRM 500 or equivalent. This course develops students' understanding and skills in two central parts of organizational life: human motivation and organizational change. Both traditional and modern theories of work motivation and change are reviewed, analyzed, and applied. Primary issues include: 1) the psychology and management of motivation, 2) the psychology and management of organizational change and development, and 3) management skills, policies, and organizational characteristics that facilitate the creation of genuinely motivating and flexible organizations.

657. Seminar in Leadership Skills (3)

Prerequisites: MBA standing, plus HRM 500 or equivalent. This course is intended to: 1) develop the student's leadership abilities and 2) examine the effectiveness of numerous approaches to leadership, including both traditional and modern approaches, from both managerial and psychological viewpoints. Leadership assessment and self assessment are included to aid diagnosis and understanding of one's own and others' leadership styles and abilities. Personality, situational factors, group processes, followership, and implications for leadership training are discussed.

658. Seminar in Managing Cultural Diversity (3)

Prerequisites: MBA standing. This course examines the impact of diversity, culture, and ethnic origin on the work experience, and is designed to better prepare individuals to meet the challenge of cultural diversity in organizations. Attention is given to how language, gender, race, tradition, education, economic structure, and organizational philosophy interact to create a set of rules for acceptable behaviors in complex organizations. Open dialogue, debate, outside research, and group presentations.

695. Selected Topics (3)

Prerequisites: MBA standing. Topics to be announced in the Schedule of Classes. Topics change each term and in the absence of significant duplication the course may be repeated once for credit.

697. Directed Studies (1-3)

Prerequisites: MBA standing, plus consent of instructor. Individual study under the direction of the faculty.

# MUSIC

## *College of the Arts*

### Department Chair

Donald J. Para

### Department Office

University Music Center (UMC),  
Room C306

### Telephone

(562) 985-4781

### Faculty

#### Professors

John T. Barcellona  
Richard P. Birkemeier  
Michael R. Carney  
Kristine K. Forney  
H. Martin Herman  
Roger C. Hickman  
Edith Hirshtal  
Justus F. Matthews  
Donald J. Para  
John H. Prince

#### Associate Professors

Lynn D. Bielefelt  
John Carnahan  
Deborah Mitchell

#### Assistant Professor

Leland Vail

#### Applied Music

Jim Atkinson, French Horn; John Barcellona, Flute; Marian Bodnar, Voice; Gary Bovyer, Clarinet; Marvlee Cariaga, Voice; Michael Carney, Percussion; Adriana Chirilov, Viola; Cecilia Coleman, Commercial Piano; Kathleen Darragh, Voice; Charley Davis, Trumpet; Marcia Dickstein, Harp; Greg Donovetsky, Oboe; Randy Drake, Percussion; Brad Dutz, Percussion; Ronald Eschete, Guitar; Dave Evans, Trumpet; John Hayhurst, Viola; Edith Hirshtal, Piano; Elizabeth Holborn, Violin; Andy Honea, Cello; Carolyn Hove, Oboe; Alex Iles, Trombone; Monica Kaenzig, Clarinet; Joan LaRue, Trumpet; Patrick Lindley, Harpsichord; Josephine Loit, Voice; Jonathan Mack, Voice; Loren Marsteller, Euphonium; Kathlene Martin, Voice; Shigemi Matsumoto, Voice; Rob Roy McGregor, Trumpet; Joe Meyer, French Horn; David Muller, Bassoon; Hae Oh, Guitar; Arpine Pehlivanian, Voice; Tom Peters, String Bass; Leo Potts, Saxophone; Jeff Reynolds, Bass Trombone; Mark Robertson, Violin; Linda Rose, Violin; Jenny Sprague, Clarinet; Richard Todd, French Horn; Doug Tornquist, Tuba; Mark Uranker, Piano; Rena Urso, Flute; Althea Waites, Piano; James Walker, Organ; Jon Walz, Cello; John Wittenberg, Violin.

#### Administrative Coordinator

Debra Scraggins

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate advisor, Music Education (credential) or Graduate Advisor.

The undergraduate music curriculum provides programs for the student: who wishes to become a professional musician; who wishes to enter the teaching profession; for whom music is part of a general education; or, who is intending to pursue an advanced degree in music.

All entering freshmen and transfer students are required to take a theory placement test and performance audition which are regularly administered in Spring and late Fall and are also available at the beginning of registration week each semester. Each entering student should inquire at the Music Office for dates and details. In addition, new students are required to meet with the advisor prior to registration.

Each music major must declare a specialization in some performance area (voice, piano or other orchestral instrument), develop ability in this area, appear in student recitals and demonstrate progress to the satisfaction of the faculty. NOTE: Due to admissions limitations, the department is no longer providing instruction in acoustic guitar. A limited number of jazz/commercial guitar students will be admitted each year.

All undergraduate music majors are required to pass a screening examination in applied music on their primary instrument or voice before advancement to upper division applied study. This upper division screening exam (UDSE) will cover repertoire that is determined by each applied area. Specific information regarding the test may be obtained in the music office or from the advisor. The exam will be administered at a regular jury after four (4) semesters of applied study, however transfer students may elect to take it earlier. Failure to pass the exam will result in automatic suspension of all music departmental scholarship aid and continued applied study at the lower division level through university extension (a fee is required). The exam may be repeated.

Each student must pass a piano proficiency examination regardless of the performance area (piano majors excepted). Detailed information may be obtained in the Music Office.

Participation in a major performance organization (MUS 100/300) is required of each music major each semester. The performance ensemble must be approved by the department. Undergraduates are also required to register for Semester Recital (MUS 110) every semester except the semester of the senior project.

The Department of Music offers graduate study leading to the Master of Arts or Master of Music degrees. The candidate should arrange for counseling with the graduate advisor through the department office. Special placement examinations or auditions are required to validate qualifications for graduate work in music.

All general requirements of the University must be met in addition to departmental requirements listed below. California State University, Long Beach is an accredited institutional

member of the National Association of Schools of Music (NASM) (National Association of Schools of Music, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700).

## Bachelor of Arts in Music (code 2-5820) (124 units)

### Requirements

The B.A. requires 124 units, 24 upper division in the major. Music history and literature (MUS 190\* [section by advisement], 160, 360, 374, 490\* - \*counts towards GE); music theory (MUS 141A-B; 142A-B; 240, 241, 341, 342); Major Performance Organization (MUS 100 [lower division] or 300 [upper division]) one unit each semester in residence – the performance ensemble must be approved by the department; keyboard proficiency [completion of the piano proficiency examination (equivalent to MUS 220B)]; Music Forum (MUS 110) each semester in residence to a total of 7 units; Applied Music: 129/329 or X129/X329 for 8 units; Senior Project (MUS 423) or (MUS 428).

## Bachelor of Music

The B.M. requires a minimum of 72 music units including the core and one area of specialization called an option. Options include Music History and Literature, Composition, Instrumental Music (Music Education), Choral-Vocal Music (Music Education) and Performance. Admission to the option is determined by audition and approval of the chair of the department. Application for admission to the option should be submitted no later than the beginning of the junior year, and significant progress must be demonstrated during the remaining two years. A Bachelor of Music degree requires a total of 132 units which must include a minimum of 40 upper division units.

### Requirements

Core: Music history and literature (MUS 190\*, 160, 360, 374, 490\* - \*counts toward GE); music theory (MUS 141A-B, 142A-B, 240, 241, 341, 342); Major Performance Organization (MUS 100 [lower division] or 300 [upper division]) one unit each semester in residence (keyboard majors only take MUS 100/300 for 4 semesters); keyboard proficiency [completion of the piano proficiency examination (equivalent to MUS 220B)]; semester recital (MUS 110) each semester in residence to a total of 7 units; senior project (MUS 423).

### Option in Instrumental Music (code 4-5826) (132 units)

(This option is intended for single subject teaching credential candidates.)

### Requirements

MUS 129/329 or X129/X329 (must be taken for 8 units); MUS 122A, 7 units of MUS 125 or proficiencies to include brass, woodwinds, strings and percussion, 282, 382A-B-C, 386, 425A-B, 480, 482; choose one course from: 442 and 474.

### Option in Choral-Vocal Music (code 4-5821) (132 units)

(This option is intended for single subject teaching credential candidates.)

## Requirements

MUS 129/329, or X129/X329 (must be taken for 8 units); voice proficiency; MUS 125 (guitar and 1 unit in each family of instruments for a total of 4 units; may be waived in whole or part upon passage of proficiency exams); Advanced piano proficiency exam, MUS 327, 373, 386, 422A-B, 426, 473, 483A-B, 485; 1 unit from the following: 131/331 (Music Theatre) or 130/330 (Opera) or 201D/401D (Vocal Jazz Ensemble I) or 201E/401E (Vocal Jazz Ensemble II).

## Option in Performance (code 4-5828) (132 units)

### Requirements

Individual instruction (MUS 129, 229/429, or X129, X229/X429) required each semester in residence with an achievement level of senior level on major performance medium. A Junior Project (MUS 323) is required of all students.

Piano: Core: MUS 200 or 201/400 or 401 (4 units); 277A-B, 427A, 477A-B, 492. Electives: four units chosen from the following courses: 373, 422A, 427B, 428, 434A-B, 436, and 460.

String Instruments: MUS 200 or 201/400 or 401 (4 units); MUS 425 A-B; choose six units from: 428, 460, and 493.

Wind Instruments: MUS 200 or 201/400 or 401 (4 units, 2 of which must be either Woodwind or Brass Chamber Music); MUS 425 A - B; choose six units from 428, 460, and 493.

Percussion: MUS 200 or 201/400 or 401 (4 units, 2 of which must be Percussion Ensemble); MUS 425A B; choose 6 units from 428, 460, and 493.

Voice: MUS 373, 422A, 426, 434A or 434B, 460, 473; choose an additional two units from: 436 and 434A or 434B. Completion of Department of Music Foreign Language Examination in French, German or Italian (may be waived by completion of 101B level course in French, German or Italian).

Opera: MUS 373, 422A, 436, 473 and THEA 262; MUS 130/330 allowed for 2 units of activity credit; choose two courses from the following: MUS 469, 3 unit theatre elective, 2 unit Dance elective (Dance 111A or 113A). Completion of Department of Music Foreign Language Examination in French, German or Italian (may be waived by completion of 101B level course in French, German or Italian).

Commercial Music: MUS 200 or 201/400 or 401 (at least 4 units of Studio Ensemble 201/401); MUS 271, 370, 371, 372, 393, 474. Students in commercial music, whose primary performance medium is woodwinds, will be required to take a minimum of 6 units in saxophone, 2 units in clarinet, 2 units in flute, and 4 units consisting of further study in saxophone, clarinet or flute for a total of 14 units in applied music. Prior to the senior project, each student must pass the UDSE on saxophone, clarinet and flute.

## Option in Composition (code 4-5822) (132 units)

### Requirements

MUS 129 or X129 to be taken each semester in residence until the successful completion of the departmental upper division screening examination in applied music (a minimum of 4 units is required), MUS 344A (to be taken concurrently with 329X), 344B (to be taken concurrently with 329X), and 26 units to be chosen under departmental advisement from the following

courses: 200B, 271, 343, 370, 371, 372, 375I, 393, 400B, 415, 422A, 422B, 425A, 425B, 441, 442, 443, 445 (taken concurrently with 329X for a total of 6 units), 447, 455, 456, 457, 460, 474, 497, THEA 449.

### Option in History and Literature (code 4-5824) (132 units)

#### Requirements

MUS 129 or X129 to be taken each semester in residence until successful completion of the departmental upper division screening examination in applied music (a minimum of four units is required); MUS 496 (Research Methods); 460; elect 14 units from MUS 363I, 364I, 365I, 375I, 393, 428, 447, 467, 469, 471, 478, 492 and 400R or 400S (Collegium Musicum; may be repeated). Completion of Department of Music Foreign Language Examination in French, German, or Italian (may be waived by completion of 101B level course in French, German, or Italian).

### Minor in Music (code 0-5820)

#### Requirements

A minimum of 20 units, 10 of which must be upper division (300- and 400-level courses). Specific courses are required. A degree plan must be prepared in conference with the department advisor prior to beginning this program.

### Master of Arts in Music (code 5-5820)

The Master of Arts degree in Music provides academic concentrations in Musicology, Music Theory and Music Education.

#### Prerequisites

1. A Bachelor of Arts degree with a major in music, a Bachelor of Music degree, or a bachelor's degree with a minimum of 24 units of upper division courses in music comparable to those required of a major in music at this University;
2. The student must request all institutions of higher learning attended to send official copies of transcripts directly to the Office of Admissions and Records and another set to the Department of Music Graduate Advisor. Transcripts presented to the Admissions Office by the student are not acceptable. Graduates of California State University, Long Beach must follow these same procedures when making application to the Master of Arts in music program;
3. All applicants are required to complete the Department of Music Graduate Placement Examination before they register for courses applicable to the Master of Arts degree. (Under special circumstances, a student may take the examination during the first semester in which he or she is registered in courses applicable to the degree.) Applicants for all options of the M.A. degree must present samples of their scholarly writings in music for review by the Graduate faculty. Applicants for the musicology concentration must show evidence of reading and translation ability in one foreign language (French or German);
4. A GPA of 3.00 or better in upper division Music courses. Students who do not meet the 3.00 GPA requirement or specified balance within the required 24 units of upper division music but who possess outstanding or unusual

qualifications that promise a significant contribution to the Master of Arts program may petition for a special review from the Department Graduate Committee.

#### Advancement to Candidacy

The prerequisites for advancement to candidacy are the same as those for the Master of Music.

#### Requirements

1. Completion of a minimum of 30 units of approved upper division and graduate courses with at least 24 units in the major. (The program may not include more than six units of transfer graduate credit);
2. Core Courses required by all Master of Arts students. 13-15 units; MUS 696 (should be taken the first time it is offered during the student's residency); MUS 541; one course from MUS 561, 562, 563, 564, 565; MUS 698 (for 4-6 units, dependent upon concentration).
3. Additional course for Musicology concentration: 3 units from MUS 561, 562, 563, 564, 565 (other than one taken in core); 6 units elected from MUS 547, 561, 562, 563, 564, 565, 566, 569, 571, 576, 578, 592, 593 (not taken in core); 6 units of music electives (students in this concentration are strongly encouraged to elect theory as well as performance classes, especially Collegium Musicum and New Music Ensemble). Thesis is taken for 6 units in this concentration.
4. Additional courses for Music Theory concentration: MUS 542; 6 units from MUS 541 (may be repeated), 547, 640 (may be repeated); 6 units of electives (students in this concentration are strongly encouraged to elect additional history, composition and performance classes, especially New Music Ensemble and Collegium Musicum). Thesis is taken for 6 units in this concentration.
5. Additional courses for Music Education Concentration: MUS 581, 588; 4 units chosen from MUS 427B, 486, 526, 554, 575, 580, 582, 585, 587, 594, 595, 680, 681; 5-7 units of electives (students in this concentration are encouraged to elect performance and conducting classes). Thesis is taken for 4-6 units in this concentration, dependent upon project.
6. An oral examination and defense of the thesis, recital, or project (MUS 698).

### Master of Music Degree (code 7-5820)

The Master of Music degree program provides professional concentrations in Composition, Conducting-Instrumental, Conducting-Choral, Jazz Studies, Opera Performance and Instrumental/Vocal Performance.

#### Prerequisites

1. A Bachelor of Music degree, or a Bachelor of Arts degree with a major in Music or a bachelor's degree, from an accredited institution, with a minimum of 24 upper division units of music comparable to those required at this University;
2. The student must request all institutions of higher learning attended to send official copies of transcripts directly to the Office of Admissions and Records and another set to the Department of Music Graduate Advisor. Transcripts presented to the Admissions Office by the student are not acceptable. Graduates of California State University,

Long Beach must follow these same procedures when making application to the Master of Music in music program;

- All applicants are required to complete the Department of Music Graduate Placement Examination before they register for courses applicable to the Master of Music degree. (Under special circumstances, a student may take the examination during the first semester in which he or she is registered in courses applicable to the degree);
- Criteria according to concentration:
  - Composition: submission and approval of a portfolio of representative original scores and evidence of baccalaureate-level competency as required in the Bachelor of Music Composition Option;
  - Performance/Jazz Studies/Conducting: successful completion of a conducting examination and approval by the conducting faculty; Performance-Opera; Jazz Studies; and Instrumental/Vocal: an audition both at a performance level and with a repertory on an instrument or in voice acceptable to the faculty of the specific performance medium.
- A GPA of 3.00 or better in upper division Music courses. Students who do not meet the 3.00 GPA requirement or specified balance within the required 24 units of upper division music but who possess outstanding or unusual qualifications that promise a significant contribution to the Master of Music program may petition for a special review from the Department Graduate Advisory Council.

#### Advancement to Candidacy

- Satisfy all the general University requirements, including passing the CSULB Writing Proficiency Examination;
- Remove all undergraduate deficiencies, which were determined by the departmental Graduate Placement Examination and/or the Dean of the College of the Arts;
- Pass the Department of Music Qualifying Examinations;
- Submit an approved project or thesis proposal, and a graduate degree program approved by the student's Thesis Committee, the Graduate Advisor, Department Chair, and the Dean of the College of the Arts;
- GPA of 3.0 or higher.

#### Requirements

- General requirements for all majors: Completion of a minimum of 30 units of approved upper division and graduate courses with at least 24 units in the major. (The program may not include more than six units of transfer graduate credit);
- Core curriculum (13 units) MUS 541, one course from MUS 561, 562, 563, 564, 565, 566 (Jazz Studies concentration only; MUS 513); MUS 696 (should be taken the first time it is offered during student's residency); MUS 698.
- An oral examination and defense of the thesis, recital, or project (MUS 698).

#### Master of Music Concentrations

Composition: 2 units of MUS 529X or 629X, taken concurrently with MUS 544 and MUS 545; 9 units to be chosen under departmental advisement from the following courses: 510, 511, 512, 513, 515, 516, 517, 520, 522B, 525B, 542, 543, 545, 547, 555, 556, 557, 574, 597, 640; 2 units of electives selected by advisement.

Conducting – Instrumental: 2 units of MUS 500, 600, or 601; 4 units of 529W or 629W; 525B, 680; 5 units of music electives selected by advisement.

Conducting – Choral: 2 units of MUS 500, 600, or 601; 4 units of 529W or 629W; 521 (must be taken twice), 575; 6 units of music electives by advisement.

Jazz Studies: 3 units MUS 574, 515; 9 units selected from MUS 510, 511, 512, 516, 525B, 529 or 629 (section by advisement), 601A, 601B, 601C, 601D, or 601E; 2 units of electives.

Opera Performance: 4 units for MUS 529Q or 629Q; 2 units of MUS 530; 526, 536, 573; 5 units of electives chosen by advisement. Students in this concentration are strongly encouraged to take MUS 569.

Instrumental/Vocal Performance: 4 units of MUS 500, 530, 600, or 601; 4 units of MUS 529 or 629 (section by advisement). Vocal specialization: 2 units for MUS 526; 2 units of MUS 573; 5 units of electives selected by advisement. Keyboard specialization: 3 units of MUS 592; 6 units of electives selected by advisement (MUS 577A-B strongly encouraged). Other instrumental specialization: 9 units of electives chosen by advisement.

#### Teaching Credentials

See Instrumental Music and Choral-Vocal Music options under B.M. degree. For further information consult with the Department of Music credential advisor.

#### Music Performance

Opportunities to participate in various instrumental and vocal ensembles are available to all students regardless of major. Before enrolling in a performing group students should apply to the director of the organization in which they wish to participate. Music performance courses may be repeated; up to 8 units of credit in MUS 100 or 300 may be counted toward a bachelor's degree. Simultaneous enrollment in more than one organization is permitted.

#### Courses (MUS)

##### Lower Division

100. Major Performance Organization (1)

Prerequisite: Consent of instructor.

- B. Symphonic Band
- C. Wind Symphony
- D. Women's Chorus
- E. Forty-Niner Chorus
- F. University Choir
- G. Chamber Singers
- J. Symphony Orchestra
- K. Performance.

Course may be repeated for a maximum of 8 units.

110. Music Forum (1)

Recital attendance and performance on principal instrument or voice. Required of undergraduate music majors each semester, except for semester enrolled in MUS 423, for a maximum of 7 units. Credit/No Credit grading only

119. Group Piano for the Non-Major (1)

A group piano setting designed for the student interested in learning to play the piano for enjoyment. Repertoire and technical exercises for dexterity will be emphasized. Simple chord progressions and improvisational skills will also be taught. Knowledge of reading music preferred but not required. Course may be repeated to a maximum of 2 units.

120A-B. Class Piano (1,1)

Technique, tone production, rhythm, sight-reading, interpretation and keyboard facility. (2 hours laboratory.)

122A-B. Class Voice (1-1)

Fundamental techniques of singing, tone production, voice placement, breathing, diction, repertoire and song interpretation. (2 hours lab.)

125. Instrumental Methods (1)

Prerequisite: Limited to music majors and minors. Class instruction in applied music.

- A. Clarinet
- B. Flute-Saxophone
- C. Guitar
- D. Oboe-Bassoon
- E. Percussion
- F. High Brass
- G. Low Brass
- J. Strings

129. Individual Instruction for Music Majors (1)

Open to music majors only. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration subject to departmental approval. May be repeated for a maximum of 4 units.

- A. Baritone/Tuba
- B. French Horn
- C. Trombone
- D. Trumpet
- E. Harpsichord
- F. Organ
- G. Piano
- J. Percussion
- K. Double Bass
- L. Cello
- M. Viola
- N. Violin
- O. Guitar
- P. Harp
- Q. Voice
- R. Bassoon
- S. Clarinet
- T. Flute
- U. Oboe
- V. Saxophone

130. Opera (1)

Prerequisites: Consent of instructor. Performance of excerpts and complete works for the lyric theatre; solo and ensemble coachings; intensive language and diction training; preparation and performance of entire role in original language; additional areas include stage management, scheduling, costuming, set construction. (3 hours or more laboratory.)

131. Music Theater (1)

Prerequisite: Consent of Instructor. Performance of musical theater works and operas. Additional areas include stage management, scheduling, costuming, and set construction.

140. Basic Music Theory (2)

Notation and reading of music. Written, aural and performance experience with scales, intervals, chords, and melodies. Provides essential background for more advanced courses in music theory.

141A. Musicianship I (2)

Corequisite: MUS 142A. Study of the basic skills of music reading, ear training and sight-singing including melodic and harmonic dictation through modulation and chromatic harmony. Computer assisted instruction is available.

141B. Musicianship II (2)

Prerequisite: MUS 141A or satisfactory score on theory placement test. Corequisite: MUS 142B. Study of the basic skills of music reading, ear training and sight-singing including melodic and har-

monic dictation through modulation and chromatic harmony. Computer assisted instruction is available.

142A. Harmony I (3)

Corequisite: MUS 141A. Beginning principles of part-writing, to include modal counterpoint, concepts of chord progression, chord prolongation, and analysis in diatonic and chromatic tonal music.

142B. Harmony II (3)

Prerequisites: MUS 141A & 142A or satisfactory score in theory placement test. Corequisite: MUS 141B. Principles of part-writing, to include modal counterpoint, concepts of chord progression, chord prolongation, and analysis in diatonic and chromatic tonal music.

160. History of Music: Baroque/Classic (3)

Prerequisite: MUS 190. Chronological survey of music and musical styles from 1600 to 1750 with selected readings, recordings and scores for in-depth study. Primarily for music majors and minors, but open to others who can read music. Traditional grading only.

180. Exploring Music (3)

Fundamentals of music and essentials of music listening. Performance skills in singing and playing music.

190. Listener's Approach to Music (3)

Non-technical course open to all students. Materials, forms and styles of music with extensive listening.

200. Chamber Music (1)

Prerequisite: consent of instructor.

- A. Brass Ensemble
- B. New Music Ensemble
- C. String Ensemble
- D. University String Quartet
- E. University Wind Quintet
- F. University Brass Quintet
- K. Performance
- L. Brass Chamber Music
- M. Percussion Ensemble
- N. Steel Drum Orchestra
- O. Woodwind Chamber Music
- P. String Chamber Music
- Q. University Jazz Quintet
- R. Collegium-Voc
- S. Collegium-Inst
- T. Saxophone Ensemble
- U. Directed Accompanying
- V. Recital Accompanying
- W. Varsity Band
- X. World Percussion Group
- Y. World/Traditional Music Performance
- Z. University Percussion Quartet

Course may be repeated for a maximum of 8 units.

201. Jazz Ensemble (1)

Prerequisites: Consent of instructor. Course may be repeated to a maximum of 8 units.

- A. Jazz Ensemble I
- B. Jazz Ensemble II
- C. Jazz Combos
- D. Vocal Jazz Ensemble I
- E. Vocal Jazz Ensemble II

220A-B. Class Piano (1-1)

Continuation of 120A-B. (2 hours laboratory.)

229. Individual Instruction for Music Major (2)

Open to performance majors only. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration is subject to departmental approval. May be repeated for a maximum of 8 units.

- A. Baritone/Tuba
- B. French Horn
- C. Trombone



- D. Trumpet
- E. Harpsichord
- F. Organ
- G. Piano
- J. Percussion
- K. Double Bass
- L. Cello
- M. Viola
- N. Violin
- O. Guitar
- P. Harp
- Q. Voice
- R. Bassoon
- S. Clarinet
- T. Flute
- U. Oboe
- V. Saxophone

#### 240. Advanced Musicianship (2)

Prerequisites: MUS 141B and 142B or satisfactory score on theory placement test. Study of advanced skills in ear training and sight singing. Traditional grading only.

#### 241. Tonal Counterpoint (3)x

Prerequisites: MUS 141B and 142B. Intensive analysis of the historical development of form in tonal music from the early Baroque through the early 20th Century.

#### 271. Improvisation Techniques I (2)

Basic techniques in improvisation, beginning with simple question and answer phrases and progressing to extended solos. Detailed and applied knowledge of chord progressions.

#### 277A. Keyboard Skills (2)

Open to Music majors only. Development of basic technical skills at the piano, including sight-reading, harmonization at the keyboard, chord and scale identification, score analysis and beginning ensemble playing.

#### 277B. Keyboard Skills (2)

Open to Music majors only. Development of basic technical skills at the piano, including sight-reading, harmonization at the keyboard, chord and scale identification, score analysis and beginning ensemble playing.

#### 282. Beginning Instrumental Ensemble Lab (1)

Examination of organizational and instructional techniques relating to instrumental beginners, orchestral and band, as well as performance on secondary instruments and conducting ensemble class sessions.

#### 290. Popular Music in America (3)

Artistic and socio-economic influences on popular music in America from 1890 to the present. Special consideration of the impact on "pop" music of various cultures and ethnic groups within the U.S. will be explored. Not open to Music majors.

### Upper Division

#### 300. Major Performance Organization (1)

Prerequisite: Consent of instructor.

- B. Symphonic Band
- C. Wind Symphony
- D. Women's Chorus
- E. Forty-Niner Chorus
- F. University Choir
- G. Chamber Singers
- J. Symphony Orchestra
- K. Performance

Course may be repeated for a maximum of 8 units.

#### 323. Junior Project (1)

Prerequisite: MUS 241. Recital of the standard literature for solo instrument or voice in the performance option in the Bachelor of Music degree. Enrollment restricted to music majors passing the Qualifying Examination.

#### 327. Choral Organization and Rehearsal Techniques (2)

A course for the choral musician with emphasis upon the rehearsal and rehearsal techniques. Aspects of auditioning voices, choral tone, diction, and score preparation will be stressed. Methods of organization and management of the overall choral program will also be addressed.

#### 329. Individual Instruction for Music Majors (1)

Prerequisite: Successful completion of the departmental upper division screening exam on the applied instrument or voice. Open to music majors only. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration subject to departmental approval. May be repeated for a maximum of 10 units.

- A. Baritone/Tuba
- B. French Horn
- C. Trombone
- D. Trumpet
- E. Harpsichord
- F. Organ
- G. Piano
- J. Percussion
- K. Double Bass
- L. Cello
- M. Viola
- N. Violin
- O. Guitar
- P. Harp
- Q. Voice
- R. Bassoon
- S. Clarinet
- T. Flute
- U. Oboe
- V. Saxophone
- W. Conducting
- X. Composition
- Y. Jazz Writing/Arranging

#### 330. Opera (1)

Prerequisites: Consent of instructor. Performance of excerpts and complete works for the lyric theatre: solo and ensemble coachings; intensive language and diction training; preparation and performance of entire role in original language; additional areas include stage management, scheduling, costuming, set construction. (3 hours or more laboratory.)

#### 331. Music Theater (1)

Prerequisite: Consent of Instructor. Performance of musical theater works and operas. Additional areas include stage management, scheduling, costuming, and set construction.

#### 341. Musical Form and Analysis (3)

Prerequisites: MUS 241. Small, large, multi-movement, variation, and contrapuntal forms in instrumental and vocal music.

#### 342. Materials of Modern Music (3)

Prerequisite: MUS 341. Continuation of intensive analysis of representative compositions of the 20th Century with emphasis on writing in selected 20th Century styles.

#### 343. Introduction to MIDI (3)

Basic techniques of sequencing, beginning music notation, sampling, SMPTE, and elements of studio design in a MIDI based computer music studio. Students will work at individual workstations in a networked computer music lab, gaining experience with practical application on studio equipment. Traditional grading only for Majors/Minors.

#### 344A-B. Composers' Workshop I-II (2-2)

Prerequisite: MUS 142B or consent of instructor. Corequisite: MUS 329X (1 unit). Directed studies in composition and analysis. Composition in selected styles and forms from various historical periods with readings of student works by resident ensembles.

360. History of Music: Medieval/Renaissance (3)  
Prerequisite: MUS 190. Chronological survey of music and musical readings, recordings and scores for in-depth study. Primarily for music majors and minors, but open to others who read music. Traditional grading only.
- 363I. Music and the Humanities: Antiquity to the Baroque (3)  
Prerequisites: ENGL 100 and upper division status. Survey of interrelationships between music and literature, visual arts, and dance from Antiquity through the Baroque era.
- 364I. Music and the Humanities: Enlightenment to the Present (3)  
Prerequisites: ENGL 100 and upper division status. Survey of interrelationships between music and literature, visual arts, and dance from the Enlightenment to the present.
- 365I. Renaissance World (3)  
Prerequisites: ENGL 100 and upper division status. An interdisciplinary view of selected aspects of Renaissance culture and society, emphasizing the arts and literature within the historical context of the era. Topics span social, economic, intellectual, institutional, religious, and cultural issues and their influences in music, art, literature, and philosophy. (Lecture/discussion 3 hours.)
370. Recording and Electronic Techniques (3)  
Technique of the preparation and recording of music and the study of electronic recording and musical equipment.
371. Improvisation Techniques II (2)  
Continuation of MUS 271.
372. Jazz Harmony and Analysis (3)  
Prerequisite: MUS 142B. Basic techniques of writing and analyzing jazz harmony.
373. Diction for Singers (2)  
Prerequisites: MUS 122A/B or consent of instructor. Principles of pronunciation of English, German, French, Italian and Latin using the International Phonetic Alphabet (IPA).
374. History of Music: Nineteenth/Twentieth Centuries (3)  
Prerequisite: MUS 190. Chronological survey of music and musical styles from 1800 to the present, with selected readings, recordings and scores for in-depth study. Primarily for music majors and minors, but open to others who read music. Traditional grading only.
- 375I. The Avant-Garde: Radical Change in Art and Music in the 20th Century (3)  
Prerequisites: ENGL 100 and upper division status. An examination of some of the major "modern" or avant-garde styles and movements in art and music in Europe and America from about 1900 to the present. The course aims not only to characterize these styles and their practitioners but to relate them to major changes to modern society.
- 382A. Intermediate Instrumental Ensemble Lab (1)  
Prerequisite: MUS 282. Examination of organizational and instructional techniques relating to Grade I-II music literature, orchestral and band, as well as performance on secondary instruments and conducting ensemble class sessions.
- 382B. Beginning Jazz Ensemble Lab (1)  
Prerequisite: MUS 282. Examination of organizational and instructional techniques relating to beginning jazz ensemble performance, as well as performance on secondary instruments and conducting ensemble class sessions.
- 382C. Advanced Instrumental Ensemble Lab (1)  
Prerequisite: MUS 282. Examination of organizational and instructional techniques relating to Grade III-IV music literature, orchestral and band, as well as performance on secondary instruments and conducting ensemble class sessions.
385. Children's Music (3)  
Prerequisite: MUS 180 or waiver (already in place). An introduction to general, vocal, and instrumental musical experiences appropriate for children in grades K-6. Includes participation in singing and listening activities and experience in the use of simple melodic, rhythmic, and harmonic instruments appropriate to the age and development of the child. This course is intended for liberal studies majors and others by consent of instructor.
386. Introduction to Music Education (3)  
This course provides the philosophical and pedagogical theory required for the design and execution of appropriate music instructional programs at the general classroom, middle school, and secondary levels. The content includes discussion of rationales for music education, the current state of music education, general learning principles, music learning theories, classroom management, and research and resource materials in music education. Traditional grading only.
393. Jazz, An American Music (3)  
A historical survey of the origins, developments, and social significance of American Jazz through recordings, films, live performances, and lectures.
400. Chamber Music (1)  
Prerequisite: consent of instructor.
- A. Brass Ensemble
  - B. New Music Ensemble
  - C. String Ensemble
  - D. University String Quartet
  - E. University Wind Quintet
  - F. University Brass Quintet
  - G. Studio Ensemble IV
  - J. Studio Ensemble V
  - K. Performance
  - L. Brass Chamber Music
  - M. Percussion Ensemble
  - N. Steel Drum Orchestra
  - O. Woodwind Chamber Music
  - P. String Chamber Music
  - Q. University Jazz Quintet
  - R. Collegium-Voc
  - S. Collegium-Inst
  - T. Saxophone Ensemble
  - U. Directed Accompanying
  - V. Recital Accompanying
  - W. Varsity Band
  - X. World Percussion Group
  - Y. World/Traditional Music Performance
  - Z. University Percussion Quartet
- Course may be repeated for a maximum of 8 units.
401. Jazz Ensemble (1)  
Prerequisites: Consent of instructor. Course may be repeated to a maximum of 8 units.
- A. Jazz Ensemble I
  - B. Jazz Ensemble II
  - C. Jazz Combos
  - D. Vocal Jazz Ensemble I
  - E. Vocal Jazz Ensemble II
- 411./511. Film Scoring (3)  
Prerequisites: MUS 372, 474, or permission of instructor. A course of study designed to review the development of various musical styles, forms, genres, and significant musical concepts and problems in creating music for films. Will include the study of film mechanics and the emotional and psychological requirements of music underscoring. Time will be spent creating original music for film cues. Traditional grading only. Course may be repeated for a maximum of 6 units.
- 415./515. Advanced Concepts in Jazz Theory (3)  
Prerequisites: MUS 372, 393, 474, or consent of instructor. A theory course designed to review the development of musical styles, forms, genres, and significant musical concepts and problems in jazz harmony. Theoretical work emphasizes detailed study of harmony, form, idioms, combination of idioms, and use of experimental materials. Study and detailed analysis of major modern jazz artists harmonic technique. Musicians to be studied include: Chick Corea, Keith Jarrett, Herbie Hancock, Joe Farrell, Miles Farrell, Miles Davis, Freddie Hubbard, John Lewis, McCoy Tyner, Clare Fischer, Wayne Shorter, Gil Evans, and Bill Evans. Traditional grading only.

416./516. Pedagogy of Improvisation (3)

Prerequisites: MUS 371, 372, 393, 474, or consent of instructor (students must demonstrate substantial skills in jazz improvisation). A course of study designed to survey the developments of literature and teaching methods dealing with individual instruments in Jazz Improvisation. These methods will provide important information regarding musical styles, and significant musical concepts as applied to individual instruments and vocalists. Theoretical work emphasizes detailed study of methods dealing with technique, harmony, forms, digital patterns and scales, combination of idioms, use of experimental material, transcriptions, texts, and videos. Traditional grading only.

417./517. Business of Music (3)

An overview of the business and artistic process of the music industry. Topics include popular music, music and media, operation of retail music stores, and film, theatrical, and concert music. Recent changes in digital recording, broadcasting technology, copyright laws, and legal issues are also addressed. Traditional grading only.

419./519. Choral Master Class (1)

Prerequisites: Consent of instructor. Designed for the graduate conducting student, and undergraduate/graduate choral/vocal major. The lecture/practicum format allows each conductor the experience of conducting the laboratory choir (consisting of the enrolled singers and conductors) in a master class setting. Emphasis on advanced conducting, vocal and rehearsal techniques as well as performance practices. Traditional grading only. Course may be repeated for a maximum of 4 units.

422A. Choral Conducting (2)

Prerequisite: MUS 327 or consent of instructor. Principles and techniques of choral conducting and organization. Study and interpretation of choral materials, using the class as a laboratory group.

422B./522B. Advanced Choral Conducting and Literature (2)

Prerequisite: MUS 422A or consent of instructor. Choral technique, style and interpretation; choral schools and composers since the 16th century; contemporary secular and sacred choral compositions. Class used as laboratory group.

423. Senior Project (1)

Prerequisites: MUS 341, 342. Corequisite: Concurrent enrollment in MUS 329 or 429 (excluding students in Music History or Composition). An individual recital of the standard literature for solo instrument or voice or a written project in certain options in the Bachelor of Music degree. Enrollment restricted to music majors passing the Qualifying Examination.

425A. Instrumental Conducting I (2)

Prerequisites: Consent of instructor. Principles and techniques of instrumental conducting and organization. Study and interpretation of instrumental literature using the class as a laboratory. Course must be taken concurrently with MUS 382A or 382C. (Lecture and lab.)

425B./525B. Instrumental Conducting II (2)

Prerequisites: Consent of instructor. Corequisite for 425B: MUS 382A or MUS 382C. Principles and techniques of instrumental conducting and organization. Study and interpretation of instrumental literature using the class as a laboratory. Course must be taken concurrently with MUS 382A or 382C. (Lecture and lab.)

426./526. Vocal Development (2)

Prerequisite: Consent of instructor. Theory and techniques of teaching voice.

427A. Piano Pedagogy I (3)

Study of the philosophies, psychology and methods of piano teaching as they apply to children and to beginning through intermediate adult levels.

\*427B. Piano Pedagogy II (3)

Prerequisite: MUS 427A. Study of piano teaching methods, psychology and philosophies as they apply to the more advanced and secondary university music student.

\*428. Seminar in Musical Styles (3)

Prerequisites: MUS 160, 360, 341, 374. A study seminar designed to review the development of musical styles, forms genres, and significant musical concepts and problems. For Music majors only. Traditional grading only.

429. Individual Instruction for Music Majors (2)

Prerequisite: Successful Completion of the Departmental Upper Division Screening Exam on the Applied Instrument or Voice. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration is subject to departmental approval. May be repeated for a maximum of 10 units.

A. Baritone/Tuba

B. French Horn

C. Trombone

D. Trumpet

E. Harpsichord

F. Organ

G. Piano

J. Percussion

K. Double Bass

L. Cello

M. Viola

N. Violin

O. Guitar

P. Harp

Q. Voice

R. Bassoon

S. Clarinet

T. Flute

U. Oboe

V. Saxophone

W. Conducting

X. Composition

434A-B./534A-B. Song Repertoire (2-2)

Prerequisite: Voice major or consent of instructor. Selecting and preparing song literature for public performance. Coaching in languages, musical style and vocal techniques.

436./536. Opera Repertoire (2)

Prerequisites: Two years of voice study, completion of Department of Music Foreign Language Proficiency Exam in French, German or Italian (may be waived by completion of 101B level course in French, German or Italian) and consent of instructor. Advanced study of repertoire for the lyric theatre with particular emphasis on stylistic and linguistic problems in French, German and Italian opera: study of original source materials; translation and transliteration of various foreign languages; musical/textual relationships. (4 hours laboratory.)

\*441. Studies in Musical Analysis (3)

Prerequisites: MUS 341, 342. Intensive individual and class analysis of representative compositions of various periods and styles.

442. Orchestration (3)

Prerequisite: MUS 241. Range, characteristics, and transpositions of all standard orchestral instruments by writing and/or transcribing music for them. Preparation and proofreading of scores and parts. Readings of student assignments will be included whenever possible.

443. Advanced Orchestration (3)

Prerequisite: MUS 442. Techniques of arranging, transcribing and composing for standard chamber ensembles, chorus and orchestra. Readings of student orchestrations will be included whenever possible.

445. Composition (2)

Prerequisite: MUS 344A-B or consent of instructor. Corequisite: MUS 329X. Composition with emphasis on the development of an individual style. Course includes study of representative major compositions of the 20th Century. Course may be repeated for a maximum of 6 units.

- 447./547. **Musical Systems of the World (3)**  
Prerequisites: MUS 342 or consent of instructor. Open to music majors and minors. Study of theoretical systems (pitch, scales, rhythmic treatment, textures, forms) of selected musical cultures of the world. Traditional grading only.
- 454./554. **School, Society, and Music Education (3)**  
Beginning with the singing school movement and the Jeffersonian era, this course will provide the student with an historical, in-depth examination of the direction and influence of music education within America's general education curriculum as it has reflected and addressed the changing needs of schooling and society. Traditional grading only.
- 455./555. **Sound Synthesis (3)**  
An intensive course in aspects of sound synthesis in a computer music studio. Students will get hands-on experience designing and editing sounds using computer music software such as cmix, csound, galaxy plus editors. Areas covered include additive, FM, wave (vector) synthesis and resonance modeling. The course will culminate in a creative composition or research project. Traditional grading only.
- 456./556. **Sampling and Sound Design (3)**  
An intensive course concentrating on aspects of digital audio, sample editing and sound design using computers, samplers, and hard disk editors/recorders. This course will culminate in a creative project in which collaboration is encouraged (film, theater, media presentations, etc.) Traditional grading only.
- 457./557. **Multimedia Authoring (3)**  
Students will learn the tools which will enable them to author multimedia presentations and CD ROMs using current hardware and software tools. The course will culminate in a creative project in which students combine computer graphics/animation, text, MIDI, and digital audio. Traditional grading only.
- 460./566. **Studies in Performance Practices (3)**  
Prerequisite: MUS 360 or consent of instructor. Surveys problems of vocal and instrumental performance in music of the Middle Ages, Renaissance and Baroque.
- 467./576. **Studies in Gender and Music (3)**  
Prerequisite: MUS 374. Surveys issues surrounding women as musicians (performers and composers), comparative studies of the role men and women have played in music, and feminist criticism of music. Traditional grading only for Majors/Minors.
468. **Music and Film (3)**  
Study of the interrelationships of dramatic, visual, and musical arts in film, with a special emphasis on the role of music.
- 469./569. **Music of the Theater (3)**  
Prerequisites: MUS 374. History and development of music for the stage from 1600 to the present, its conventions and styles. Analysis of representative masterworks.
- 471./571. **Studies in Ethnomusicology (3)**  
Prerequisites: MUS 374. Emphasis on theory and methodology of ethnomusicological study. Investigation of music of particular non-western cultures or areas For music majors only.
- 473./573. **Diction for Singers II (2)**  
Prerequisites: MUS 373. Advanced study of English, German, French and Italian pronunciation and enunciation problems with particular emphasis on proper text declamation in various styles.
- 474./574. **Commercial Arranging (3)**  
Prerequisite: MUS 372 or consent of instructor. Arranging and scoring of the various types of commercial ensembles in the styles demanded by contemporary performance practices.
- 477A-B./577A-B. **Piano Accompanying (2-2)**  
Prerequisite: MUS 277B or consent of instructor. Instruction and training in the art and the techniques of accompanying singers, instrumentalists and ensembles. Students with credit in MUS 228 or 477 may enroll only in 477B. (Lecture 1 hr, activity 3 hrs)
- 478./578. **Musical Instruments of the World (3)**  
Prerequisites: MUS 360 or consent of instructor. Open to music majors and minors. Study of the origins and history of musical instruments in the western and nonwestern world, with emphasis on cross-cultural influences, iconographical and organological issues, and scientific classification. Traditional grading only.
- 480./580. **Marching Band Techniques (2)**  
Marching fundamentals, charting formations, precision drills, parade technique and half-time pageantry.
- 482./582. **Instrumental Rehearsal Techniques and Literature (3)**  
Procedures for organization and development of instrumental programs and literature for performing groups.
- 483A-B./583A-B. **Choral Repertoire (2-2)**  
Traditional and contemporary choral repertoire for public school teachers and church choir directors. (4 hours laboratory.)
- 484A. **Choral Arranging (2)**  
Prerequisites: MUS 142B, 241. Instruction in arranging for vocal ensembles of all sizes. Primarily intended for music education majors. Traditional grading only.
- 484B. **Instrumental Arranging (2)**  
Prerequisites: MUS 142B, 241. Instruction in arranging for orchestras, bands, and symphonic wind ensembles. Primarily intended for music education majors. Traditional grading only.
- 485./585. **Music for the Elementary School Child (3)**  
Prerequisites: MUS 341. A detailed examination of specific approaches to developing musical and aesthetic sensitivity in children. Students will be involved in creating vocal, instrumental, and listening experiences appropriate for use with children in grades K-6. This course is intended for music education and music therapy majors, and others by consent of instructor.
- 487./587. **Microcomputers and Music Learning (3)**  
Prerequisites: Music education applications of microcomputers, including: existing instructional software and hardware, administrative applications, criteria for software and hardware selection, MIDI music composition, and contemporary issues and trends. Traditional grading only.
- 488./688. **CSU Summer Arts (1-6)**  
Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.
- \*489. **Special Topics in Music Education (1-3)**  
Prerequisite: Consent of instructor. Topics of interest in the various areas of music education selected for special presentation and development. May be repeated for a maximum of six units. Topics announced in Schedule of Classes.
490. **Introduction to Music Cultures (3)**  
Introduction to the Music of a variety of cultures and ethnic groups representative of the diversity of the United States and of Native cultures found throughout the world. Attention will be focused on the functions that music serves, the social organization of music including age and gender roles, the distinctive characteristics of the music, the types of instruments used, and cultural performance standards.
- 492./592. **Studies in Keyboard Music (3)**  
Prerequisite: MUS 360 or consent of instructor. Survey of the evolution of keyboard music including the clavichord, harpsichord, piano and organ from the 13th century to the present.
- 493./593. **Studies in Instrumental Music (3)**  
Prerequisite: MUS 374. A studies course in instrumental music spanning at least three epochs of music history and covering a minimum of two of four categories: solo sonata (excluding keyboard), chamber music, orchestral/symphonic and orchestral/concerto. Course may be repeated for a maximum of 6 units.
- 494./594. **Music Learning Theory (3)**  
This course will investigate the research and resulting methodology developed by Dr. Edwin Gordon as to how children learn music, including the nature of music aptitude, the Music Learning Theory Curriculum, incorporating Music Learning Theory in the music classroom and rehearsal settings, and evaluation and assessment of student learning. Traditional grading only.

**\*495. Special Topics in Music (3)**

Prerequisite: Consent of instructor. Topics of current interest in the various fields of music selected for special presentation and development. Topics will be announced in the Schedule of Classes.

**496. Research Methods (3)**

Prerequisite: Completion of Department of Music Foreign Language Proficiency Examination (French, German, or Italian) or evidence of completion of 101B level course in French, German, or Italian. Bibliography; approaches to contemporary problems in music; demonstration of competency in research and writing about music. Required of all undergraduate music history/literature majors.

**497. Special Topics in Music Composition (3)**

Topics of current interest in the field of music composition selected for special presentation and development. Topics will be announced in the Schedule of Classes. Traditional grading only.

- A. Songwriting and Analysis
- B. Musical Theater Project
- C. Advanced Film Scoring Project
- D. Contemporary and Computer Music Notation
- E. Internet Connectivity and Publishing
- F. Musical Interactivity

**\*499. Special Studies (1-3)**

Prerequisite: Consent of instructor. Individual research or group investigation of selected topics. May be repeated for a maximum of six units of credit.

**Graduate Division**

All graduate music courses are traditional grading only, unless otherwise stated. Credit/No Credit grading is not an option

**500. Major Performance Organization (1)**

Prerequisite: Consent of instructor.

- B. Symphonic Band
- C. Wind Symphony
- D. Women's Chorus
- E. Forty-Niner Chorus
- F. University Choir
- G. Chamber Singers
- J. Symphony Orchestra
- K. Performance

Course may be repeated for a maximum of 8 units.

**510. Improvisation Styles and Literature (3)**

Prerequisites: MUS 372, 393, 474, or permission of instructor. A course of study designed to review the development of various musical styles, forms, genres, and significant musical concepts in Jazz Improvisation. Theoretical work emphasizes detailed study of harmonic and linear forms, digital patterns and scales, combination of idioms, patterns, use of experimental material, transcriptions and historic implications.

**511./411. Film Scoring (3)**

Prerequisites: MUS 372, 474, or permission of instructor. A course of study designed to review the development of various musical styles, forms, genres, and significant musical concepts and problems in creating music for films. Will include the study of film mechanics and the emotional and psychological requirements of music underscoring. Time will be spent creating original music for film cues. Traditional grading only. Course may be repeated for a maximum of 6 units.

**512. Advanced Techniques in Jazz Composition (3)**

Prerequisites: MUS 372, 474, or permission of instructor. A course of study designed to review various composers, musical styles, forms, genres, and significant musical techniques and developments in contemporary jazz composition. Will include the study of major contemporary jazz works with writing assignments based on those styles. Composers who may be studied will include: Duke Ellington, George Russell, Gil Evans, John Lewis, Gunther Schuller, Oliver Nelson, Lalo Schiffrin, Gerald Wilson, Thad Jones, Bob Brookmeyer, Bob Mintzer, Herbie Hancock and Chick Corea. Course may be repeated for a maximum of 6 units.

**513. History and Analysis of Jazz Styles (3)**

Prerequisites: MUS 372, 393, or permission of instructor. A study seminar designed to review the development of various musical styles, forms, genres, and significant musical concepts and problems in Jazz History.

**515./415. Advanced Concepts in Jazz Theory (3)**

Prerequisites: MUS 372, 393, 474, or consent of instructor. A theory course designed to review the development of musical styles, forms, genres, and significant musical concepts and problems in jazz harmony. Theoretical work emphasizes detailed study of harmony, form, idioms, combination of idioms, and use of experimental materials. Study and detailed analysis of major modern jazz artists harmonic technique. Musicians to be studied include: Chick Corea, Keith Jarrett, Herbie Hancock, Joe Farrell, Miles Farrell, Miles Davis, Freddie Hubbard, John Lewis, McCoy Tyner, Clare Fischer, Wayne Shorter, Gil Evans, and Bill Evans. Traditional grading only.

**516./416. Pedagogy of Improvisation (3)**

Prerequisites: MUS 371, 372, 393, 474, or consent of instructor (students must demonstrate substantial skills in jazz improvisation). A course of study designed to survey the developments of literature and teaching methods dealing with individual instruments in Jazz Improvisation. These methods will provide important information regarding musical styles, and significant musical concepts as applied to individual instruments and vocalists. Theoretical work emphasizes detailed study of methods dealing with technique, harmony, forms, digital patterns and scales, combination of idioms, use of experimental material, transcriptions, texts, and videos. Traditional grading only.

**517./417. Business of Music (3)**

An overview of the business and artistic process of the music industry. Topics include popular music, music and media, operation of retail music stores, and film, theatrical, and concert music. Recent changes in digital recording, broadcasting technology, copyright laws, and legal issues are also addressed. Traditional grading only.

**519./419. Choral Master Class (1)**

Prerequisite: Consent of instructor. Designed for the graduate conducting student, and undergraduate/graduate choral/vocal major. The lecture/practicum format allows each conductor the experience of conducting the laboratory choir (consisting of the enrolled singers and conductors) in a master class setting. Emphasis on advanced conducting, vocal and rehearsal techniques as well as performance practices. Course may be repeated for a maximum of 4 units.

**520. Advanced Conducting (3)**

Prerequisite: Consent of instructor. Advanced baton technique, interpretation, securing proper sound, organizing routine and program making.

**522B./422B. Advanced Choral Conducting and Literature (2)**

Prerequisite: MUS 422A or consent of instructor. Choral technique, style and interpretation; choral schools and composers since the 16th century; contemporary secular and sacred choral compositions. Class used as laboratory group.

**525B./425B. Instrumental Conducting II (2,2)**

Prerequisite: 425A,B. Principles and techniques of instrumental conducting and organization. Study and interpretation of instrumental literature using the class as a laboratory.

**526./426. Vocal Development (2)**

Prerequisite: Consent of instructor. Theory and techniques of teaching voice.

**529. Individual Instruction (1)**

Open to graduate students in music only. Private lessons in their major performance medium. Application must be made to the Graduate Advisor of the Department of Music during the semester prior to registration. Registration is subject to departmental approval. May be repeated for a maximum of 10 units.

- A. Baritone/Tuba
- B. French Horn
- C. Trombone
- D. Trumpet

E. Harpsichord  
 F. Organ  
 G. Piano  
 J. Percussion  
 K. Double Bass  
 L. Cello  
 M. Viola  
 N. Violin  
 O. Guitar  
 P. Harp  
 Q. Voice  
 R. Bassoon  
 S. Clarinet  
 T. Flute  
 U. Oboe  
 V. Saxophone  
 W. Conducting  
 X. Composition  
 Y. Jazz Writing/Arranging

530. Opera (1)

Prerequisites: Consent of instructor. Performance of excerpts and complete works for the lyric theatre; solo and ensemble coachings; intensive language and diction training; preparation and performance of entire role in original language; additional areas include stage management, scheduling, costuming, set construction. (3 hours or more laboratory.)

531. Music Theater (1)

Prerequisite: Consent of instructor. Performance of musical theater works and operas. Additional areas include stage management, scheduling, costuming, and set construction.

534A-B./434A-B. Song Repertoire (2-2)

Prerequisite: Voice major or consent of instructor. Selecting and preparing song literature for public performance. Coaching in languages musical style and vocal techniques.

536./436. Opera Repertoire (2)

Prerequisites: Two years of voice study, completion of Department of Music Foreign Language Proficiency Exam in French, German or Italian (may be waived by completion of 101B level course in French, German or Italian) and consent of instructor. Advanced study of repertoire for the lyric theatre with particular emphasis on stylistic and linguistic problems in French, German and Italian opera; study of original source materials; translation and transliteration of various foreign language; musical/textual relationships. (4 hours laboratory.)

541. Seminar in Musical Analysis (3)

Analysis of the forms and techniques of musical compositions in various genres and styles. May be repeated for a maximum of 6 units.

542. Seminar in Advanced Musical Analysis (3)

Advanced analysis in variable topics of the forms and techniques of musical compositions. May be repeated for maximum of 6 units.

543. Advanced Orchestration (3)

Prerequisite: MUS 442. Graduate level study in the techniques of arranging, transcribing and composing for standard chamber ensembles, chorus and orchestra. Readings of student orchestrations will be included whenever possible.

544. Composition in Selected Forms (2)

Corequisite: MUS 529A. Graduate level composition in various forms and genres with readings of student works where possible.

545. Composition (2)

Corequisite: MUS 529A. Graduate level composition with emphasis on the development of an individual style. May be repeated for a maximum of 6 units.

547./447. Musical Systems of the World (3)

Prerequisites: MUS 342 or consent of instructor. Open to music majors and minors. Study of theoretical systems (pitch, scales, rhythmic treatment, textures, forms) of selected musical cultures of the world. Traditional grading only.

554./454. School, Society, and Music Education (3)

Beginning with the singing school movement and progressing to the present era, this course will provide the student with an historical, in-depth examination of the direction and influence of music education within America's general education curriculum as it has reflected and addressed the changing needs of schooling and society.

555./455. Sound Synthesis (3)

An intensive course in aspects of sound synthesis in a computer music studio. Students will get hands-on experience designing and editing sounds using computer music software such as cmix, csound, galaxy plus editors. Areas covered include additive, FM, wave (vector) synthesis and resonance modeling. The course will culminate in a creative composition or research project. Traditional grading only.

556./456. Sampling and Sound Design (3)

An intensive course concentrating on aspects of digital audio, sample editing and sound design using computers, samplers, and hard disk editors/recorders. This course will culminate in a creative project in which collaboration is encouraged (film, theater, media presentations, etc.) Traditional grading only.

557./457. Multimedia Authoring (3)

Students will learn the tools which will enable them to author multimedia presentations and CD ROMs using current hardware and software tools. The course will culminate in a creative project in which students combine computer graphics/animation, text, MIDI, and digital audio. Traditional grading only.

561. Seminar in Medieval and Renaissance Music (3)

Prerequisite: MUS 360, or consent of instructor. Topics in the development of musical styles and genres from Gregorian Chant through late sixteenth-century sacred and secular polyphony. Course may be repeated for a maximum of 6 units.

562. Seminar In Baroque Music (3)

Prerequisites: MUS 341, 360, or consent of instructor. Stylistic analysis and inquiry into cultural background of composers and genres. Course may be repeated for a maximum of 6 units.

563. Seminar In Classical Music (3)

Prerequisites: MUS 341, 360, or consent of instructor. Music from the Rococo to the end of the eighteenth century. Philosophical attitudes in relation to the musical styles. Course may be repeated for a maximum of 6 units.

564. Seminar in Romantic Music (3)

Prerequisites: MUS 342, 374 or consent of instructor. Music from Beethoven to the end of the nineteenth century. Course may be repeated for a maximum of 6 units.

565. Seminar In 20th-Century Music (3)

Prerequisites: MUS 342, 374, or consent of instructor. Stylistic analysis and music; aesthetic and socioeconomic problems of contemporary music; survey of new music. Course may be repeated for a maximum of 6 units.

566./460. Studies in Performance Practices (3)

Prerequisite: MUS 360 or consent of instructor. Surveys problems of vocal and instrumental performance in music of the Middle Ages, Renaissance and Baroque.

569./469. Music of the Theater (3)

Prerequisites: MUS 374. History and development of music for the stage from 1600 to the present, its conventions and styles. Analysis of representative masterworks.

571./471. Studies in Ethnomusicology (3)

Prerequisite: MUS 374. Emphasis on theory and methodology of ethnomusicological study. Investigation of music of particular non-western cultures or areas for music majors only.

573./473. Diction for Singers II (2)

Prerequisites: MUS 373. Advanced study of English, German, French and Italian pronunciation and enunciation problems with particular emphasis on proper text declamation in various styles. Traditional grading only for Majors.

574./474. Commercial Arranging (3)

Prerequisite: MUS 372 or consent of instructor. Arranging and scoring for the various types of commercial ensembles in the styles demanded by contemporary performance practices.

575. Studies in Choral Music (3)

Prerequisite: Consent of instructor. Studies in research techniques for the Choral Musician and exploration of Choral masterworks including score preparation, performance practice considerations, and historical investigation. Rehearsal techniques, principles and procedures necessary to effective choral teaching will also be examined. Course may be repeated for a maximum of 6 units.

576./467. Studies in Gender and Music (3)

Prerequisites: MUS 374. Surveys issues surrounding women as musicians (performers and composers), comparative studies of the role men and women have played in music, and feminist criticism of music. Traditional grading only for Majors/Minors.

577A,B./477A,B. Piano Accompanying (2,2)

Prerequisite: MUS 477B or consent of instructor. Piano major or consent of instructor. Instruction and training in the art and the techniques of accompanying for singers, instrumentalists and ensembles.

578./478. Musical Instruments of the World (3)

Prerequisites: MUS 360 or consent of instructor. Open to music majors and minors. Study of the origins and history of musical instruments in the western and nonwestern world, with emphasis on cross-cultural influences, iconographical and organological issues, and scientific classification. Traditional grading only.

580./480. Marching Band Techniques (2)

Marching fundamentals, charting, formations, precision drills, parade technique and half-time pageantry.

581. Foundations of Music Education (3)

Open to graduate music majors only. A survey of contemporary aesthetic, philosophical, psychological and sociological trends in music education course requirement: a major research paper dealing with one of the previously cited topics.

582./482. Instrumental Rehearsal Techniques and Literature (3)

Procedures for organization and development of instrumental programs and literature for performing groups.

583A-B./483A-B. Choral Repertoire (2-2)

Traditional and contemporary choral repertoire for public school teachers and church choir directors. (4 hours laboratory)

585./485. Music for the Elementary Child (3)

A detailed examination of specific approaches to developing musical and aesthetic sensitivity in children. Students will be involved in creating vocal, instrumental, and listening experiences appropriate for use with children in grades K-6. This course is intended for Music Education and Music Therapy majors, and others by consent of instructor.

587./487. Microcomputers in Music Learning (3)

Music Education applications of microcomputers, including: existing instructional software and hardware, administrative applications, criteria for software and hardware selection, MIDI music composition, and contemporary issues and trends.

588. Quantitative Issues and Research in Music Education (3)

Prerequisites: MUS 581. Assessment and curriculum development; appropriate techniques and existing tools for the measurement and evaluation of musical behavior; survey and critical analysis of research, especially quantitative, in areas relevant to music education and therapy. Design research project appropriate to field.

592./492. Studies in Keyboard Music (3)

Prerequisite: MUS 360 or consent of instructor. Survey of the evolution of keyboard music including the clavichord, harpsichord, piano and organ from the 13th century to the present.

593./493. Studies in Instrumental Music (3)

Prerequisites: MUS 374. A studies course in instrumental music spanning at least three epochs of music history and covering a minimum of two of four categories: solo sonata (excluding keyboard), chamber music, orchestral/symphonic and orchestral/concerto.

594./494. Music Learning Theory (3)

This course will investigate the research and resulting methodology developed by Dr. Edwin Gordon as to how children learn music, including the nature of music aptitude, the Music Learning Theory curriculum, incorporating Music Learning Theory in the music classroom and rehearsal settings, and evaluation and assessment of student learning.

595. Special Topics in Music (1-3)

Prerequisite: Consent of Graduate Advisor and instructor. Topics of current interest in various fields of music selected for special presentation and development. Topics will be announced in the Schedule of Classes.

596. Special Topics in Music (3)

597./497. Special Topics in Music Composition (3)

Prerequisite: Consent of Graduate Advisor and instructor. Topics of current interest in various fields of music selected for special presentation and development. Topics will be announced in the Schedule of Classes.

A. Songwriting and Analysis

B. Musical Theater Project

C. Advanced Film Scoring Project

D. Contemporary and Computer Music Notation

E. Internet Connectivity and Publishing

F. Musical Interactivity

598. Teaching Music in the University (1)

Prerequisite: position as TA or GA in Department of Music or consent of instructor. A seminar on teaching methods, goals, and objectives; covers regulations and responsibilities; preparation of course materials; assessment and evaluation tools; technology in the classroom. Required of first-term TAs and GAs with teaching responsibilities. Traditional grading only. Course may be repeated for a maximum of 3 units.

599. Special Studies (1-3)

Prerequisite: Consent of Graduate Advisor and instructor. Individual research or group investigation of selected topics. May be repeated for a maximum of six units of credit.

600. Chamber Music (1)

Prerequisite: Consent of instructor.

A. Brass Ensemble

B. New Music Ensemble

C. String Ensemble

D. University String Quartet

E. University Wind Quintet

F. University Brass Quintet

K. Performance

L. Brass Chamber Music

M. Percussion Ensemble

N. Steel Drum Orchestra

O. Woodwind Chamber Music

P. String Chamber Music

Q. University Jazz Quintet

R. Collegium-Voc

S. Collegium-Inst

T. Saxophone Ensemble

U. Directed Accompanying

V. Recital Accompanying

W. Varsity Band

X. World Percussion Group

Q. University Jazz Quintet

Y. World/Traditional Music Performance

Z. University Percussion Quartet

Course may be repeated for a maximum of 8 units.

601. Jazz Ensemble (1)

Prerequisites: Consent of Instructor. Course may be repeated to a maximum of 8 units.

- A. Jazz Ensemble I
- B. Jazz Ensemble II
- C. Jazz Combos
- D. Vocal Jazz Ensemble I
- E. Vocal Jazz Ensemble II

629. Individual Instruction for Music Majors (2)

Open to graduate students in music only. Private lessons in their major performance medium. Application must be made to the Graduate Advisor of the Department of Music during the semester prior to registration. Registration is subject to departmental approval. May be repeated for a maximum of 12 units credit.

- A. Baritone/Tuba
- B. French Horn
- C. Trombone
- D. Trumpet
- E. Harpsichord
- F. Organ
- G. Piano
- J. Percussion
- K. Double Bass
- L. Cello
- M. Viola
- N. Violin
- O. Guitar
- P. Harp
- Q. Voice
- R. Bassoon
- S. Clarinet
- T. Flute
- U. Oboe
- V. Saxophone
- W. Conducting
- X. Composition

640. Seminar in Music Theory (3)

Prerequisites: MUS 541 or 542 and consent of instructor. Intensive seminar focusing on analytical and theoretical issues in music. May center on an individual composer, a theoretical technique, or history of theory. Course may be repeated for a maximum of 6 units of degree credit.

645. Seminar in Advanced Composition (3)

Prerequisites: MUS 344A-B, 443, 445, or equivalent. Free composition in the more extended forms for various combinations of instruments including full orchestra and band.

646. Seminar in Electronic Music Composition (3)

Prerequisite: Consent of instructor. Advanced instruction in electronic studio techniques, literature and composing with analog and digital electronic equipment.

680. Seminar in Instrumental Music Teaching (3)

Prerequisite: Consent of instructor. Principles, procedures, and materials used in teaching instrumental music in the public schools. Special attention given to methods and materials used in instrument classes.

681. Seminar in Choral Music Teaching (3)

Prerequisite: Limited to music majors and minors. Research and analysis of principles, procedures, curricula and materials used in choral music performance and composition at all levels of teaching.

688./488. CSU Summer Arts (1-6)

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

696. Research Methods (3)

Bibliography; approaches to contemporary problems in music; demonstration of competence. Required of all master's degree candidates in music.

698. Thesis (2-6)

Planning, preparation, and completion of a thesis or project related to this field. Limited to graduate candidates who have taken MUS 696.



# COLLEGE OF NATURAL SCIENCES AND MATHEMATICS

Dean

Glenn M. Nagel

Associate Dean for Instructional Programs

Henry C. Fung

Acting Associate Dean for Facilities

Robert L. Loeschen

Development Officer

Patricia Maxwell

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Departments

Biological Sciences

Laura Kingsford, Chair

Chemistry and Biochemistry

Nail M. Senozan, Chair

Geological Sciences

Stanley C. Finney, Chair

Mathematics

Samuel G. Councilman, Chair

Physics and Astronomy

Kwang Y. Shen, Chair

Science Education

William C. Ritz, Chair

Student Access to Science Center

Director

Roger D. Bauer

Assistant Director

Roberto Coronel

Office

FO5, Room 109

In a world where science plays an increasingly important role and where an understanding of the sciences is essential for a participating and informed citizenry, the College of Natural Sciences and Mathematics provides quality educational opportunities in the life and physical sciences. Students are provided a broad-based, fundamental education in the natural sciences and mathematics, and are challenged to think critically, analytically, and creatively. Alumni of the College demonstrate that science graduates are well-prepared to enter graduate and professional schools or to assume responsible positions in industry or government. Employment opportunities for students with backgrounds in science and mathematics are traditionally excellent.

The College is dedicated to the concept that a university has a special responsibility toward academic excellence and the advancement of knowledge. The faculty and staff of the Departments of Biological Sciences (including the former departments of Anatomy and Physiology, Biology, and Microbiology), Chemistry/Biochemistry, Geological Sciences, Mathematics, Physics/Astronomy, and Science Education are committed to providing an outstanding educational experience for all students.

## *Degrees Offered*

Five departments within the College of Natural Sciences and Mathematics offer both the Bachelor of Science and Master of Science degrees. The Departments of Chemistry/Biochemistry, and Physics/Astronomy also offer the Bachelor of Arts degree. Each degree has unique requirements and students should refer to a departmental section of this Catalog to determine specific requirements. All students participate in the Science Safari to Success (for first time freshmen) or EONS (Enrollment and Orientation in Natural Sciences and Mathematics for transfer students) Program offered each June-July (for those entering in August) and January (for those entering in January). A department advisor will be available to assist in developing an appropriate academic plan consistent with career goals. During the semester, students may obtain academic advising by contacting the appropriate adviser(s) in the department offering the chosen degree program.

## *Student Research Opportunities*

Faculty in the College involve more than 200 students annually, both undergraduate and graduate, in a wide variety of research activities. Many of these students are supported by research grants, especially during the summer months. Each year many of these students present the results of their research at scientific conferences. It is not unusual for a student to co-author an article appearing in a major scientific journal.

The faculty's commitment to these students is based on the knowledge that involvement in scientific research makes the study of science more real and provides strong motivation for the student to pursue a career in science. Since the anticipated need for scientists far exceeds the enrollment of science majors, we are committed to meeting the coming short-fall by making the study of science at CSULB as "real world" as possible.

### *Student Access to Science (SAS)*

A suite of rooms (FO5-109) adjacent to the Dean's office is dedicated to promoting success for students who pursue majors in the College and those who take courses in its departments. The Center also facilitates several externally funded programs including The National Institutes of Health (MARC, MBRS, and Bridges to the Baccalaureate), National Science Foundation (ACCESS and AMP), and Howard Hughes Medical Institute (HHMI Undergraduate Biological Science Education Program). These rooms provide space for studying, tutoring, mentoring, and meeting rooms for student-centered activities. The Center also serves as the resource center for professional and graduate school opportunities, summer research opportunities and fellowships.

SAS coordinates and assures effective integration of all of our mentoring, enrichment, and outreach programs — including those based on undergraduate research. SAS is dependent on external funding for its success.

The Director is Dr. Roger Bauer, the Associate Directors are Dr. Glenn Nagel, Dr. Henry Fung, Dr. Marco Lopez, and Dr. Morteza Ebneshahrashoob. Roberto Coronel, Ronnie Damico, Cheryl Muilenberg, Nycole Plough and Carolyn Thomas are full time staff responsible for fiscal and programmatic activities.

SAS also operates the Mobile Science Museum, which extends the campus into the community. This innovative museum travels to schools and community groups, bringing many interactive displays and exhibits. The Mobile Science Museum's greatest asset is its ability to motivate people toward a better understanding of science.

### *Student-Centered Programs in Science*

There are a host of activities and programs that strive to involve students and promote their success in science and mathematics. Several federally funded programs focus on underrepresented students and address the diversity of our campus. In addition to fostering involvement of students in science, they feature an ethnic identity that provides a unique encouragement for 250 of our science majors.

MARC/MBRS Programs. The College hosts both programs funded by The National Institutes of General Medical Sciences: Minority Access to Research Careers (MARC) and Minority Biomedical Research Support (MBRS). Both programs have the goal of increasing the number and quality of students from historically underrepresented ethnic groups who pursue careers in scientific research. The 30 students supported by these programs carry out state-of-the-art biomedical research projects in conjunction with a member of the faculty. Virtually all of these students continue study toward advanced degrees in science. The MARC program is an honors program (GPA 3.0) for upper division students, while the MBRS program can support students as early as the freshman year and can also support graduate students. As a result of their research activities, most students present papers at scientific conferences and often co-author publications appearing in leading scientific journals. In addition to their research involvement, MARC/MBRS students are active in various outreach and mentoring activities.

Bridges to the Baccalaureate Program. This program is funded by the National Institutes of General Medical Sciences and its goal is to provide historically underrepresented community college students with research opportunities in the bio-

medical sciences and to facilitate their seamless transition into baccalaureate granting institutions.

AMP Program. The College hosts the National Science Foundation's Alliance for Minority Participation (AMP) program. Its goal is to improve the mathematics and science preparation for historically underrepresented students majoring in the sciences, mathematics, and engineering.

UPP. The University Preparatory Program (UPP) provides an enriched curriculum in mathematics and sciences for underrepresented high school students and introduces, presents, and facilitates their entrance into the university.

Freshman Science Enrichment and Mentoring Program. All entering science majors from underrepresented groups meet individually with a science faculty mentor at the time of enrollment and throughout the first year. This mentoring program is designed to optimize the student experience during the first two semesters. The mentor facilitates a variety of circumstances, but a major emphasis is on assuring registration in courses appropriate to the major and the level of preparation of the student, and assuring that the student becomes involved in the MARC/MBRS and/or the CSULB Partners for Success Programs.

### *The Electron Microscopy Facility*

The study of the natural sciences requires observation of the macroscopic, microscopic, and sub-microscopic character of our universe. With this in mind, the College has established a modern Electron Microscope (EM) Facility which is used by several undergraduate courses in addition to undergraduate and graduate research projects. The pride of the EM Facility is the Joel-1200EXII transmission electron microscope (TEM), obtained through a National Science Foundation instrumentation grant. The Joel-1200EXII has a resolution of 0.14 nm and a magnification range of from 50 to 1,000,000 times. The EM Facility also houses additional TEMs and an AMR 1000 scanning electron microscope. The latter will be upgraded to include analytical capabilities.

### *Student Organizations*

The College of Natural Sciences and Mathematics Student Council sponsors annual events including: a fall open house and spring picnic, a canned food drive to benefit the needy, Science Career Day, and the Nobel Laureate Speaker series. Six departmental associations plan various social and academic-related programs that offer peer support, as well as opportunities for students and faculty to interact outside of the classroom.

Four other student-led groups offer activities for students who are planning careers in one of the health professions (medicine, dentistry, etc.). The Organization of Preprofessional Students (T.O.P.S.) has a speaker series with representatives from professional schools; the group also holds social functions and provides a peer advising network. Chicanos for Community Medicine (CCM) sponsors community outreach activities, an annual workshop on interviewing techniques, and an annual conference on applying to medical/professional schools. The Black Students in Science Organization (BSSO) and Latinos in Science (LIS) also provide a variety of outreach and peer support activities. These three groups cosponsor an annual information session promoting opportunities for summer research/enrichment programs. Students in Flying Samaritans do volunteer work on a monthly basis in health clinics located in underserved areas.

### *Pre-Health Professions Office*

Professional schools in many universities either require or recommend that applicants complete four-year programs for admission. Although the professional schools do not always require a bachelor's degree, they generally encourage basic preparation and a broad general education leading to that degree before beginning specialization.

Students planning a career as a health professional can begin preparing themselves by making use of the advising services coordinated by the Pre-Health Professions Office. Pamphlets, catalogs, and college admissions and testing information are available in the SAS Center (FO5-109) for those interested in such fields of study as medicine, dentistry, optometry, osteopathy, physician's assistant, pharmacy, podiatry, public health, and veterinary medicine. The Office maintains a file on each student which, among other features, allows students to have one centralized location for all of their letters of recommendation. Letters are copied free of charge and sent to professional schools at the student's request.

An alumni group, composed of CSULB alumni who are practicing health professionals, provides role models for pre-health professions students as well as providing guidance and insight into a variety of health professions and professional schools.

### *Southern California Marine Institute (SCMI)*

The Institute operates a number of research vessels, and provides the mechanism whereby students from CSU Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, San Diego State, San Marcos, Occidental, and USC can share courses and degree programs. In addition, Institute staff conduct research and facilitate the research of CSU faculty. The major focus is on harbors and coastal areas, with emphasis on environmental issues.

### *California Desert Studies Consortium*

CSULB participates in the California Desert Studies Consortium, which has a Desert Studies Center in the heart of the Mojave Desert at Soda Springs near the town of Baker. The surrounding area consists of typical Mojave Desert with dry lakes, sand dunes, and mountain ranges; it is the gateway to Death Valley and the Kelso Dunes. The Center has excellent facilities for teaching field classes and for research. California State Universities at Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, and San Bernardino are the Consortia members.

### **Courses (NSCI)**

#### **200. Introduction to Computer Methods in Science (2)**

Prerequisites: Major in the College of Natural Sciences and Mathematics; and MATH 119A or MATH 122 or consent of instructor. Introduction to computer methods used in collecting, analyzing, and presenting scientific data. Will introduce word processing, spreadsheet analysis, and elementary programming. Credit/No Credit grading only. (Lecture 1 hr., discussion 1 hr.) A course fee may be required.

#### **309. Women in Science (3)**

Prerequisites: Upper division status; ENGL 100; six units of general education science courses; and permission of instructor. The purpose of this course is to increase awareness of the accomplishments of women in natural science, engineering, and mathematics in their socio-historical context; and the obstacles that

have precluded easy access to careers for women in these areas. Specific topics include historical roles of women in science, contributions of celebrated women scientists, and women scientists who made significant contributions but were ignored or devalued by their scientific peers. Other key issues include stereotypes and images of women in science; cultural, societal, and institutional obstacles to the entry and success of women in science; and ways of overcoming these obstacles. Cannot be used for credit towards any degree in biological sciences. Traditional grading only. Same as W/ST 309. (Lecture 3 hrs.)

#### **3751. Science and Society (3)**

Prerequisites: Upper division status, ENGL 100 or its equivalent, and 3 units of general education natural science courses. The purpose of this course is to learn about the nature of science by studying major discoveries in the life and physical sciences that currently have an impact on our lives. In addition to the basic science that contributed to these technological advances, the historical, political, philosophical, and economic contexts of these events will be examined. Included will be discussions of what is science, how is it done, and is it beneficial or destructive? Traditional views of science will be challenged and the social/cultural aspects will be explored. Recent discoveries and the underlying basic science also will be critically evaluated. A special focus will be the demands placed on society by rapidly advancing technology. Traditional grading only. (Lecture 3 hrs.)

#### **3771. Blood Research: A Study In Landmark Discoveries (3)**

Prerequisites: Upper division status, ENGL 100 or its equivalent, BIOL 200 or 211A, CHEM 100 or a more advanced course. A study of landmark discoveries in blood research that emphasizes the interplay between biology, chemistry and physics. (Discussion 3 hrs.)

#### **402. Problem Solving Applications in Mathematics for Elementary Teachers (3)**

Prerequisites: MATH 110 and MATH 111 or 355 and a course in Critical Thinking with a "C" or better grade in each course. Problem solving applications involving the operations of the real number system, logic, probability, statistics, geometry, measurement and the use of the computer. The pervasiveness and usefulness of mathematics in a variety of fields of inquiry will be explored. Student competency in understanding mathematical concepts, representations and procedures and the connections among them will be assessed. Not open for credit for Mathematics majors. (Seminar 3 hrs.) Traditional grading only.

#### **490. Special Topics in the Natural Sciences (1-3)**

Prerequisites: At least upper division standing in the College of Natural Sciences and Mathematics and consent of instructor. Faculty and student discussions and analysis of a current topic in the natural sciences. This course may be repeated once for credit with different discussions and topics. (Lecture 1-3 hrs.) Course may be repeated to a maximum of 6 units with different topics.

#### **491. Special Topics Laboratory in Natural Science (1-2)**

Prerequisites: Senior standing in the College of Natural Sciences and Mathematics and consent of instructor. Topics from selected areas of the natural sciences. Course content will vary from section to section. May be repeated for credit for a maximum of two units toward any single degree. Traditional grading only. (Laboratory 3-6 hrs.) A course fee may be required.

#### **492. Internships In Natural Science (3)**

Prerequisites: Upper division standing and consent of instructor prior to registration. Students who qualify will be placed in a major or career-related assignment in private industry and public agencies. All participants utilize learning agreements. A final written report is required. Class attendance to be arranged by instructor. (9 hours experience per week). May be repeated for a maximum of six units. Credit/No Credit grading only.

#### **496. Investigations in Natural Sciences and Mathematics (1-3)**

Prerequisites: Consent of instructor. Supervised study of current topics in the natural sciences or mathematics by a faculty member in the College of Natural Sciences and Mathematics. May be repeated for a maximum of 3 units. Course fee may be required.

# NURSING

*College of Health and Human Services*

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Barbara White

Assistant Professors

Sonja Cahill

Natalie Cheffer

Eileen Croke

Rebecca Dahlen

Carol Holt

Allison Keller

David Kumrow

Students desiring information should contact the department office for dates of opening counseling sessions.

## Bachelor of Science in Nursing

The baccalaureate program offers courses that prepare the student to become a professional nurse. Two distinct categories of students are eligible for admission: The "basic student" who enters the University without having completed a first level nursing program and the "registered nurse student" who, having completed a course of study at the first level, desires further study to expand her or his nursing capabilities to the professional level. Though each category of student enters at different levels, the terminal objectives of the nursing program are the same for both groups. The "basic student" upon completion of specific courses is eligible to take the examination for licensure to practice as a registered nurse. All graduates are recommended for certification as a public health nurse in the State of California. The program is accredited by the California State Board of Registered Nursing and the Commission on Collegiate Nursing Education (Commission on Collegiate Nursing Education, 1 Dupont Circle, NW, Suite 530, Washington, DC 20036-1120, phone: 202-887-6791).

The purpose of the bachelor of science program in nursing is to prepare graduates to function as professional nurses in a variety of settings. Graduates are expected to have acquired foundations for continuing professional development.

The curriculum is formulated to help the student develop understanding of self and others stimulate, intellectual curiosity and to develop an ability to work with colleagues to identify and resolve the health problems of individuals and families in a changing society. The professional nurse, while able to assess and intervene where health deviations exist, is committed to the role of maintaining health and preventing illness in self and others.

### Admission Requirements for the Basic Student

Students must apply for admission to the University as an undeclared or pre-nursing major. The number of applicants to nursing exceeds the number that can be accepted. For this reason nursing applicants are subject to criteria in addition to those required for admission to the University. The "basic student" may apply as a new or transfer student. After the student is accepted in NRSG 200 the department submits a change of major to nursing for the student.

To be considered as a nursing major, basic students are required to do the following:

1. Earn a "C" grade or better and a GPA of 2.5 or better in all prerequisite courses;
2. Complete a test that assesses ability for logical thinking and problem solving prior to filing an application with the department;
3. Earn a passing score on the Writing Proficiency Examination prior to filing an application with the department;

4. Have a personal scheduled interview with a designated nursing faculty member;
5. Submit transcripts of any previous college work to the Nursing Department as well as to the Admissions Office;
6. NOTE: California residents are given priority over all other applicants;
7. All lower division general education requirements must be completed prior to the semester for which the application is submitted.

Further information regarding admission to program courses is available at group counseling sessions held in the department.

NOTE: A one-time lab fee is charged for student supplies used throughout the pre-licensure courses (sophomore-junior years).

#### Requirements for the Bachelor of Science in Nursing: Basic (code 3-1072) (132 units)

Required Prerequisite Courses: CHEM 202, 302, A/P 207, 208, MICR 200, PSY 100, SOC 100; or equivalent.

Required Support Courses: A/P 206, 305; FCS 339.

Required Nursing Courses: NRSRG 200, 200L, 202, 250, 250L, 256, 256L, 260, 260L, 300, 307, 330, 330L, 340, 340L, 351, 357, 360, 360L, 370, 370L, 400, 402, 402L, 450, 450L, 452A, or B or C or D, 453L, or 454L or 455L or 456L.

#### Admission Requirements for the Registered Nurse Student

Registered Nurse Applicants are required to apply for admission to the University and do the following:

1. Hold a current license or be eligible for license to practice nursing in California;
2. Have 56 transferable units;
3. Obtain malpractice insurance;
4. Attend a group counseling session for RN students and complete the RN application form;
5. Submit official transcripts of any previous college work to the Nursing Department;
6. Earn a passing score on the Writing Proficiency Examination.

Graduates of diploma schools of nursing are urged to seek information/admission to a community college that offers the opportunity to earn academic credit for a diploma nursing program.

All courses offered by the Nursing Department are letter graded unless otherwise specified.

#### Requirements for the Bachelor of Science in Nursing: R.N. (code 3-1073) (131 units)

Required Prerequisite Courses: Once course in each of the following: Anatomy, Physiology (or a combined Anatomy/Physiology), Microbiology, Chemistry (inorganic/organic), Psychology, Sociology.

Required Support Courses: CHEM 302 and A/P 305. One three unit course out of the following science courses: MICR 302I, 303, A/P 308I, and 401; one three unit out of the following counseling courses: SOC 336, PSY 351 and FCS 312I; one three unit course out of the following communication courses: ED P 434B, SPCH 451, 410, 411, 432, GERN 486, and ANTH 412I; one three unit course out the of the following

critical thinking or logic courses: SPCH 331, PHIL 363, 381, and 382.

Required Nursing Courses: NRSRG 256, 256L, 400, 402, 402L, 450, 450L, and one of the following: 452A, and 453L; 452B and 454L; 452C and 455L; 452D and 456L.

#### Course of Study

A specific combination of general education, prerequisites, nursing and elective courses totaling 132 units for the basic program and 131 units for the R.N. program are required for graduation. All nursing courses in the nursing program must be taken in sequence. In general, the number assigned to each nursing course indicates where it occurs in the sequence. Admission to the first course is by application which will be accepted upon successful attainment of the criteria listed above. The last date to file applications for each semester will be available in the Nursing Department. Progress in the nursing major requires that students maintain a cumulative 2.0 GPA on all units attempted and attain a minimum of a "C" grade in each of the nursing courses as well as all required support courses. The student who earns less than a grade of "C" must repeat that course prior to being admitted to the next course in the nursing course sequence. A nursing course may be repeated one time. The nursing sequence of courses requires a minimum of six semesters for the "basic student". A break in the sequence of nursing courses necessitates readmission on a space-available basis. All courses offered by the Nursing Department are letter graded unless otherwise specified.

#### Accelerated RN to Master of Science in Nursing Program

This program is designed for currently licensed Registered Nurses who intend to pursue studies leading to the Masters Degree in Nursing in the following specialty areas: Adult/Geriatric and Psychiatric/Mental Health. Students entering this program must meet admission requirements for the RN complete an Independent Study NRSRG 490 course and the following prerequisite courses: CHEM 302, A/P 305, NRSRG 256, 256L, 307, and 357. A specific combination of general education, prerequisite nursing and elective courses totaling 129 units, 132 total units are required for graduation. Entry into the Master of Science in Nursing Program will be contingent upon meeting the graduate admission requirements.

#### Accelerated Options

##### Option A Thesis

Term 2 NRSRG 400, 402, 402L

Term 3 NRSRG 452A or B or C or D, 453L or 454L or 455L or 456L, 560, 596

Term 4 NRSRG 510, 520, 530, 540, 550

Term 5 NRSRG 686; 686A, 686B, or 688, 688A, 688B; 698

Term 6 NRSRG 687, 687A, 687B or 689, 689A, 689B; 698

Term 7 NRSRG 698

##### Option B Comprehensive Examination

Term 2 NRSRG 400, 402, 402L

Term 3 NRSRG 452A or B or C or D, 453L or 454L or 455L or 456L, 560, 596

Term 4 NRSRG 510, 520, 530, 540, 550

Term 5 NRS 686, 686A, 686B or 688, 688A, 688B

Term 6 NRS 687, 687A, 687B or 689, 689A, 689B

Term 7 NRS 695

## Master of Science in Nursing

The master of science degree is available to qualified students who desire advanced preparation in a variety of clinical specialty areas.

The philosophy of graduate nurse education is that the practice of nursing is constantly changing as health needs and health delivery systems are altered. Integral to nursing is an ability to work effectively and cooperatively with other disciplines and community services to promote health.

The focal point in this curriculum is the nursing process with strong components of clinical medical knowledge complemented by behavioral science concepts. Courses are interdependent and have been structured to provide clinical depth in the area of student's choice.

The graduate will have the knowledge and skill to function as an advanced practice nurse in one of several specialty areas. Nursing research skills and the application of nursing theory to practice are major emphases of the curriculum. Each applicant should request a copy of the official transcript of all college course work be sent to the department graduate advisor of nursing in addition to the copies required by the Office of Admissions and Records.

### Prerequisites

1. A bachelor's degree in nursing preferred: A bachelor's degree in a related field will be considered;
2. Current license to practice as a registered nurse in California; PHN Certificate needed for concurrent MSN/MPH program;
3. Admission to graduate standing in nursing at the University;
4. An upper division or graduate course in statistics;
5. A physical assessment course which includes clinical practice (all specialty areas except concurrent MSN/MPH);
6. An upper division of graduate level course in pathophysiology (all specialty areas except concurrent MSN/MPH);
7. An upper division public health nursing course;
8. An overall GPA of 2.75 or better in the last 60 units of the undergraduate BSN Program.

### Additional Prerequisites for Concurrent MSN/MPH program only

9. An ethics course
10. Graduate Record examination (GRE) - verbal and quantitative scores.
11. Current professional resume describing applicant's relevant experience.

### Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy;
2. Completion of all undergraduate deficiencies;
3. Successful completion of the CSULB Writing Proficiency Examination;
4. Approval of the department graduate advisor and Director of Graduate Studies and Research, College of Health and Human Services.

The M.S. in Nursing requires completion of the required courses in one of the following specialty areas: Adult/Geriatric, Family, Pediatric, Psychiatric/Mental Health, or Women's Health Care Nurse Practitioner; Nurse Midwifery or Nurse Anesthetist. A Nurse Practitioner Certificate (code 1-1120) is awarded to students who complete the required courses in one of the Nurse Practitioner specialty areas. A School Nursing Credential option is offered only in conjunction with the Pediatric Nurse Practitioner Master's degree program. Most of the specialization instruction is offered through the 680 series of courses.

### Requirements for the Master of Science in Nursing (code 6-1072)

1. Completion of a minimum of 36 units in approved upper division and graduate courses;
2. Completion of NRS 510 (2 units), 520 (2 units), 530 (2 units), 540 (2 units), 550 (2 units), 560 (2 units), 596 (2 units), 680-689 series (at least six units), 680L or 683A-689B series (at least 12 units), and 695 (3 units) or 698 (4 units);
3. An overall GPA of 3.0 or better;
4. Completion of an approved thesis or comprehensive examination.

### Master of Science in Nursing/Master in Public Health (code 7-1074)

The Departments of Nursing and Health Science offer a concurrent Master of Science and Master of Public Health degree available to qualified students who desire advanced preparation in the area of public health nursing with a practice focus of primary prevention, illness prevention, and health promotion. The concurrent program leading to both degrees represents the core accreditation requirements of each degree. Coursework is integrated between the two Departments in each semester in order to provide an intense learning experience. The Master of Science and Master of Public Health (Health Education Option) provides the opportunity for students to increase competence in designing, implementing, and evaluating behavior change programs in preparation for serving in various health agencies.

### Admission Requirements in Addition to

An upper division or graduate course in biostatistics (HSC 403 or Ed. Stat 419) and an ethics course (HSC 451).

### Health Education Option

#### Requirements

1. A minimum of 57 units of approved Nursing and Health Science upper division and graduate level courses including:  
HSC 500 or MICR429; HSC 503 OR BIOL 565; HSC 508, 528, 535, 570, 581, 624, 625; NRS 560, 680A, 680B, 680C; 680AL, 680BL, NRS 680CL or HSC 626 (in lieu of one 3 unit NRS 680L); NRS 596 or HSC 696; NRS 695 or HSC 697 or NRS 698
2. An overall GPA of 3.0 or better in all courses
3. Comprehensive written examination or a thesis or a directed project (Department of Health Science only)
4. If a student after entering the concurrent MSN/MPH program returns to a single degree program, all requirements for the single degree program must be met.

## Courses (NRSB)

### Lower Division

#### 150. Explorations in Nursing (3)

Prerequisites: Pre-Nursing majors or consent of instructor. The course is designed for the student who is interested in entering the nursing program and wishes to know more about the program and profession. The course includes discussion of the current issues in the profession and development of learning skills needed for student success in the nursing program. Credit/No Credit grading only. (Lecture-activity 3 hours)

#### 200. Introduction to Nursing Health Care (3)

Prerequisites: Admission to nursing program; Corequisites: NRSB 200L, 202, A/P 206, FCS 339. Development of concepts of high level wellness and self care. Introduction to physical and social science principles which provide the basis for beginning level nursing theory and practice. Introduction to the nursing process and the framework for nursing practice. Traditional grading only.

#### 200L. Introduction to Nursing Health Care Clinical (3)

Prerequisites: Admission to nursing program; Corequisites: NRSB 200, 202, A/P 206, FCS. This course is designed to provide guided utilization of beginning level theory and skill in a simulation laboratory. Opportunity is provided for the student to experience clinical practice based on the concepts of the nursing process and the framework for nursing practice. Course fee: \$47.00 for materials to be used throughout the pre-licensure program; non-refundable fee. Course may be repeated one time. Credit/No credit grading only. (Laboratory 9 hours)

#### 202. Health Care Communication (2)

Prerequisites: Admission to the nursing program, consent of instructor. Must be taken concurrently with NRSB 200, 200L, FCS 339, A/P 206, or consent of instructor. Primary focus is on communication theory, helping modes and communication with diverse people. Introduction to understanding the psycho-social and cultural factors which influence the responses to and on the health professional-client interaction. Clinically oriented simulated projects and activities provide opportunities for application of theory. Traditional grading only. (Lecture-activity, 2 hours.)

#### 250. Intermediate Nursing Health Care (3)

Prerequisites: NRSB 200, 200L, 202, A/P 206, FCS 339, consent of instructor. Must be taken concurrently with NRSB 250L, 256, 256L, 260, 260L, A/P 305; or with consent of instructor. Exploration of the illness experiences and health deviations related to various medical and surgical etiologies and pathological states. The focus is on the independent and collaborative nursing practice utilizing the nursing process. Emphasis is on illness care and health restoration, illness prevention, and health promotion. Multicultural influences on health care are considered. Traditional grading only. (Lecture-discussion 3 hours.)

#### 250L. Intermediate Nursing Health Care Clinical Studies (3)

Prerequisites: NRSB 200, 200L, 202, A/P 206, FCS 338, consent of instructor. Must be taken concurrently with 250, 260, 260L, 256, 256L, A/P 305, or with consent of instructor. This course is a clinical practicum focusing on the application of the nursing process and collaborative care to patients experiencing illness and health deviations due to various medical surgical etiologies and pathological states. Traditional grading only. (Laboratory 9 hrs.)

#### 256. Health Assessment (2)

Prerequisites: NRSB 200, 200L, 202, A/P 206, FCS 339, consent of instructor. Must be taken concurrently with NRSB 250L, 250, 260, 260L, 256L, A/P 305; or with consent of instructor. This course covers the basic techniques of history taking and physical examination of health individuals. These techniques are used by the nurse in identification of patient problems. Traditional grading only. (Lecture-Discussion.)

#### 256L. Physical Assessment for Nurses Lab (1)

Prerequisites: NRSB 200, 200L, 202, A/P 206, FCS 339, consent of instructor. Must be taken concurrently with NRSB 250L, 250, 260, 260L, 256L, A/P 305; or with consent of instructor. This course provides the opportunity for the student to apply basic techniques of history taking and physical examination which are used by the

nurse in identification of patient problems. Includes demonstration and practice of physical assessment methodology. Traditional grading only. (Technical activity and laboratory 2 hours.)

#### 260. Older Adult Health Care (2)

Prerequisites: NRSB 200, 200L, 202, FCS 339, A/P 206 or consent of instructor. Must be taken concurrently with NRSB 260L, 250, 250L, 256, 256L, A/P 305, or consent of instructor. This course is a study of the delivery of optimum health care to the aging client within the framework of the nursing process. Emphasis is on understanding the unique needs of the aging population, encouraging health promotion and self-care, identifying variable responses of elderly clients to pathological conditions, and maintaining a level of function that promotes quality of life. Traditional grading only. (Lecture-Discussion.)

#### 260L. Older Adult Health Care Clinical Studies (2)

Prerequisites: NRSB 200, 200L, 202, FCS 339, A/P 206, or consent of instructor. Must be taken concurrently with NRSB 260, 250, 250L, 256, 256L, A/P 305, or consent of instructor. This clinical course provides the student the experience of applying the nursing process to care of the aging client in a variety of settings. Traditional grading only. (Laboratory 6 hours.)

#### 300. Psychological Aspects of Health Care (2)

Prerequisites: NRSB 330, 330L, 340, 340L, 307, 351 or consent of instructor. Must be taken concurrently with NRSB 360, 360L, 370, 370L, or with consent of instructor. This course presents an exploration of psychosocial concepts, cultural and environmental factors relative to wellness-illness of individuals and family groups with special attention to physically ill individuals. Group interaction is directed toward development of self awareness as well as development of the professional role. Traditional grading only. (Lecture-Discussion.)

#### 307. Human Life Cycle I (2)

Prerequisites: NRSB 250, 250L, 256, 256L, 260, 260L, A/P 305 or consent of instructor. Must be taken concurrently with NRSB 330, 330L, 340, 340L, 351; or with consent of instructor. Study of the physiological, social, intellectual and emotional development of persons as individuals and as family members from conception through adolescence, including nursing implications for fostering optimal development. Traditional grading only. (Lecture-Discussion.)

#### 330. Women's Health Care (2)

Prerequisites: NRSB 250, 250L, 260, 260L, 256, 256L, A/P 305. Must be taken concurrently with NRSB 330L, 340, 340L, 307, 351 or consent of instructor. Focus on the family during the childbearing period and common health problems of women. Includes assessment, intervention and evaluation of normal clients and those at risk of complications during pregnancy and/or childbirth and common gynecological problems of women, the childbearing period, gain (adding of family member) and family roles are addressed. Traditional grading only. (Lecture-Discussion.)

#### 330L. Women's Health Care Clinical (3)

Prerequisites: NRSB 250, 250L, 260, 260L, 256, 256L, A/P 305. Must be taken concurrently with NRSB 330, 340, 340L, 307, 351 or consent of instructor. This course provides the opportunity to apply theoretical concepts from NRSB 330 in a supervised clinical setting. Supervised care is provided to the childbearing family at all stages in the cycle-antepartum, intrapartum and postpartum-including the normal newborn and newborn requiring intensive care. Assessment of potential complications and variations from normal, and implementation and evaluation of care are the basis for application of knowledge. Traditional grading only. (Laboratory 9 hours.)

#### 340. Child Health Care (2)

Prerequisites: NRSB 250, 250L, 260, 260L, 256, 256L, A/P 305. Must be taken concurrently with NRSB 330, 330L, 340L, 307, 351 or consent of instructor. Theoretical base for pediatric nursing practice, including the care of the well and ill child from birth through adolescence. Pathophysiology of specific body systems and appropriate nursing interventions are described. Cultural and growth and development variations, psychological development, and family roles and structures are also considered. Traditional grading only. (Lecture-Discussion.)

#### 340L. Child Health Care Clinical (3)

Prerequisites: NRS 250, 250L, 260, 260L, 256, 256L, A/P 305. Must be taken concurrently with NRS 330, 330L, 340, 351, or consent of instructor. Opportunities for the student to apply theoretical concepts from NRS 340 in various clinical settings and to a variety of pediatric clients and their families. The student will assess the physical, psychological, and cultural status of the ill child. The student will plan, implement, and evaluate age appropriate nursing care for clients with common pediatric disorders. Traditional grading only. (Laboratory 9 hours.)

#### 351. Legal Aspects of Health Care (2)

Prerequisites: NRS 250, 250L, 256, 256L, 260, 260L, A/P 305, or consent of instructor. Must be taken concurrently with NRS 330, 330L, 340, 340L, 307; or with consent of instructor. This course presents the legal duties and responsibilities of nurses in the delivery of health care services. Professional licensure regulations, scope of nursing practice and ethical issues related to nursing practice are emphasized. Traditional grading only. (Lecture-Discussion.)

#### 357. Human Life Cycle II (2)

Prerequisites: NRS 307, 351, 330, 330L, 340, 340L, or consent of instructor. Must be taken concurrently with NRS 300, 350, 360L, 370, 370L; or with consent of instructor. Study and application to nursing of the physiological, social, intellectual and emotional development of persons as individuals and as family members from young adulthood through old age. Traditional grading only. (Lecture-Discussion.)

#### 360. Critical Care Nursing (2)

Prerequisites: NRS 330, 330L, 340, 340L, 307, 351, or consent of instructor. Must be taken concurrently with NRS 360L, 370, 370L, 300, 357, or consent of instructor. Advanced study of the critically ill or injured patient in various critical care settings. The course focuses on complex knowledge required to provide nursing care of patients in technologically sophisticated specialty areas. Additional emphasis and specific content will focus on psychosocial and cultural concepts and issues as they relate to patients in the critical care settings. Traditional grading only. (Lecture-Discussion.)

#### 360L. Critical Care Nursing Clinical Studies (3)

Prerequisites: NRS 330, 330L, 340, 340L, 307, 351, or consent of instructor. Must be taken concurrently with NRS 360, 370, 370L, 300, 357, or consent of instructor. Advanced study of the critically ill or injured patient in various critical care settings. The course focuses on complex knowledge required to provide nursing care of patients technologically sophisticated specialty areas. Additional emphasis and specific content will focus on psychosocial and cultural concepts and issues as they relate to patients in the critical care setting. Traditional grading only. (Laboratory 9 hours)

#### 370. Psychiatric/Mental Health Nursing (2)

Prerequisites: NRS 330, 330L, 340, 340L, 307, 351 or consent of instructor. Must be taken concurrently with NRS 360, 360L, 370L, 300, 357, or consent of instructor. This course presents the theory base for psychiatric/mental health delivery system. Cultural, ethical, economic and legal influences on mental health will be considered. Traditional grading only. (Lecture-Discussion.)

#### 370L. Psychiatric/Mental Health Nursing Clinical (3)

Prerequisites: NRS 330, 330L, 340, 340L, 307, 351, or consent of instructor. Must be taken concurrently with NRS 360, 360L, 370, 300, 357, or consent of instructor. This course provides the clinical experiences for students to apply the theories learned in NRS 370. The student will utilize the nursing process to apply theories and implement care for clients with psychiatric and mental health issues. Traditional grading only. (Lecture-Discussion.)

#### 400. Health Care Delivery Systems (3)

Prerequisites: NRS 360, 360L, 370, 370L, 300, 357, or consent of instructor; for RNs: NRS 307, 357, A/P 305; or consent of instructor. Must be taken concurrently with NRS 402, 402L, or consent of instructor. Study of the health care delivery systems with emphasis on the role of nursing within these systems. Emphasis is upon less well defined problems and their causes, original and creative nursing interventions and in-depth study of the impact of political, economic and social issues of the health care delivery system. (Lecture-Discussion.)

#### 402. Community Health Nursing (3)

Prerequisites: NRS 360, 360L, 370, 370L, 300, 357, or consent of instructor. Must be taken concurrently with NRS 402L, 400; or with consent of instructor. This course focuses on diversified and/or permanent interruptions in the health-illness continuum and associated nursing care for aggregates in non-acute institutions and community facilities. Content emphasizes the variety of life styles and diversified ethnic groups. Traditional grading only. (Lecture-Discussion.)

#### 402L. Community Health Nursing Clinical Studies (4)

Prerequisites: NRS 360, 360L, 370, 370L, 300, 357, or consent of instructor; for RNs: NRS 307, 357, A/P 305, or consent of instructor. Must be taken concurrently with NRS 402, 400; or with consent of instructor. This course focuses on developing the expertise to work with diversified and/or permanent interruptions in the health-illness continuum and provides appropriate nursing interventions for aggregates in non-acute facilities. Experiences emphasize providing health care to groups with a variety of life styles and diversified ethnic groups. Traditional grading only. (Laboratory 12 hours.)

#### 405./505. Holistic Nursing Interventions Across the Lifespan (3)

Prerequisites: Senior standing or graduate status. This course will present therapeutic touch, meditation, and imagery as science-based interventions grounded in a holistic nursing framework. Students will learn the basics of practicing modality which will enable them to begin incorporating the three modalities into their practice. Traditional grading only.

#### 420. Prepared Childbirth Teachers (7)

Prerequisites: Must be RN, MD, RPT, or other health professional with a bachelor's degree. This certification program is designed to prepare persons to educate expectant parents in the psychoprophylactic method of childbearing most commonly referred to as the "Lamaze" method of childbirth. Over a 6 month period, this intensive program will cover: childbirth preparation including pregnancy, labor and delivery as well as pain management and teaching strategies. In addition to the 72 classroom hrs (4 units), there are 135 lab hours which include a minimum of 10 labor and delivery observations and 2-3 hours per week observing classes and a student teaching experience. Successful completion of the course makes the participant eligible for certification from the American Society for Psycho-prophylaxis in Obstetrics.

#### 430. Women's Health Care Nurse Practitioner (6)

Prerequisites: Valid RN License; Corequisite: NRS 430L. This course presents the epidemiology, etiology, pathophysiology, diagnosis, and management of women's health care, including indications for referral of selected health problems. An emphasis is placed on preventive and maintenance aspects for each health care condition presented. Health problems and tasks associated with prenatal assessment and management will be explored in terms of etiology, pathophysiology, signs, symptoms, diagnosis, management, and implication for individual and family. Theoretical concepts related to clinical contraceptive management and reproductive health will be presented.

#### 430L. Women's Health Care Nurse Practitioner Laboratory (6)

Prerequisites: Valid RN License; Corequisite: NRS 430. This course is designed to allow the student the opportunity to apply theoretical knowledge in supervised clinical practice in the area of Women's Health Care. Emphasis is placed on socialization into the Nurse Practitioner role and on developing sound clinical judgment applied to health promotion, health maintenance, diagnosis, contraceptive management, and prenatal care for women. The supervised clinical practicum focuses on the application of obstetric and gynecologic health concepts and therapeutic modalities.

#### 450. Nursing Research and Administration (3)

Prerequisites: NRS 400, 402, 402L, 357, A/P 305, NRS 400, or consent of instructor. Must be taken concurrently with NRS 452, 452L, 450L; or with consent of instructor. The application of the nursing process using research methodology, teaching and learning theory in selected clinical settings. The latter part of the course will focus on leadership and management theories and skills as they relate to clinical practice. Traditional grading only. (Lecture-Discussion 3 hours.)



#### 450L. Nursing Research Seminar (1)

Prerequisites: NRS 400, 402, 402L, 357, A/P 305, NRS 400, or consent of instructor. Must be taken concurrently with NRS 452, 452L, 450; or with consent of instructor. The application of the nursing process using research theory in selected clinical settings. Traditional grading only. (Lecture 1 hour.)

#### 452A. Advanced Nursing in Critical Care (2)

Prerequisites: NRS 400, 402L, 402 or consent of instructor. Must be taken concurrently with NRS 452L-A, 450, 450L; or with consent of instructor. A study of critical care/emergency department health care delivery systems and theories of management and leadership with their application to selected settings. An emphasis will be placed on the utilization of critical care/emergency department nursing care and nursing management models that incorporate unique client problems in selected patient populations. The integration of critical care/emergency clinical and management knowledge as essential to role fulfillment will be investigated in selected settings. Traditional grading only. (Clinical process.)

#### 452B. Advanced Maternal Child Health in Nursing (2)

Prerequisites: NRS 400, 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452L-B, 450, 450L; or with consent of instructor. This course is a study of advanced concept in maternal-child nursing and of theories of management, leadership, and administration as they are applied to selected settings. An emphasis is placed on the utilization of maternal-child nursing care in in-patient and out-patient health care delivery settings and on nursing management models that incorporate unique client problems in selected patient populations. The integration of advanced maternal-child nursing concepts in clinical settings with management knowledge is investigated in selected settings. Traditional grading only. (Clinical process.)

#### 452C. Advanced Primary/Community Health Care in Nursing (2)

Prerequisites: NRS 400, 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452L-C, 450, 450L. This course is a study of advanced concepts in primary/community health care delivery systems and theories of management and leadership as they are applied to selected settings. An emphasis is placed on the utilization of nursing management models that incorporate unique client problems in selected patient populations. The integration of clinical and management knowledge as essential to role fulfillment in selected settings is investigated. Traditional grading only. (Clinical process.)

#### 453L. Advanced Nursing in Critical Care Clinical Studies (4)

Prerequisites: NRS 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452A, 450, 450L. This course is designed to provide clinical experiences in the critical care/emergency departments of health care delivery systems and application of theories of management and leadership. An emphasis will be placed on the utilization of critical care/emergency department nursing care and nursing management models that incorporate unique client problems in selected patient populations. The integration of critical care/emergency clinical and management knowledge as essential to role fulfillment will be investigated in selected settings. Traditional grading only. (Laboratory 12 hours.)

#### 454L. Advanced Nursing in Maternal-Child Clinical Studies (4)

Prerequisites: NRS 400, 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452B, 450, 450L; or with consent of instructor. This course is designed to provide clinical experiences in the application of advanced concepts in maternal-child nursing and the application of theories of management, leadership, and administration as they are applied to selected settings. A unique client problems in selected patient populations encountered in maternal-child nursing. Opportunity to integrate clinical and management knowledge in maternal-child clinical settings is provided. Traditional grading only. (Laboratory 12 hours.)

#### 452C. Advanced Nursing in Primary/Community Health Care (2)

Prerequisites: NRS 400, 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452L-C, 450, 450L. This course is a study of advanced concepts in primary/community health care delivery systems and theories of management and leadership as they are applied to selected settings. An emphasis is placed on the utilization of nursing management models that incorporate unique client problems in selected patient populations. The integration of clinical and management knowledge essential to role fulfillment in selected settings is investigated. (Clinical process) Traditional grading only.

#### 455L. Advanced Nursing Primary/Community Health Care Clinical (4)

Prerequisites: NRS 400, 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452C, 450, 450L. This course provides the opportunity for clinical application of advanced concepts in primary/community health care, and application of theories of management, leadership, and administration in selected settings. An emphasis is placed on the utilization of primary/community health nursing care and nursing management models that incorporate unique client problems in selected settings is investigated. Traditional grading only. (Laboratory 12 hours.)

#### 452D. Advanced Nursing in Community Mental Health (2)

Prerequisites: NRS 400, 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452L-D, 450, 450L. This course is a study of advanced concepts in the area of clinical specialization in community mental health nursing and of theories of management, leadership, and administration as they are applied to selected settings. An emphasis is placed on the utilization of community mental health nursing care and nursing management models that incorporate unique client problems in selected patient populations. The integration of community mental health care clinical and management knowledge essential to role fulfillment in selected settings is investigated. (Clinical process) Traditional grading only.

#### 456L. Advanced Nursing in Community Mental Health Clinical (4)

Prerequisites: NRS 400, 402, 402L, or consent of instructor. Must be taken concurrently with NRS 452D, 450, 450L. This course is designed to provide clinical application of advanced concepts in Community Mental Health and application of theories of management, leadership, and administration in selected settings. An emphasis is placed on the utilization of community mental health nursing care and nursing management models that incorporate unique client problems in selected patient populations. The integration of community mental health clinical and management knowledge essential to role fulfillment in selected settings is investigated. Traditional grading only. (Laboratory 12 hours.)

#### 481I. Parenting (3)

Prerequisites: ENGL 100 and upper division status. Effective parenting with emphasis on common parenting concerns and the developmental tasks of parents and children.

#### 482. Physical Assessment and Aging (3)

Prerequisite: Upper division standing. Study of the physical, emotional and social changes which accompany aging. Theory and practice in the assessment of these factors. Course is designed to prepare the average lay person and those in the helping professions to work with the aged and deal with their own aging.

#### 490. Independent Study (1-3)

Prerequisite: Consent of any nursing faculty. Students who have made prior arrangements with a faculty advisor for appropriate learning objectives may enroll. May be repeated to a maximum of six units.

#### 499./599. Special Topics in Nursing (1-3)

Prerequisite: Consent of instructor. Topics consistent with contemporary nursing or curricular trends will be announced each semester. Credit may be earned for course each time a new topic is offered.

## Graduate Division

### 505./405. Holistic Nursing Interventions Across the Lifespan (3)

Prerequisites: Senior standing or graduate status. This course will present therapeutic touch, meditation, and imagery as interventions grounded in a holistic nursing framework. Students will learn the basics of practicing modality which will enable them to begin incorporating the three modalities into their practice. Traditional grading only.

### 510. Advanced Pathophysiology for Advance Practice Nursing (2)

Prerequisites: Admission to the graduate nursing program or consent of instructor. This course presents the principles of human functional and homeostatic mechanisms, as well as underlying mechanisms operant during disturbance of human functional and homeostatic mechanisms. The course materials build upon the framework of understanding developed in the prerequisite undergraduate anatomy and physiology course. Understanding of concepts of integration and communication between organs systems will be explored and will be applied to gain greater knowledge of disturbances at the cellular level which result in aberrant organ and system function. This course is prerequisite to the nursing 680 series courses. Traditional grading only. (Lecture-Activity.)

### 520. Advanced Pharmacology for the Advance Practice Nurse (2)

Prerequisites: Admission to the graduate nursing program, must be taken concurrent with NRS 510 or consent of the instructor. This course is designed to meet the needs of students in the graduate nursing program and advance practice nurses for advanced knowledge about pharmacological agents use full in the management of a variety of common clinical situations. This course is also designed to meet the BRN pharmacology course requirement for the nurse practitioner to furnish drugs or devices pursuant to the Business and Professions Code, Section 2836.1. A theoretical framework establishing the importance of advanced pharmacological knowledge to the full implementation of the nurse practitioner role will be presented. Following a review of the basic concepts, a physiological systems approach will be applied which will allow a greater understanding of the effect of common drugs utilized in primary care/family planning settings in the provision of perinatal care, family planning services and/or routine health care in essentially healthy persons. Ethical/legal issues, as well as a review of the California furnishing bill and standardized procedures will be covered. This course is not designed to supersede or replace dosage and treatment protocols established within the nurse practitioner's setting for clinical practice. The course is prerequisite to the nursing 680 series courses. Traditional grading only. (Lecture-Discussion.)

### 530. Advanced Physical Assessment for Advanced Practice Nurses (2)

Prerequisites: Admission to the graduate nursing program or permission of the instructor. This core course is designed to provide through classroom instruction and experiences, advanced knowledge and diagnostic skill development in physical assessment of client soft encountered by the advanced practice nurse. The assessment role of the nurse is further expanded to include client education and the cooperative synthesis of wellness strategies to optimize health. This course is prerequisite to entry into the specialty specific content sequences of the advanced practice nurse specialist tracks. Traditional grading only. (Technical activity and laboratory 4 hours)

### 540. Health Care Economics, Policy, and Management for Advanced Practiced Nursing (2)

Prerequisites: Admission to the graduate nursing program or consent of instructor. This course examines the advanced practice nurse's relationship to policy formation, health care economics, and health care organizations. Analysis of the health care delivery system will include the increasing levels of public, governmental, and third party participation in policy formation. Emphasis of this course will be analysis of health policy and its effect on the practice environment. The course explores the issues of health care organization, health care financing, and delivery within integrated

care systems to include community and the organization of community based systems of care. Students are prepared to provide quality cost effective care, participate in the design and implementation of care in a variety of health systems, utilize computerized data bases, and assume a leadership role in managing human, fiscal, and physical health care resources. Included is the definition of primary health care by the World Health Organization which addresses the issues of poverty and public health, and the relationship of these issues to improving health care delivery and client outcomes. This course is prerequisite to the nursing 680 series courses. Traditional grading only. (Lecture-Discussion.)

### 550. Human Diversity and Psychosocial Issues in Health Care for Advanced Practice Nursing (2)

Prerequisites: Admission to the graduate nursing program or consent of instructor. This course focuses on the cultural sensitive nursing principles of advanced practice nursing, selected strategies, and negotiations with patients. An emphasis is placed on complex psychosocial assessment, interdisciplinary approaches and special populations. This course is prerequisite to the NRS 680 series course. Traditional grading only. (Lecture-Discussion.)

### 556A. Conditions of Learning and Instruction in Nursing (3)

A systematic study of theories of learning and instruction as they apply to patient and/or student teaching-learning situations. Content covered includes conditions of learning, models of instruction, transfer of learning, behavior modification techniques, variables influencing learning and instruction, and evaluation of instruction.

### 556B. Curriculum Development in Nursing (3)

A critical appraisal of patterns of nursing education as considered from the standpoint of the changing order. A systematic study of principles of curriculum development as they apply to different types of nursing programs. Focuses on the relationship between philosophy, objectives, the selection and organization of learning experiences and the evaluative process.

### 556L. Theoretical Concepts Laboratory of Nursing Education (1-4)

Instructional skills and the application of theories of learning and instruction to the practice and teaching of nursing within a supervised practice-teaching situation. Reference to ways teaching skills relate to broader educational issues such as teaching/learning theory. May be repeated for a maximum of 4 units.

### 557. Nursing Interaction with the Elderly (3)

Prerequisites: Graduate standing, consent of instructor. Study of the psycho-social development, needs and problems of the elderly and related nursing intervention.

### 559. Nursing Administration (3)

Theories, issues and application of techniques pertaining to management applicable to nurses in the clinical setting.

### 560. Professional Foundations of Theoretical and Professional Roles in Advanced Nursing Practice (2)

Prerequisites: Admission to graduate nursing program or permission of instructor. The study of theoretical framework and professional roles influencing advanced practice nursing. Specifically, content will address the dynamic nature of the profession and its roles. Student will review and analyze the major theoretical frameworks for advanced practice from nursing and related fields. They will be introduced to the changing nature of role ambiguity, role boundaries in addition to the need to work in a collaborative relationship with other health professionals. This course is prerequisite to the NRS 680 series courses. Traditional grading only. (Lecture-Discussion.)

### 590. Independent Study (1-3)

Prerequisite: Consent of a nursing faculty member. Independent research under the supervision of a nursing faculty member.

### 596. Research Methods in Nursing (3)

Prerequisites: Admission to graduate program in nursing or permission of instructor, upper division statistic course. The focus of this course is on the research process in nursing, including the use and testing of nursing theories, development of research proposals that includes conceptualization of the problem, literature search, study design, data collection, analysis and interpretation of findings. The legal and ethical aspects of research are stressed. This course is prerequisite to the nursing 680 series courses. Traditional grading only. (Lecture-Discussion.)

**599./499. Special Topics in Nursing (1-3)**

Prerequisite: Consent of instructor. Topics consistent with contemporary nursing or curricular trends will be announced each semester. Credit may be earned for course each time a new topic is offered.

**680A,B,C. Theories for Extended Nursing Practice (3,3,3)**

Prerequisites: A physical assessment course (including 60 hours laboratory practice), A/P 305. Normal and pathological conditions and the management theory base applicable for the advanced practice nurse in clinical areas of concentration. May be repeated for a maximum of 6 units in each suffix. Traditional grading only.

**680L. Clinical Studies in Nursing (3)**

A laboratory course offering clinical experience in selected settings to prepare the student for advanced nursing practice. May be repeated for credit with a change of topic. A maximum of nine units for degree credit. Credit/No Credit.

**682. Family Theories for Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate nursing program, NRS 510, 520, 530, 550, 560, 506. The primary focus of this course is diagnosis, treatment and management of common and pathological conditions by the family nurse practitioner. A management and family theory base applicable for the role of the family nurse practitioner is presented. Traditional grading only.

**682A. Family Clinical Studies for Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate nursing program, NRS 510, 520, 530, 540, 550, 560, 596; clinical pretest; co-requisite, NRS 682. This is the first of two courses designed to allow the student the opportunity to apply theoretical knowledge in supervised clinical practice in family practice. An emphasis is placed on socialization into the family nurse practitioner role. Clinical seminars assist the student to apply theoretical concepts and expand clinical knowledge. Credit/No Credit grading only. (Laboratory 9 hours.)

**682B. Family Clinical Studies for Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate nursing program, NRS 510, 520, 530, 540, 550, 560, 596; co-requisite: NRS 682. This is the second of two course designed to allow the student the opportunity to apply theoretical knowledge in supervised clinical practice in family practice. An emphasis is placed on socialization into the family nurse practitioner role. Clinical seminars assist the student to apply theoretical concepts and expand clinical knowledge. Credit/No Credit only. (Laboratory 9 hours.)

**683. Family Theories for Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate nursing program, NRS 510, 520, 530, 540, 550, 560, 596. The primary focus of this course is diagnosis, treatment and management of common and pathological conditions by the family nurse practitioner. A management and family theory base applicable for the role of the family nurse practitioner is presented. Traditional grading only.

**683A. Family Clinical Studies for Advanced Practice Nursing III (3)**

Prerequisites: Admission to graduate nursing program, NRS 510, 520, 530, 540, 550, 560, 596, clinical pretest; co-requisite: NRS 683. This is first of two courses designed to allow the student additional opportunity to apply theoretical knowledge in supervised clinical practice in family practice. An emphasis is placed on further socialization into the family nurse practitioner role. Clinical seminars assist the student to apply theoretical concepts and expand clinical knowledge. Traditional grading only. (Laboratory 9 hours.)

**683B. Family Clinical Studies for Advanced Practice Nursing IV (3)**

Prerequisites: Admission to graduate nursing program, NRS 510, 520, 530, 540, 550, 560, 596; co-requisite: NRS 683. This is second of two courses designed to allow the student additional opportunity to apply theoretical concepts and expand clinical knowledge. Traditional grading only. (Laboratory 9 hours.)

**684. Pediatric Theories for Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate nursing program and NRS 510, 520, 540, 550, 560, 596. This course presents the theory base for well child care applicable to the role of the pediatric nurse practitioner. Content focuses on preventive health care and well child management of children from infancy through adolescence. The specific topics covered are well child, anticipatory guidance, family theory, child and family response to stress, childhood maltreatment, violence and substance abuse, professional issues and related research. Traditional grading only.

**684A. Pediatric Clinical Studies for Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate program and NRS 510, 520, 530, 540, 550, 560, 596; co-requisite: NRS 684. This course is the first of two clinical laboratory components of the pediatric specialty program. The student has the opportunity to demonstrate the application of theory from concurrent course work. Clinical experiences are available which will allow the student to give preventive health care, to manage the well child and to manage common pediatric problems. Credit/No Credit grading only. (Laboratory 9 hours.)

**684B. Pediatric Clinical Studies for Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate program and NRS 510, 520, 530, 540, 550, 560, 596; co-requisite: NRS 684. This course is the second of two clinical laboratory components of the pediatric specialty program. The student has the opportunity to demonstrate the application of theory from concurrent course work. Clinical experiences are available which will allow the student to give preventive health care, to manage the well child, and to manage common pediatric problems. Credit/No Credit grading only. (Laboratory 9 hours.)

**685. Pediatric Theories for Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate nursing program and NRS 510, 520, 540, 550, 560, 596. The primary focus of this course, at the advanced level, is diagnosis, treatment and management of common pediatric condition/disorders by the pediatric nurse practitioner. The specific topics covered are the management of common pediatric dermatological, ENT, ophthalmic conditions, allergy, respiratory, gastrointestinal, genitourinary, cardiovascular, neurological/learning disorders, infectious diseases, hematological, congenital anomalies/genetic disorders, endocrine, orthopedic and sport injuries. Traditional grading only.

**685A. Pediatric Clinical Studies for Advanced Practice Nursing III (3)**

Prerequisites: Admission to graduate program and NRS 510, 520, 530, 540, 550, 560, 596; co-requisite: NRS 685. This is the first of two clinical laboratory courses of the pediatric nurse practitioner program that provides experience for the management of common pediatric health care problems. The student has the opportunity to demonstrate, at an advanced level, the application of theory from previous and concurrent course work that deals with the assessment, diagnosis, treatment, management and prevention of common pediatric health care problems in the clinical setting. Traditional grading only. (Laboratory 9 hours.)

**685B. Pediatric Clinical Studies for Advanced Practice Nursing IV (3)**

Prerequisites: Admission to graduate program and NRS 510, 520, 530, 540, 550, 560, 596; co-requisite: NRS 685. This is the second of two clinical laboratory courses of the pediatric nurse practitioner program that provides experience for the management of common pediatric health care problems. The student has the opportunity to demonstrate, at an advanced level, the application of theory from previous and concurrent course work that deals with the assessment, diagnosis, treatment, management and prevention of common pediatric health care problems in the clinical setting. Traditional grading only. (Laboratory 9 hours.)

**686. Adult/Geriatric Theories for Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate nursing program and NRSRG 510, 520, 540, 550, 560, 596, clinical pretest. This course presents the epidemiology, etiology, differential diagnosis, management and prevention of selected health problems of the adult/geriatric patient in primary, secondary, and tertiary settings and the role of the nurse practitioner in these settings. The course provides information regarding normal and pathological conditions and management theory base applicable for the role of the advanced practice nurse providing care to the adult in a changing environment of healthcare. Traditional grading only.

**686A. Adult/Geriatric Clinical Studies in Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560, 596, a clinical pretest; co-requisite: NRSRG 686. This course is the first of two designed to allow the adult/geriatric nurse practitioner student the opportunity to apply theoretical knowledge in supervised clinical practice with adult and geriatric patients. An emphasis is placed on beginning socialization into the nurse practitioner role. Credit/No Credit grading only. (Laboratory 9 hours.)

**686B. Adult/Geriatric Clinical Studies in Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560, 596; a clinical pretest; co-requisite NRSRG 686. This course is the second of two designed to allow the adult/geriatric nurse practitioner student the opportunity to apply theoretical knowledge in supervised clinical practice with adult and geriatric patients. An emphasis is placed on beginning socialization into the nurse practitioner role. Credit/No Credit grading only. (Laboratory 9 hours.)

**687. Adult/Geriatric Theories for Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate nursing program and NRSRG 510, 520, 540, 550, 560, 596, a clinical pretest. This course presents continued epidemiology, etiology, differential diagnosis and management and prevention of additional selected health problems of the adult/geriatric patient in primary, secondary, and tertiary settings and a further delineation of the role of the nurse practitioner in these settings. The course provides information regarding normal and pathological conditions and the management theory base applicable for the role of the advanced practice nurse providing care to the adult in a changing environment of health care. Traditional grading only.

**687A. Adult/Geriatric Clinical Studies in Advanced Practice Nursing III (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560, 596, a clinical pretest; co-requisite: NRSRG 687. This clinical course is the first of two designed to allow the adult/geriatric nurse practitioner student the opportunity to apply theoretical knowledge in supervised clinical practice with adult and geriatric patients. An emphasis is placed on continuing to socialize into the nurse practitioner role. Traditional grading only. (Laboratory 9 hours.)

**687B. Adult/Geriatric Clinical Studies in Advanced Practice Nursing IV (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560, 596, a clinical pretest; co-requisite: NRSRG 687. This clinical course is the second of two designed to allow the adult/geriatric nurse practitioner student the opportunity to apply theoretical knowledge in supervised clinical practice with adult and geriatric patients. An emphasis is placed on continuing to socialize into the nurse practitioner role. Traditional grading only. (Laboratory 9 hours.)

**688. Psychiatric/Mental Health Theories for Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate nursing program and NRSRG 510, 520, 540, 550, 560, 596. Study of the pathology, diagnostic methods, indications for referral, and management for nurse practitioner students of the medical, psychological, and social problems of clients of psychiatric facilities and community mental health agencies. Traditional grading only.

**688A. Psychiatric – Mental Health Clinical Studies for Advanced Practice Nursing I (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560, 596; Co-requisite: NRSRG 688. This course is the first of two supervised clinical practicums for nurse practitioner students which is focused on the application of mental health concepts. Theories from the prerequisite and concurrent nursing theory courses are applied and tested in the clinical setting. Credit/No Credit only. (Laboratory 9 hours)

**688B Psychiatric – Mental Health Clinical Studies for Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560; Co-requisite: NRSRG 688. This course is the second of two supervised clinical practicums for nurse practitioner students which is focused on the application of mental health concepts. Theories from the prerequisite and concurrent nursing theory courses are applied and tested in the clinical setting. Credit/No Credit grading only. (Laboratory 9 hours.)

**689. Psychiatric – Mental Health Theories for Advanced Practice Nursing II (3)**

Prerequisites: Admission to graduate nursing program and NRSRG 510, 520, 530, 540, 550, 560, 596. This course is the continued study at an advanced level of the pathology, diagnostic methods, indications for referral, and management for nurse practitioner students of the medical, psychological, and social problems of client of psychiatric facilities and community mental health agencies. Traditional grading only.

**689A. Psychiatric – Mental Health Clinical Studies for Advanced Practice Nursing III (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560, 596; co-requisite: NRSRG 689. This course is the first of two supervised clinical practicums for nurse practitioner students focused on the application of complex mental health concepts. Theories from the prerequisite and concurrent nursing theory courses are applied and tested in the clinical setting. Traditional grading only. (Laboratory 9 hours.)

**689B. Psychiatric – Mental Health Clinical Studies for Advanced Practice Nursing IV (3)**

Prerequisites: Admission to graduate program and NRSRG 510, 520, 530, 540, 550, 560, 596; co-requisite: NRSRG 689. This course is the second of two supervised clinical practicums for nurse practitioner students focused on the application of complex mental health concepts. Theories from the prerequisite and concurrent nursing theory courses are applied and tested in the clinical setting. Traditional grading only. (Laboratory 9 hours.)

**695. Professional Literature (3)**

Prerequisites: NRSRG 596, Consent of graduate and program advisors, advancement to candidacy. Critical analysis and synthesis by comparative review of professional literature in nursing practice, theory, and research. Not open to students taking Nursing 698. Traditional grading only.

**698. Thesis (1-4)**

Prerequisites: Admission to Graduate Nursing Program, advancement to candidacy, NRSRG 596, and consent of department graduate advisor. Planning, preparation and completion of a thesis in clinical nursing.

# OCEAN STUDIES INSTITUTE

*University Academic Programs*

Associate Vice President, Academic Affairs and  
Dean, University Academic Programs

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Director

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The Ocean Studies Institute was created in 1972 to coordinate teaching, research and community service in ocean studies on member campuses. Members include Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, and San Marcos. The Institute does not offer degrees, but it serves as an administrative liaison to facilitate degree programs offered on member campuses.

The Institute operates a 76-foot research vessel for teaching and research purposes, obtains research grants and contracts, performs research, and is responsible for curriculum planning and facilities acquisition. Presently the Institute serves over 35 departments across eight campuses.

The courses and research in which the Institute is active reflect the broad applied approach of interdisciplinary, mission-oriented projects in harbors and the coastal zone.

## Courses (OSS)

### Upper Division

#### 460. Oceanographic Techniques (3)

Prerequisites: Consent of instructor. An interdisciplinary survey of techniques and procedures used in collection of oceanographic data in the fields of biology, chemistry, geology, and physics. Students will become familiar with oceanographic equipment and methodologies which will emphasize on-the-job training aboard ship and in the laboratory. (Lecture: 1 hour; Laboratory and Field: 6 hours; class meets one day per week). Traditional grading only.

#### 490. Special Topics in Ocean Studies (1-3)

Prerequisite: Consent of instructor. Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSS 490 and/or 490L limited to six units. Topics to be announced in the Schedule of Classes. (Lecture.)

#### 490L. Laboratory in Special Topics in Ocean Studies (1-3)

Prerequisite: Consent of instructor. Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSS 490 and/or 490L limited to six units. Topics to be announced in the Schedule of Classes. (Laboratory 3-9 hours.)

#### 496. Special Problems in Ocean Studies (1-3)

Prerequisite: Consent of director. Research in a specific aspect of biology, water quality, geology, microbiology, ocean engineering. This course is designed to allow students working on specific topics access to additional material through utilization of the research vessel *Yellowfin*. Individuals using the vessel would do so as a guest of the crew's leader on a regularly scheduled trip. May be repeated to a maximum of three units.

# OCCUPATIONAL STUDIES

*College of Health and Human Services*

Chair

Paul A. Bott

Department Office

Engineering Technology Building, Room 233

Telephone

(562) 985-5633

Faculty

Professors

Leonard O. Albright

Robert Behm

Paul A. Bott

Donald Lauda

Richard L. Resurreccion

William V. Wittich

Assistant Professor

Colleen Hill

Department Secretary

Anne Bykerk-Plante

Credential Analyst

Anne Aspiras

Students desiring information should contact the department office for referral to one of the faculty advisors, Credential Analyst, Graduate Advisor, Undergraduate Advisor, or Designated Subjects Credential Coordinator.

Occupational Studies is designed to enable persons to gain the competencies requisite for successful employment in secondary schools, community colleges and adult programs as teachers, coordinators and supervisors of vocational, occupational, career preparation, and related human resource development programs.

## Designated Subjects Credential (code 300)

This program of instruction identifies and develops on an individualized basis the teaching competencies requisite for successful employment in designated subjects programs, as required by the California Commission on Teacher Credentialing.

## Bachelor of Science in Occupational Studies

California State University, Long Beach (CSULB) offers a Bachelor of Science Degree in Occupational Studies. This degree is targeted primarily towards employed persons serving in business, industry, labor, government and occupational education teachers and counselors serving in the private and non-profit sectors. The BS program will help these people grow in level of professional participation in their various occupational subject areas, knowledge of the respective training and development methods, and problems of work-life education in an information and technological society. The primary goal of the program is to improve the competencies of human resource development personnel to instruct in technical subjects, to design curriculum, to advise learners, and to evaluate curriculum and learner performance.

The Bachelor of Science degree requires 128 units of college work. The major consists of 69 to 70 units comprised of (a) a 24 unit core, (b) foundation and occupational competency coursework (12 to 20 units depending on student's option), and (c) options of 26 to 34 units. The 24 units of required courses that constitute the core are: OCST 410, 411, 412, 418, 420, 456, and 485; and ENGL 317. The foundation and occupational competency courses, generally lower division, are selected from (a) the social and behavioral sciences, (b) occupationally based technical courses, or (c) a combination of both. Nine units of occupational competence may be granted for prior learning.

### Option in Bilingual Occupational Instruction (code 3-1051) (128 units)

The bilingual occupational instruction option prepares students for human resource development positions as curriculum development and instruction specialists in the bilingual vocational training (BVT) method developed in research sponsored by the Office of Bilingual Education and Minority Language Affairs, United States Department of Education. Graduates of this option are employed as teachers, curriculum development specialists, and job developers in private occupational education institutions, community based organizations, and private industry. It is highly recommended that those selecting this option possess or develop an elementary speaking and reading proficiency in a second language. The required courses for this option are: OCST 422, 461, 462, 480; EDSE 435, 436; EDP 454, 485; and LING 325, 486. This option requires 16 units of foundation and occupational competency coursework.

### Option in Corporate Training and Development (code 3-1052) (128 units)

The option in corporate training and development prepares students for human resource development positions as training specialists, training materials developers, and training systems analysts. These specialists serve as support personnel assisting in the analysis and interpretation of job analysis data and translating these data into training and development pro-

grams. They assist technical content experts in the design and delivery of instruction. The required courses for this option are: OCST 388I or approved alternative OCST 417I; OCST 421 or approved alternative ET 202; OCST 435; OCST 461 or approved alternative OCST 462; OCST 470, 480, 490; ET 307, 309. This option requires 17 units of foundation and occupational competency coursework.

### Option in Research and Evaluation (code 3-1053) (128 units)

The option in research and evaluation prepares students for careers as labor market analysts, training evaluation specialists, and evaluation research specialists in public postsecondary education, government employment development agencies, and private industry. These specialists develop evaluation guidelines, evaluate training and development programs including maintaining task lists and training program descriptions, determine the effectiveness and currency of instructional content and methods, and assess trainee performance in training and on-the-job. The required courses for this option are: OCST 421, 422, 480, 483, 490; EDP 400, 419, 420; ET 205, 205L. This option requires 20 units of foundation and occupational competency coursework.

### Option in Transition Services (code 3-1054) (128 units)

The option in transition services prepares students for professional positions in secondary and postsecondary occupational special education, rehabilitative services, and related adult services. Graduates develop competencies as educational and human resource development specialists in transition services for individuals with disabilities. The curriculum for this option was developed under research sponsored by the Office of Special Education and Rehabilitation Services, United States Department of Education. The required courses for this option are: OCST 260, 360, 422, 460, 480, 497, 499; EDP 350, 405; OCST 461 or OCST 462 or EDP 454; REC 416 or an approved alternative from one of the following: FCS 413, FCS 418, EDP 430, SW 350, SW 351, or CD 361. This option requires 12 units of foundation and occupational competency coursework.

### Bachelor of Vocational Education (code 4-1027) (124 units)

The Bachelor of Vocational Education (BVE) degree is designed for teachers in employment-related educational programs that meet the requirements of the State Education Code, Sections 89220, 89221, 89222 and 89223. Specifically, candidates for the BVE degree must:

1. Teach or have taught at least 1,620 student contact hours in a full-time position or 1,000 student contact hours in a part-time position in an approved occupational education curriculum.
2. Hold a teaching credential authorizing service as a vocational teacher (community college instructors affected by AB 1725 are exempt from this requirement; however, they must demonstrate instructional competencies by completing prescribed teacher certification courses); and
3. Have worked at least seven years full-time or the equivalent in the field(s) named on the credential.

BVE candidates, upon completion of these requirements and in consultation with their adviser, submit an application with documentation verifying occupational, managerial, teaching, and professional development experience. Upon approval of the application, the California State Board of Examiners for Vocational Teachers recommends advancement to BVE candidacy.

Advancement to candidacy includes the preparation of an individualized program emphasizing three areas of occupational studies: 1) the relation of education and work, 2) teaching learners with special needs, and 3) research and evaluation.

#### Requirements

The BVE degree requires 124 units including:

1. 51 units of General Education, and
2. 40 units (minimum) in major.

Additional information concerning the BVE degree may be obtained from a department undergraduate adviser.

### Master of Arts in Occupational Studies (5-1050)

The Master of Arts degree in Occupational Studies is available to qualified students preparing for professional careers in the fields of career, occupational, and vocational education. A major thrust is the development of qualified leadership personnel to serve occupational education programs in public and private education as well as related human resource development programs in California and the nation.

The graduate program in occupational studies consists of three parts. The first part is a 15 unit set of required or core coursework in the following areas:

History and foundations of occupational education (OCST 501)

Leadership development (OCST 502)

Management skills (OCST 503)

Research and evaluation (OCST 505 and 696)

The second part is an area of specialization which is selected by the student in consultation with an advisor. Examples of program specialization areas follow:

Administrative studies – for persons interested in administration of occupational education in public or private sectors.

Special populations – for persons planning to work with learners who are culturally different, handicapped, and/or limited English proficient in occupational education settings.

Corporate training and development – for persons interested in development, implementation, and evaluation of training programs in a variety of business or industrial settings.

Career guidance – for persons interested in counseling and guidance services in education and employment settings.

Research and evaluation – for persons planning to work in research and evaluation units in public and private agencies or to pursue advanced graduate studies.

Curriculum and instruction – for persons interested in developing occupational education courses and programs in public and proprietary institutions.

The third program part is the decision to conduct a major research study (the thesis option) or to complete a comprehensive examination near the end of the Master's program.

Each applicant must submit a copy of transcripts for all college work to the program office, in addition to the official copies required by the Office of Admissions and Records.

#### Prerequisites

1. A bachelor's degree in vocational education, with a minimum of 24 upper division units in vocational education comparable to courses offered at this University; or
2. A bachelor's degree with a minimum of 24 upper division units comparable to courses offered at this University in the discipline in which the degree was awarded.

#### Advancement to Candidacy

1. Satisfaction of the general University requirements for advancement to candidacy;
2. Completion of all core courses;
3. Maintenance of B average (3.0 GPA) in all work completed in graduate program;
4. Approval of Occupational Studies Graduate faculty and Director of Graduate Studies and Research, College of Health and Human Services.

#### Requirements

1. Completion of OCST 501, 502, 503, 505, 696;
2. Completion of 30 units of approved upper division and graduate courses and a thesis (OCST 698) and an oral presentation of the thesis approved by Department Graduate Committee; or 36 units of approved upper division and graduate courses and a written comprehensive examination.

#### Courses (OCST)

##### X260. Techniques of Job Coaching (3)

This course is designed to equip students with hands-on techniques and strategies to facilitate the transition of individuals with special needs in employment settings. Traditional grading only. (Lecture/Activity 3 hours.)

##### 300. Orientation to Occupational Education (3)

Prerequisites: Qualified for admission to the Bachelor of Vocational Education (BVE) degree program under California Education Code, Sections 89220, 89221, 89222, and 89223. Philosophy and development of comprehensive employment-related education in California, its present place and functions in the total system of education. Completion of "Swan Bill" application and individualized program of studies. Traditional grading only.

##### 360. Foundation of Transition Services (3)

Prerequisites: OCST 260 or instructor consent. An overview of the models, personnel roles, practices, and delivery systems of services for youth and adults with special needs in their transition from school to work and independent living. Traditional grading only.

##### 388I. Technological Literacy (3)

Prerequisites: ENGL 100 and upper division status. Exploring technological concepts as they impact on humans, society and culture. Emphasis will be placed on technology as a human adaptive system and its relationship to sociological and ideological systems. Traditional grading only. (Discussion 3 hours.)

##### 401A. The Vocational Legacy (1)

Study of the social, philosophic, economic, and political factors that have affected occupational education from 1900 to the present.

##### 401B. The Publics of Occupational Education (1)

Identification and discussion of the characteristics of the people served by occupational education. Instructional strategies are designed for dealing with each of the various publics.

##### 401C. Program Elements (1)

Study of the relationship of occupational programs to other segments and levels of education. Particular emphasis is placed on the design of instructional facilities, legal implications, and the responsibilities of occupational teachers regarding safety in the classroom.

##### \*402A. Needs Assessment (1)

Techniques of occupational and task analysis, community surveys, and the use of subject matter advisory committees in curriculum development of occupational education.

##### \*402B. Identifying Curriculum Content (1)

Identification and development of specific units of instruction for occupational subjects.

##### \*402C. Developing Training Objectives (1)

Identification and development of performance objectives for occupational subjects.

##### \*404. Techniques of Occupational and Adult Instruction (3)

The development of the skills and knowledge necessary to teach occupational subjects. Emphasis is placed on instructional techniques specific to occupational education.

##### \*405. Instruction and Evaluation in Occupational Education (3)

Prerequisite: OCST 404. The emphasis in this course is in two areas: the measurement of student growth and the effect of the occupational teacher in the classroom. Classroom laboratory visits are a required part of the course.

##### \*410. Curriculum Development for Designated Subjects (3)

Prerequisites: Enrollment in Designated Subjects Credential Program, BS, BVE or MA degree programs. Techniques of curriculum planning and development in occupational and adult education. Components include needs assessment strategies, course content, performance objectives, development of specific units of instruction, learner characteristics, and learning theories applicable to curriculum development.

##### \*411. Instruction and Evaluation for Designated Subjects Teachers (3)

Prerequisites: OCST 410 or permission of instructor. Enrollment in Designated Subjects Credential Program, BS, BVE or MA degree. Techniques and evaluation of instruction in occupational and adult education. Components include motivation, presentation, application, and evaluation techniques necessary to teach all students in occupational and adult education.

##### \*412. Advanced Program Development and Instruction (3)

Prerequisites-Enrollment in B.S., B.V.E., M.A. or Designated Subjects Credential Program. Advanced techniques of teaching designated subjects. Components include curriculum, instruction, communication, program evaluation, classroom management, technology in the classroom, and the latest knowledge and practices for teaching all students in occupational and adult education and for effecting their transition from school to work. Traditional grading only.

##### \*413. Foundations of Designated Subjects Credential Programs (3)

Prerequisites-Enrollment in B.S., B.V.E., M.A. or Designated Subjects Credential Program. An examination of the foundations and principles of occupational education with a specific focus on programs subsumed under designated subjects credentials. Traditional grading only.

##### 417I. Technology, Ethics, and Society (3)

This course is designed to provide students with a framework for understanding the ways in which human societies transform themselves through technological innovation. New technologies enlarge society's options, thereby forcing us to consider ethical questions concerning the social effects of technological change.

##### \*418. The Marketplace for Occupational Education (3)

Studies of public and private agencies that serve persons who have the need to identify, prepare for and use occupational education; where such persons are placed, what they do, their successes and failures, and future trends and needs.



\*420. Evaluation of Occupational Education Programs (3)  
Analysis of evaluation approaches applicable to vocational education programs and systems. The major phases and steps involved in organizing, conducting and reporting an evaluation will be examined. Students will be exposed to a variety of program evaluation systems currently in operation in vocational education and will design a functional evaluation plan for a program in their respective professional fields.

\*421. Research Design for Occupational Education (3)  
Study of research designs applicable in occupational education. Calculation of basic statistics, development of research proposals, use of minicomputers in occupational research.

\*422. Grants and Contract Writing in Occupational Education (3)  
Study of process of contract and grant proposal writing for public- and private-funding agencies, including budget preparation, for occupational education.

\*435. Principles of Adult Education (3)  
Instruction on the scope and function of adult education including the local, state, and federal levels. Principles and practices of adult education, philosophical perspectives, and professional issues are discussed. Traditional grading only.

\*456. Attitude Awareness for Occupational Education Teachers (3)  
Introduction to and application of the principles of communication, human relations, understanding other people, attitude recognition and development, and mental steps to motivation. Contributions of the behavioral sciences to more effective teaching in a vocational setting will be examined and plans for their implementation will be prepared.

\*460. Occupational Education for Learners with Special Needs (3)  
Identification, assessment and instructional development strategies for students in vocational education with diverse needs.

\*461. Occupational Education for Teachers of Economically and Culturally Diverse Students (3)  
Techniques for teaching disadvantaged and culturally diverse learners in occupational education. Emphasis on methods, motivation, counseling and instructional organization.

\*462. Occupational Education for Teachers of Linguistically Diverse Students (3)  
A convergence of bilingual and vocational education principles, leading to an understanding and application of strategies suitable for teaching occupational skills to linguistically diverse students. Bilingual proficiency is not required.

463. Job Development (3)  
Prerequisites: OCST 260 or consent of instructor. An overview of techniques and strategies needed to successfully develop employment opportunities for people with special needs. Traditional grading only.

\*470. Seminar in Occupational Education (3)  
Study of the major problems and issues confronting the educator and practitioner.

\*480. Internship in Occupational Education (1-4)  
Internship in community or school employment and training development programs which involve instruction, administration and research within the occupational education spectrum.

\*483. Senior Thesis or Project (1-3)  
Identification of, planning, preparation and completion of a project to solve or research problems particular to a business, educational or industrial setting. Written report required.

\*485. Identifying Management Competencies (3)  
A lecture and discussion course focusing on the identification of competencies requisite for effective management of occupational education programs. These competencies are categorized in three domains, including, but not limited to: the interrelationships of concepts, things, and people.

\*490. Independent Study in Occupational Education (1-3)  
Individual research and study under the direction of a faculty member in areas not an integral part of any regular course. Written report is required. May be repeated to a maximum of three units.

\*497. Practicum in Occupational Education (1-6)  
Action-oriented organized learning directed toward identifying the major problems and issues confronting occupational education and suggesting practical solutions for the practitioner.

\*499. Special Topics in Occupational Education (1-3)  
Topics of current interest in occupational education will be selected for intensive group study. Topics will be announced in the Schedule of Classes. May be repeated to a maximum of six units.

## Graduate Division

501. Foundations of Occupational Education (3)  
Examination of history and development of occupational education in the United States. Particular attention is devoted to the multiple purposes and principles of occupational education, key federal legislation and contemporary issues and developments affecting occupational education.

502. Administrative Leadership in Occupational Education (3)  
Prerequisites: OCST 485 or equivalent. Concepts and techniques of personal and professional administrative leadership.

503. Management of Occupational Education Programs (3)  
Advanced principles and procedures of management emphasizing local and county operations, and evaluation of occupational education programs.

504. The Environments of Occupational Education (3)  
Interrelationships among occupational education, business, industry, government and society.

505. Critical Analysis of Issues and Problems in Occupational Education (3)  
In-depth analysis of major research reports and reviews of historical and contemporary issues and problems in occupational education. Particular attention will be given to the various research methodologies used to examine issues and problems in the field.

508. Transition Services for Youth and Adults With Disabilities (3)  
Examination of various models for and approaches to providing education and employment related services to disabled persons in transition from school to adult life. Traditional grading only.

591. Corporate Training Development (3)  
The selection and organization of corporate training curricula and development of courses of study to be used in public and private Occupational Education programs.

593. Corporate Training Methods (3)  
Teaching techniques, philosophy, organization and planning in corporate training programs, public and private education.

650. Graduate Seminar (3)  
Prerequisite: Consent of instructor. Study of selected topics in Occupational Education, including important legislation, industrial innovations, technical change and contemporary problems. Topics will be announced in Schedule of Classes. May be repeated for a maximum of six units.

696. Research Methods in Occupational Education (3)  
Prerequisites: OCST 421 or equivalent and OCST 505. Selecting, defining and presenting methods of research demonstration of research theory to problem solution.

697. Directed Studies in Occupational Education (1-3)  
Prerequisite: Advancement to candidacy. Research in an area of specialization under the direction of a faculty member.

698. Thesis (1-4)  
Prerequisite: Advancement to candidacy. Planning preparation and completion of a thesis related to the occupational education field.



# ODYSSEY THEME YEAR PROJECT

## Odyssey 1998-1999

### The Self and Its Sources: Individuals and Community

#### Odyssey Theme Year Project

During the 1996-97 academic year, CSULB inaugurated the first in a series of theme years. Each theme year involves the campus and the community in a year-long series of major speakers, video conferences, performances, films, events, field trips, and classes (across campus and in the community) focused on a single intellectual issue of importance to our time.

The name "Odyssey" was chosen as the title for the theme year project because of its identification with Homer's epic tale of Odysseus. This mythical Greek hero's years of wandering have come to symbolize a voyage of discovery and adventure. Each year CSULB students will have the unique opportunity to engage in their own "intellectual" voyage of discovery and adventure by taking courses which will integrate in- and out-of-classroom experiences as well as connecting the course content among their classes. For example, students might well be writing in their composition course about issues being discussed in their history, geography, anthropology, art, geology, health, astronomy, biology, or economics course while also attending films, meeting major opinion makers and researchers, doing research on the internet, and participating in video links with other students. Some students might choose to apply their courses to an interdisciplinary certificate program.

Odyssey 1996-97: The City was the first thematic year and was devoted to exploration of The City in southern California, America and the globe at the turn of the millennium. Fall 1996 focused on Southern California, New York, Seattle, Chicago and Miami and spring 1997 on Tokyo, Mexico City, Berlin, and London.

During Odyssey 1997-98: The Earth—Origins, Evolution, and The Search for Meaning, students explored issues from the formation of our universe to our innate need to explain and understand the meaning of the human experience in relationship to natural phenomena and new scientific discoveries. During the year, students considered our home the earth: biological evolution, including the evolution of humans from their predecessors, issues related to the interaction of humans with their environment as well as how they interpret that environment, health and disease, philosophical issues, and the physical environment.

The odyssey will continue in 1998-99 with The Self and Its Sources: Individuals and Community. The project's thematic focus on the self seeks to find connections from numerous viewpoints and disciplines and relate them to the individual self and the relationship of that self to society. During the year, we will explore issues concerning identity, memory, mind, consciousness, brain and body. Concepts of self—from the political to the historical, from the economic to the religious, from the inner to the scientific—will be studied. Throughout the year, self-expression in the arts and literature, the artist and social consciousness, cross-cultural conceptions of the self, the social and psychological dimensions of identity, the public self

and issues of celebrity, and the implications of the biotechnology revolution will inform the discussion.

These topics will be explored through:

- An interdisciplinary General Education course (University 300I and 301I) on the topic featuring CSULB guest experts, guest performers/speakers, and creative collaborations;
- An integration of the curriculum in other participating university courses (e.g., writing, history, psychology, dance, philosophy, art, women's studies) on issues relating to the self;
- Invited guest speakers like Mary Ann Glendon, Robert Bellah, Daniel Schacter, Daniel Dennett, Frans deWaal, and confirmed guest speakers/performers like Edward James Olmos, Bill Viola, Harry Shearer, Harry Hamlin, David Warner, Claire Porter, and Aimee Greenburg;
- A film series featuring films like Hamlet, Ballad of Gregorio Cortez (Edward James Olmos), Heaven and Earth, and The Watermelon Woman;
- Cal Rep Theatre—Among the Chosen Few;
- Exhibits—the Department of Design will co-host with the Smithsonian, Electrified, Amplified, Delfied (an historical exhibit with collateral events on the guitar) and the University Art Museum will feature a video installation by Eileen Cowin in the fall and a photo exhibit (Artists' Proof: Photographs by Sidney Felsen) in the spring; and throughout the year
- The Festival of the Five Senses will feature exhibits, performances, an interactive internet project, and other creative collaborations on Touch, Sight, Taste, Smell, and Sound.

Students in each of the participating courses will be encouraged/required to attend at least one theme-related activity each semester. In addition, faculty are creating new special topics courses and restructuring existing courses to provide opportunities for students to receive course credit for "creating" part of the Odyssey experience through the Festival of the Five Senses. Students will directly benefit by having the opportunity to choose from a variety of course-related experiences and cooperative learning activities.

Fall 1998 and Spring 1999

The Self and Its Sources: Individuals and Community

University 300I and University 301I

Topics:

- Different cultural conceptualizations of the self
- Historical perspectives on conceptualizations of the self
- Paradoxes in contemporary western conceptualizations of the self (unitary vs. divided, authentic vs. performing, self as individual vs. self as part of community, self as constant vs. self as dynamic, self as memory vs. self as imagining the future)
- Relations between gender, concept of self, and artistic creations (gender and the development of the concept of self, gender as a basis of different artistic creations, gender and different public perceptions of art)
- Relations between artistic creations and concepts of the self – relation between self and artistic creations (cultural differences, gender differences, historical differences, role of paradoxes in artistic creation, relation between artist and audience)
- Technology, art, and the self (technology as an extension of the creative self, technology as damaging the creative self)

Other Courses for Fall 1998 and Spring 1999 with Theme-Year Content

A/P 107†	Human Biology
A/P 208	Human Anatomy
A/P 308I†	Human Body and Mind
A/ST 360	Studies in Asian American Literature
AIS 320	American Indian Art
ANTH 120†	Introduction to Cultural Anthropology
ANTH 150†	Elements of Human Integration
ANTH 311I†	Human Adventure
ANTH 315†*	Human Variation
ANTH 319	Human Growth and Development
ANTH 351	Sex Roles and Culture
ANTH 413	Language and Culture
ART 300	Art, Adolescence, and the Child
ART 301	Cross Cultural Perspectives in Art Education
ART 372	Anatomy for Artists
ART 383	Life Painting
ART 440	Art and Society
B/ST 325	Psychology of Minorities
B/ST 460	African Thought
C/LT 124†	Introduction to World Theatre and Drama
C/LT 320I†	Comic Spirit
C/LT 412I†	Art and Literature
CHLS 310	Chicano Thought
COMM 309	Language and Behavior
COMM 414	Communication in Families
COMM 441I†	Freedom of Communication
CRIM 404	Theories of Crime Causation, Prevention, and Control

CRIM 424	Management of Human Resources in Criminal Justice
CRIM 477	Correctional Counseling
DANC 110	Viewing Dance
DANC 279	Exploring Dance: The Language of Movement
DANC 373I†	Nonverbal Communication: Interaction of Mind and Body
DESN 370†	Design in Contemporary Society
DESN 499C	Smithsonian Guitar Exhibit
ED P 191†	Career and Personal Explorations
ED P 305	Educational Psychology
ED P 357†	Self-Management
ED P 432	Social and Cultural Diversity in Educational Settings
ENGL 205†	Introduction to Creative Writing: Fiction
ENGL 206†	Introduction to Creative Writing: Poetry
ENGL 300	Advanced Composition
ENGL 372I†	Wit and Humor in America
ENGL 385†	The Short Story
ENGL 386†	Poetry
ENGL 405	Creative Writing: Short Story
ENGL 406	Creative Writing: Poetry
ENGL 407	Creative Writing: Novel
FCS 312I†	Family and Personal Development
FCS 331A	Fundamentals of Human Nutrition
FCS 464	Sensory Analysis of Foods
FEA 302	Critical Study of Film
FEA 303	Film and Electronic Media Writing
FEA 310†	Film and Culture
FEA 318I†	Theory of Fiction and Film
FEA 404	Advanced Scriptwriting for Film and Media
FEA 408	Writing the Screenplay Adaptation
FEA 486I†	Alternative Media
FIN 300	Personal Finance
FREN 440	French Civilization
FREN 456	French Cinema
GEOG 120†*	Geography of Human Diversity in the US
GEOG 160†	Introduction to Human Geography
GERM 380I	Contemporary Germany, Society, and Culture
GERM 410†	German Civilization
HDEV 307I†	Human Development: Childhood through Adolescence
HDEV 357I†	Human Development: Adulthood through Aging
HDEV 400I†	Death and Dying
HDEV 401	Cultural Influences on Human Development
HDEV 402	Development of Thought: Structure, Process, & Cultural Influences Across the Life Span
HIST 308I†	Law and Civilization
HIST 402	Oral History Methods

HIST 408	The History of the Family	S W 331†	Human Behavior and Social Environment: Young Adulthood through Old Age
HIST 479	US Constitution		
HIST 480	Law and Fundamental Rights	SOC 142†	Social Trends and Problems
I/ST 491	Non-Violent Conflict Resolution	SOC 320	The Family
ITAL 454	Italian Cinema	SOC 325	Sociology of Women
KPE 157†	Fitness for Living	SOC 335†	Social Psychology
KPE 338†*	Women in Sport	SOC 346	Race, Gender, and Class
KPE 339†	Psychology of Sport Behavior and Athletic Performance	SOC 420	Social Stratification
		SOC 427	Social Order and Social Change
MKTG 490	Consumer Behavior	SPAN 428	Spanish Cinema
NRSG 307	Human Life Cycle	SPAN 430	Spanish Civilization
PHIL 100†	Introduction to Philosophy	W/ST 101†	Women and Their Bodies
PHIL 160†	Introductory Ethics	W/ST 314	Women's Lives
PHIL 305†	Philosophy in Literature	W/ST 315	Black Women in America
PHIL 354†	Feminism and Philosophy	W/ST 316	Women in the History of U.S. Film
PHIL 361	Art and Beauty	W/ST 318†*	U.S. Women of Color
PHIL 382	Theory of Knowledge	W/ST 405	Topics in Women's Oral History
PHIL 418	Existentialism	W/ST 420	Mothers and Daughters
PHIL 451†*	Liberty and Justice: Race, Ethnicity, and Gender in American Law	W/ST 430	Women and Violence
PHIL 483	Philosophical Psychology		
POSC 306	Contemporary Political Ideologies		
POSC 412†	Law and Social Change		
POSC 422	Public Opinion		
POSC 428	Political Behavior		
PSY 100†	General Psychology		
PSY 150	Personality and Social Behavior		
PSY 230	Critical Thinking		
PSY 300†	Mind Control or Freedom		
PSY 331	Sensation and Perception		
PSY 332	Cognition		
PSY 351†*	Social Psychology		
PSY 352	Psychology of Male Roles		
PSY 353	Humanistic Psychology		
PSY 354†	Psychology of Women		
PSY 356†	Personality		
PSY 359	Self-Observation and Self-Development		
PSY 370†	Abnormal Psychology		
PSY 375†	Community Psychology		
PSY 427	Human Factors		
R/ST 202†	Religion and Society		
R/ST 302†*	Religious and Social Ethical Dimensions of American Diversity		
R/ST 362†	Religion and Psychology		
R/ST 471†	Early Christianity and Society		
R/ST 485†	Contemporary Religious Thought		
R/ST 495	The Religious Personality		
REC 320†*	The Universality of Play		
RUSS 410†	Introduction to Russian Civilization		
S W 220†	Introduction to Social Welfare		
S W 330†	Human Behavior and Social Environment: Birth through Adolescence		

† General Education credit

\* Human Diversity credit

# PEACE STUDIES

*College of Liberal Arts*

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## Certificate Program in Peace Studies (code 1-6015)

The Certificate Program in Peace Studies is designed for students who are concerned about the issues of peace and justice in contemporary society. Students who take the courses within this certificate program will be developing skills to promote peace within their individual lives, families, communities, and social systems. They will develop the skills to define peace, to discover the processes that create peace among people on this planet, and to learn about past and present conflicts that inhibit the achievement of peace. Students will have the chance to explore the past and present channels and institutions that promote peace, as well as to create new sets of practical procedures for creating peace. Students will be empowered to believe that they can make a difference and will be encouraged in their activism. Students will have the opportunity to enlarge their understanding of global problems and their solutions. They will develop thinking and communication skills that could further peace within themselves, among humans, and with and for the Earth. Overall, students will be able to develop their understanding of human beings, the causes of their conflicts with each other and past, present, and future methods of resolving those conflicts. The certificate can be earned in conjunction with any baccalaureate or graduate degree, and should be especially useful for students preparing for degrees in teaching, business, government, and social service.

### Requirements

Twenty-four units in a program approved by the Director of Peace Studies, to include the following:

1. POSC 371 or I/ST 317I;
2. SW 491;
3. Fifteen units of electives, with at least one course from each of the following areas of concern:  
Group I: Social Science Concerns: ANTH 305I; ANTH 311I; ECON 300, 465; HDEV 401; MGMT 326, 458; POSC 220, 376, 486; PSY 300I, 350I, 351; I/ST 318I; SOC 335I, 350;  
Group II: Humanistic Concerns: ART 320; C/LT 450; PHIL 351, 360, 363; R/ST 383I; REC 320; RTVF 486I; SPAN 446, 490;  
Group III: Ethnic and Gender Concerns: AIS 335; ASAM 380; B/ST 304; CHLS 310; W/ST 401I, 430;
4. Peace Project: Three units of independent study, to be taken during the senior year with any Peace Studies faculty. Exceptions or substitutions may be made only with the approval of the Director of the Peace Studies Program. Students interested in the Peace Studies Program should contact the Director.

# PHILOSOPHY

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Associate Professors

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Steven Davis

William M. Johnson

Julie Van Camp

Assistant Professor

Lawrence Nolan

Undergraduate Advisor

G.A. Spangler

Graduate Advisor

Steven Davis

Department Secretary

## Bachelor of Arts in Philosophy (code 2-6807) (124 units)

The undergraduate Philosophy program challenges students to think rigorously about some of the most profound questions people consider: "What is most important in a human life?"; "What can I know?"; "Does God exist?"; "Do human beings have free will?"; "What are the guidelines for morality?"; "What is 'the soul', or 'the mind'?". No aspect of our lives is immune from philosophical scrutiny. These and other questions are raised in courses in special areas of philosophical concern such as logic, theory of knowledge, ethics, metaphysics, philosophy of religion, philosophy of science, and aesthetics. They are also raised in their historical context in courses which focus on great philosophers such as Plato, Aristotle, Kant, the great "Rationalists" and the great "Empiricists." In addition, the Philosophy curriculum encourages students to examine our contemporary situation (with such courses as Existentialism, Phenomenology, Philosophy of Language, and Political Philosophy), and to extend their thinking with the philosophies of other cultures (such as those of China, Japan, and India).

### Requirements

A minimum of 36 units in philosophy divided as follows:

Lower Division: A minimum of 12 units in philosophy, including PHIL 203, 204, 270 and at least one of PHIL 100, 160, 296.

Upper Division: A minimum of 24 units in philosophy, including PHIL 342, 363, 382; and at least 6 units chosen from 413, 414, 421, 422, 423, 424, 425; and at least 3 units chosen from 416, 417, 418, 419. The required 6 units remaining are to be selected from philosophy courses with the advice and consent of the student's departmental advisor.

### Pre-Law Emphasis

The department offers a Pre-law emphasis to provide undergraduates who are interested in a career in law with a course of study which emphasizes the development of skills in logical reasoning and argumentation, in linguistic and ethical analysis, and in clear and precise communication. Philosophy courses emphasize oral discussion and well-reasoned writing, both of which are essential for careers in law.

Law schools do not recommend any particular major for admission. The Law School Admission Services' Official Guide to U.S. Law Schools states: "While no single curricular path is the ideal preparation for law school, you should choose courses that sharpen analytical reasoning and writing skills. Law schools prefer students who can think, read, and write well, and who have some understanding of what shapes human experience."

On the Law School Admissions Test (LSAT), philosophy majors nationwide consistently achieve among the highest scores of all majors. Because admission to law school is highly competitive, there is no easy path to success. But good students who develop their critical skills in comprehension and analysis of complex material through the study of philosophy and a strong General Education program can position themselves to compete with the best.

The department has a resource file of "alumni advisers" now in law school or the legal profession who are available to consult informally with philosophy pre-law majors. The department also offers special courses in philosophy of law and a pre-law internship to introduce students to the legal world.

The pre-law emphasis requires the minimum 36 units required for the major. For the 6 undesignated units for the major, students are required to select at least two different courses, for a total of at least 6 units from PHIL 351, 352, 452I, and 496.

### Minor in Philosophy (code 0-6807)

The minor in philosophy provides a structured yet flexible program for the student majoring in a different discipline, but who is interested in philosophy either as an adjunct to the degree major or as a foundation for the student's future intellectual life.

#### Requirements

A minimum of 21 units in philosophy, of which at least 15 are upper division and include:

1. at least three units chosen from PHIL 342, 363, 382;
2. at least three units chosen from PHIL 413, 414, 421, 422, 423, 424, 425.
3. at least three units selected from the list given in 2, but in addition to the units required in 2, or selected from PHIL 416, 417, 418, 419.

### Master of Arts in Philosophy (code 5-6807)

#### Entrance Requirements

1. A bachelor's degree with a major in philosophy; or
2. A bachelor's degree with a minimum of 24 units of upper division philosophy courses. These courses must be comparable to those required for the B.A. in philosophy at this University. (Deficiencies will be determined by the Graduate Advisor after consultation with the student and after study of transcript records.) Students who do not meet these conditions may enter as provisional graduate students. Prospective students must see the Graduate Advisor for assessment and to plan a program. Departmental reader positions are sometimes available for qualified persons, as are Graduate Assistantships. A reader works closely with a member of the faculty, but is not responsible for instruction. Application for these positions can be made to the Chair of the Philosophy Department.

#### Advancement to Candidacy

1. The graduate student will be expected to demonstrate proficiency in the areas of epistemology, metaphysics, ethics and symbolic logic. (A grade of "B" in a semester course in each of these areas is a standard way of demonstrating proficiency.)
2. The graduate student who expects to become a candidate for the Master of Arts degree in Philosophy will be required to pass a Basic Qualifying Examination (BQE). Normally, the student must complete this examination early in graduate study.
3. Students should attempt to be Advanced upon completion of 6 units (preferably no more than 9 units) on the Program. The Writing Proficiency Exam (WPE) is required for Advancement.

4. Although there is no formal language requirement, the Philosophy Department may require the student to demonstrate a foreign language proficiency whenever at the department's discretion a language proficiency is appropriate to the area of study.
5. The student's graduate program must be approved by the Graduate Advisor, the Department Chair, and the College Associate Dean of Graduate Studies.

#### Requirements

1. The student's graduate program must consist of not less than 30 units of acceptable upper division and graduate courses, of which at least 24 units must be in philosophy. The remaining 6 units must be chosen in conference with the student's faculty advisor, and may be taken either in philosophy or in another field of study closely related to the candidate's educational objectives. The program must include a minimum of 18 units of graduate courses, with a minimum of 6 units from the 600 series. PHIL 697 and 698 may not count toward fulfillment of the 600 series minimum requirement.
2. A thesis and oral defense thereof or a set of three comprehensive examinations.

### Courses (PHIL)

#### Lower Division

##### 100. Introduction to Philosophy (3)

Scope, basic principles and a brief analysis of major problems of philosophy. (CAN PHIL 2)

##### 160. Introductory Ethics (3)

Concepts of right and wrong, good and bad, and the application of moral principles to problems of everyday life. (CAN PHIL 4)

##### 160L. Introduction to Ethics (3)

Co-requisite: Concurrent enrollment in PHIL 160L workshop-LECTURE: Concepts of right and wrong, good and bad, and the application of moral principles to problems of everyday life. WORKSHOP: Planned exercises, activities, and discussion designed to develop oral and written critical thinking and analytical skills to complement lectures. (Lecture 2 hours, Workshop 2 hours)

##### 170. Elementary Logic (3)

Elements of clear, straight, orderly and valid thought, including deductive and inductive reasoning and the accurate use of language. This course explores practical applications of logic. (CAN PHIL 6)

##### 203. History of Early Philosophy (3)

From Thales to the Renaissance including the systems of Socrates, Plato and Aristotle, and their influence on European philosophy through the medieval period.

##### 204. History of Modern Philosophy (3)

Western philosophy from the Renaissance to the 20th century, including the development of modern scientific processes, and the philosophical systems of empiricism, rationalism, idealism, etc.

##### 270. Symbolic Logic I (3)

Introduction to the formal techniques of evaluating arguments.

##### 296. Methods of Philosophical Study (3)

Prerequisite: Three units in Philosophy. This course prepares the student for philosophical study through education in its research methods and technical vocabulary, by instructing students how to write a successful philosophical essay, and explaining the scope and nature of some of the central issues of philosophy.



## Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

The philosophy upper division courses fall into several curricular sub-groups, as follows:

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### Early Philosophy

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- 306. Philosophies of China and Japan
- 307. Philosophies of India
- 421./521. Plato
- 422./522. Aristotle
- 490./590. Special Topics – Early Philosophy

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### Modern Tradition

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- 413./513. Continental Rationalism
- 414./514. British Empiricism
- 423./523. Kant
- 424./524. Hegel
- 425./525. Wittgenstein
- 491./591. Special Topics – The Modern Tradition

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### Twentieth Century Philosophy

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- 416./516. Pragmatism
- 417./517. Phenomenology
- 418./518. Existentialism
- 419./519. Analytic Philosophy
- 492./592. Special Topics – Twentieth Century Philosophy

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### Metaphysical Studies

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- 330. Philosophy of Religion
- 342. Metaphysics
- 483./583. Philosophical Psychology
- 493./593. Special Topics – Metaphysical Studies

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### Epistemological Studies

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- 381. Philosophy of Science
- 382. Theory of Knowledge
- 494./594. Special Topics – Epistemological Studies

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### Studies in Logic and Semantics

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- 470./570. Symbolic Logic II
- 484. Philosophy of Language

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### Studies in Value and Evaluation

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- 302I. Molecular Biology and Bioethics
- 305. Philosophy in Literature
- 351. Conflicts in Political Philosophy
- 352. Philosophy of Law
- 360. Ethics and Ecology
- 361. Philosophy of Art and Beauty
- 362I. Ethics and Computer Technology
- 363. Ethical Theory
- 451I. Liberty and Justice: Race, Ethnicity, and Gender in American Law
- 452I. Law, Philosophy, and the Humanities
- 455. Philosophical Perspectives on Sex and Love
- 489. Philosophy Internship/Pre-Law
- 496./596. Special Topics – Value and Evaluation

## Upper Division

302I. Molecular Biology and Bioethics (3)  
Prerequisites: ENGL 100 and upper division status. A systematic study of some of the profound advances in Molecular Biology and the main genetic and ethical issues these advances have raised. Same course as MICR 302I.

305. Philosophy in Literature (3)  
Intensive exploration of philosophical ideas in selected literature.

306. Philosophies of China and Japan (3)  
Historical and critical study of the philosophical thought of China and Japan.

307. Philosophies of India (3)  
Historical and critical survey with emphasis on basic ideas and traditions.

330. Philosophy of Religion (3)  
Nature and function of religion and of fundamental religious concepts and ideals.

342. Metaphysics (3)  
Prerequisite: 3 units of philosophy or consent of instructor. Problems of ontology and cosmology including such concepts as matter and energy, time and space, evolution and causality.

351. Political Philosophy (3)  
Analysis of fundamental political concepts such as the legitimacy of government, the relation of justice to coercive power, the morality of war, political obligation, and sovereignty; and/or a study of political ideologies such as socialism, classical liberalism, and conservatism.

352. Philosophy of Law (3)  
Study of the historical development of the philosophy of law and examination of the problems in the field ranging from general theories to analysis of fundamental legal concepts and normative issues.

354. Feminism and Philosophy (3)  
A study of feminist thinking and writing about philosophy with special emphasis on feminism's re-examination of the methodology and subject matter of classical and contemporary metaphysics, epistemology, philosophy of science, philosophy of language, political philosophy, ethics and aesthetics. Traditional grading only. Same course as W/ST 354.

360. Ethics and Ecology (3)  
Philosophical look at ecological problems. Survey of a number of ethical positions held by the great philosophers will be made and current ecological problems will be looked at from the points of view of the ethical positions studied. Not open to students with credit in E/ST 360.

361. Philosophy of Art and Beauty (3)  
Discussion of central problems in aesthetics, such as the possibility of objectivity in criticism, modern and traditional definitions of a work of art, truth and meaning in the fine arts, natural beauty and its relationship to excellence in music, architecture, etc.

362I. Ethics and Computer Technology (3)  
Prerequisite: ENGL 100. Speculative and critical examination of moral dilemmas, legal issues, and social values pertaining to new developments in computer technology, with particular emphasis on how computer technology informs, and is informed by, human relationships and human needs.

363. Ethical Theory (3)  
Prerequisite: 3 units of philosophy. In-depth discussion of such issues as obligation, responsibility, social justice, and personal ideals.

381. Philosophy of Science (3)  
Problems, methods and fundamental concepts of the sciences, including the relationships of the sciences to each other, to mathematics and to philosophy.

382. Theory of Knowledge (3)  
Prerequisite: Three units of philosophy. Investigation of such concepts as knowledge, belief, certainty. Critical study of theories concerning such issues as our knowledge of the external world, the past, other minds.

413./513. Continental Rationalism (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Descartes, Spinoza and Leibniz.

414./514. British Empiricism (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Locke, Berkeley, and Hume.

416./516. Pragmatism (3)

Prerequisite: Three units of philosophy or consent of instructor. Development of pragmatism as exemplified in the philosophies of Peirce, James, Dewey and Mead.

417./517. Phenomenology (3)

Prerequisites: Six units of philosophy or consent of instructor. Study of one of the major movements of contemporary philosophy. Themes treated may include knowledge, meaning, emotionality, embodiment, language, sociality, freedom and religion. Philosophers treated may include Husserl, Scheler, Heidegger, Merleau-Ponty and Ricoeur.

418./518. Existentialism (3)

Prerequisites: Three units of philosophy or consent of instructor. Intensive study of such issues as self-as-existence, freedom and responsibility in their ethical, religious, political and aesthetic dimensions. Philosophers treated may include Kierkegaard, Nietzsche, Marcel, Jaspers, Sartre and Camus.

419./519. Analytic Philosophy (3)

Prerequisites: Six units of philosophy to include PHIL 270, or consent of instructor. Critical analysis of major movements in the development of Anglo-American philosophy in the twentieth century, such as logical atomism, logical positivism and ordinary language philosophy. Intensive study of the contributions of such philosophers as Moore, Russell, Wittgenstein, Ayer, Ryle, Austin, Strawson, and Quine.

421./521. Plato (3)

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Plato's thought, based primarily on readings from his works.

422./522. Aristotle (3)

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Aristotle's thought, based primarily on readings from his works.

423./523. Kant (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Intensive study of Kant's Critique of Pure Reason.

424./524. Hegel (3)

Prerequisites: Six units of philosophy to include 204, or consent of instructor. Study of Hegel's Philosophy of Mind and Logic, and selected writings by Hegel and other topics.

425./525. Wittgenstein (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of the later philosophy of Wittgenstein, centering on Philosophical Investigations.

451I. Liberty and Justice: Race, Ethnicity, and Gender in American Law (3)

Prerequisites: ENGL 100; and 6 units of philosophy, or consent of instructor. Junior standing required; Senior standing recommended. Philosophical and legal analysis of how liberty and justice for different races, ethnic groups and genders have been treated in American law.

452I. Law, Philosophy, and the Humanities (3)

Prerequisites: ENGL 100, upper division status (junior standing required; senior standing recommended), six units of philosophy or consent of instructor. A comparison of how the law is considered by various disciplines; primary focus is on philosophical methods and legal methods, with some consideration of other humanities disciplines, such as literature.

455./555. Philosophical Perspectives on Sex and Love (3)

Prerequisite: 6 units of philosophy or consent of instructor. Philosophical perspectives on sex and love explores philosophical issues concerning sex, gender and love through readings and

discussion of classical and contemporary philosophical sources. Topics such as sexual perversion, romantic love and gender discrimination are examined. Same course as WST 455.

470./570. Symbolic Logic II (3)

Prerequisite: PHIL 270 or MATH 330 or consent of instructor. Philosophical consideration of deductive systems.

483./583. Philosophical Psychology (3)

Prerequisites: Six units of philosophy or consent of instructor. Nature of the mind. Psychological concepts such as intention, consciousness, action, motive, imagination, belief and purpose.

484./584. Philosophy of Language (3)

Prerequisites: Six units of philosophy or consent of instructor. Philosophical thought about language and meaning.

489. Philosophy Internship/Pre-Law (3-6)

Prerequisites: Consent of Philosophy Department Chair; completion of a minimum of 15 upper-division units required for the Philosophy major. Internship with private organizations and governmental agencies with law-related focus. A CSU Summer Internship in Washington, D.C. also meets this requirement. Work done under the joint supervision of the program sponsor and CSULB Philosophy Pre-Law Advisor. A mid-term and final report and internship conferences are required.

490./590. Special Topics: Early Philosophy (3)

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of figures, periods or issues in ancient or medieval philosophy. Specific issues, period or figures will be announced in the Schedule of Classes. Sample titles: Pre-Socratic Philosophy, Post-Aristotelian Philosophy, Medieval Philosophy. May be repeated for credit to a maximum of nine units with different topics.

491./591. Special Topics: Modern Tradition (3)

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of a significant philosopher or of some issue or theme of the modern (1600-1900) philosophical era. Specific titles will be announced in the Schedule of Classes. Sample titles: Hobbes, German Idealism, Nietzsche. May be repeated for credit to a maximum of nine units with different topics.

492./592. Special Topics: Twentieth Century Philosophy (3)

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of a significant philosopher or of a school or movement of the twentieth century. Specific title will be announced in the Schedule of Classes. Sample titles: Wittgenstein, Heidegger, Russell, Process Philosophy. May be repeated for credit to a maximum of nine units with different topics.

493./593. Special Topics: Metaphysical Studies (3)

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected metaphysical topic. Sample topics: Time, Personal Identity, Philosophical Theology, Philosophy of Action, Process Philosophy. Specific topic will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

494./594. Special Topics: Epistemological Studies (3)

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected epistemological topic. Sample topics: Philosophy of History, Philosophy of Perception. Specific topic will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

495./595. Special Topics: Logic and Semantics (3)

Prerequisites: Six units of philosophy or consent of the instructor. Seminar study of selected topic in logic or semantics. Sample topics: Probability, Necessary Truth, Paradoxes, Philosophy of Mathematics. Specific topic will be announced in the Schedule of Classes. Course may be repeated for a maximum of 9 units with different topics.

496./596. Special Topics: Value and Evaluation (3)

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected topic in value or evaluation. Sample topics: Theories of Value, Freedom and Determinism. Specific topics will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member. May be repeated to a maximum of six units.

## Graduate Division

### 513./413. Continental Rationalism (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Descartes, Spinoza and Leibniz. Traditional grading only.

### 514./414. British Empiricism (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Locke, Berkeley, and Hume. Traditional grading only.

### 516./416. Pragmatism (3)

Prerequisite: Three units of philosophy or consent of instructor. Development of pragmatism as exemplified in the philosophies of Peirce, James, Dewey and Mead. Traditional grading only.

### 517./417. Phenomenology (3)

Prerequisites: Six units of philosophy or consent of instructor. Study of one of the major movements of contemporary philosophy. Themes treated may include knowledge, meaning, emotionality, embodiment, language, sociality, freedom and religion. Philosophers treated may include Husserl, Scheler, Heidegger, Merleau-Ponty and Ricoeur. Traditional grading only.

### 518./418. Existentialism (3)

Prerequisites: Three units of philosophy or consent of instructor. Intensive study of such issues as self-as-existence, freedom and responsibility in their ethical, religious, political and aesthetic dimensions. Philosophers treated may include Kierkegaard, Nietzsche, Marcel, Jaspers, Sartre and Camus. Traditional grading only.

### 519./419. Analytic Philosophy (3)

Prerequisites: Six units of philosophy to include PHIL 270, or consent of instructor. Critical analysis of major movements in the development of Anglo-American philosophy in the twentieth century, such as logical atomism, logical positivism and ordinary language philosophy. Intensive study of the contributions of such philosophers as Moore, Russell, Wittgenstein, Ayer, Ryle, Austin, Strawson, and Quine. Traditional grading only.

### 521./421. Plato (3)

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Plato's thought, based primarily on readings from his works. Traditional grading only.

### 522./422. Aristotle (3)

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Aristotle's thought, based primarily on readings from his works. Traditional grading only.

### 523./423. Kant (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Intensive study of Kant's Critique of Pure Reason. Traditional grading only.

### 524./424. Hegel (3)

Prerequisites: Six units of philosophy to include 204, or consent of instructor. Study of Hegel's Philosophy of Mind and Logic, and selected writings by Hegel and other topics. Traditional grading only.

### 525./425. Wittgenstein (3)

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of the later philosophy of Wittgenstein, centering on Philosophical Investigations.

### 552. Advanced Studies in Law, Philosophy, and the Humanities (3)

Prerequisites: Graduate standing. Comparison of how the law is considered by various disciplines; primary focus is on philosophical methods and legal methods, with some consideration of other humanities disciplines, such as literature.

### 555./455. Philosophical Perspectives on Sex and Love (3)

Prerequisites: 6 units of philosophy or consent of instructor. Philosophical perspectives on sex and love explores philosophical issues concerning sex, gender and love through readings and discussion of classical and contemporary philosophical sources. Topics such as sexual perversion, romantic love and gender discrimination are examined.

### 570./470. Symbolic Logic II (3)

Prerequisite: PHIL 270 or MATH 330 or consent of instructor. Philosophical consideration of deductive systems. Traditional grading only.

### 571. Problems in Logic (3)

Prerequisite: One course in logic or consent of instructor. Selected issues in logic and language. Topics which might be offered include: paradoxes, the history of logic, analytic and synthetic truth, meaning, the limits of formal logic, induction and scientific method. Course may be repeated for a maximum of 6 units with different topics. Traditional grading only.

### 572. Problems in Theory of Value (3)

Examinations of selected problems in which evaluation provides a central topic of concern, such as those issues commonly discussed in aesthetics, political philosophy or the philosophy of law. Course may be repeated for a maximum of 6 units with different topics. Traditional grading only.

### 583./483. Philosophical Psychology (3)

Prerequisite: Six units of philosophy or consent of instructor. Nature of the mind. Psychological concepts such as intention, consciousness, action, motive, imagination, belief and purpose. Traditional grading only.

### 584./484. Philosophy of Language (3)

Prerequisites: Six units of philosophy or consent of instructor. Philosophical thought about language and meaning. Traditional grading only.

### 590./490. Special Topics Early Philosophy (3)

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of figures, periods or issues in ancient or medieval philosophy. Specific issues, period or figures will be announced in the Schedule of Classes. Sample titles: Pre-Socratic Philosophy, Post-Aristotelian Philosophy, Medieval Philosophy. May be repeated for credit to a maximum of nine units with different topics. Traditional grading only.

### 591./491. Special Topics Modern Tradition (3)

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of a significant philosopher, or of some issue or theme of the modern (1600-1900) philosophical era. Specific titles will be announced in the Schedule of Classes. Sample titles: Hobbes, German Idealism, Nietzsche. May be repeated for credit to a maximum of nine units with different topics. Traditional grading only.

### 592./492. Special Topics: Twentieth Century Philosophy (3)

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of a significant philosopher or of a school or movement of the twentieth century. Specific title will be announced in the Schedule of Classes. Sample titles: Wittgenstein, Heidegger, Russell, Process Philosophy. May be repeated for credit to a maximum of nine units with different topics. Traditional grading only.

### 593./493. Special Topics: Metaphysical Studies (3)

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected metaphysical topic. Sample topics: Time, Personal Identity, Philosophical Theology, Philosophy of Action, Process Philosophy. Specific topic will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics. Traditional grading only.

### 594./494. Special Topics: Epistemological Studies (3)

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected epistemological topic. Sample topics: Philosophy of History, Philosophy of Perception. Specific topic will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics. Traditional grading only.

595./495. Special Topics: Logic and Semantics (3)

Prerequisites: Six units of philosophy or consent of the instructor. Seminar study of selected topic in logic or semantics. Sample topics: Probability, Necessary Truth, Paradoxes, Philosophy of Mathematics. Topic will be announced in the Schedule of Classes. Course may be repeated for a maximum of 9 units with different topics. Traditional grading only.

596./496. Special Topics: Value and Evaluation (3)

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected topic in value or evaluation. Sample topics: Theories of Value, Freedom and Determinism. Specific topics will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics. Traditional grading only.

599. Graduate Tutorial (1-3)

Prerequisite: Consent of the instructor. Supervised independent study. Seniors with a GPA of 3.0 or better may enroll with consent of Department. May be repeated for credit to a maximum of six units. Traditional grading only.

620. Seminar in History of Philosophy (3)

Prerequisite: Consent of instructor. Close study of selected subjects in the history of philosophy. The original language may be required. May be repeated with different subjects for a max. of 9 units. Traditional grading only.

630. Seminar in Philosophy of Religion (3)

Prerequisite: PHIL 330 or consent of instructor. Critical examination of selected issues, figures and movements. May be repeated for a maximum of six units, subject to suitable variation. Traditional grading only.

640. Seminar in Metaphysics (3)

Prerequisite: PHIL 342 or consent of instructor. Supervised research and discussion on recurrent metaphysical problems and systems on the basis of selected works. Course may be repeated for a maximum of 6 units credit with different topics. Traditional grading only.

663. Seminar in Ethics (3)

Prerequisite: PHIL 363 or consent of the instructor. Systematic examination of topics (such as human rights, pleasure) and theories (such as utilitarianism, contract theory) which are central to moral reasoning. Course may be repeated for a maximum of 6 units with different topics. Traditional grading only.

680. Seminar in Epistemology (3)

Prerequisite: PHIL 382 or consent of instructor. May be repeated for a maximum of six units, subject to suitable variation in course content. Traditional grading only.

681. Seminar in the Philosophy of Science (3)

Current issues in the philosophy of science. May be repeated for a maximum of six units, subject to suitable variation in course content. Traditional grading only.

690. Seminar in Selected Topics of Current Interest (3)

Presentation, discussion and critical evaluation of advanced work (which may include original research of faculty and graduate students) in selected topics of current interest to professional philosophers. If demand for more than one subject exists, multiple sections may be given in any one semester. May be repeated for a maximum of six units, subject to suitable variation of course content. Traditional grading only.

697. Directed Research (1-3)

Prerequisite: Consent of the student's advisor. Traditional grading only.

698. Thesis (1-6)

Prerequisite: Consent of graduate advisor. Preparation and completion of a thesis in philosophy and oral defense thereof.

# PHYSICS AND ASTRONOMY

*College of Natural Sciences and Mathematics*

Department Chair

Kwang Y. Shen

Department Office

PH3-207

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Faculty

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Lawrence S. Lerner

Alfred F. Leung

Keung P. Luke

Jack H. Munsee

S. Rajpoot

Sema'an I. Salem

Bruce L. Scott

Kwang Y. Shen

Edwin L. Woollett

Associate Professors

Z. Hlousek

Jing Liu

Department Secretary

Irene Howard

Students desiring information should contact the Department Office for referral to one of the faculty advisors.

Undergraduate Advisor

Edwin Woollett

Graduate Advisor

Alfred F. Leung

## *Concurrent and/or Summer Enrollment in Another College*

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the College of Natural Sciences and Mathematics must petition the appropriate department for prior approval to enroll in specific courses. This policy applies to concurrent enrollment or summer enrollment. University policy must also be complied with. See "Concurrent Enrollment" and "Transfer of Undergraduate Credit" in this Catalog. Courses not receiving prior approval will not be accepted for credit by the department.

## *Facilitated Enrollment into Classes*

All entering students who declare a major in a degree program offered by this Department must participate in the College of Natural Sciences and Mathematics' Science Safari to Success (for first-time freshmen) or EONS (Enrollment and Orientation in the Natural Sciences and Mathematics for transfer students) Program. These programs are held in June-July for those starting in the Fall Semester and in January for those starting in the Spring Semester. Department advisors will be available to provide an overview of the students' chosen baccalaureate degree program, to assist with academic advisement, to provide information on the many career opportunities available, and to aid students in enrolling in classes. Contact the Student Access to Science Center (FO5-109) or Department Office for additional information.

## **Bachelor of Science in Physics (code 3-7668) (124 units)**

The major in physics for the bachelor of science degree is offered for the student seeking the doctoral degree and the position of professional physicist in the traditional sense, the student seeking a position in an industrial laboratory, and the student seeking a career in teaching physics. This major program has been designed with the conviction that a student must first of all be a physicist and must have a program which penetrates the fundamental conceptual bases of physical phenomena, cultivates skill in the design of experiments and their practical execution and stimulates interest in the many means used to interpret the physical world. A minimum of 124 units is required.

### **Requirements**

Lower Division: PHYS 151 or 151P, 152 or 152P, 154,155; MATH 122,123,224; CHEM 111A,111B; BIOL 200 or 211A.

Upper Division: ENGL 317; MATH 370A or 364A, MATH 370B or 461; 34 units of upper division physics including PHYS 310, 320, 340A, 340B, 350, 360, 380, 450, and one laboratory course chosen from PHYS 330, 403, 476, 480, and 486. The remaining (6 to 8) units are to be chosen from any upper division physics courses except PHYS 400I.

### *Grade Requirements*

Physics majors must have a "C" average in the major. Physics students must achieve a grade of "C" or better in each required course in the major. The following schedule is typical for an upper division major who is a full-time student.

Junior Year:

Fall: PHYS 310, 320, 360; MATH 370A or 364A (or MATH 370B or 461; it is recommended that MATH 370A or 364A be taken before PHYS 310 if possible).

Spring: PHYS 340A, 350, 380; MATH 370B or 461 (if not taken previously).

Senior Year:

Fall: PHYS 340B, 450.

Spring: Three upper division physics electives.

## Bachelor of Arts in Physics (code 2-7667) (124 units)

The major in physics for the bachelor of arts degree is offered in the spirit of providing a curriculum devoted to "interpretation of physics and its reintegration with other parts of our culture." A primary purpose is to prepare teachers of physics and physical science for secondary schools.

### Requirements

Lower Division: PHYS 151 or 151P, 152 or 152P, 154,155; MATH 122,123,224; CHEM 111A,111B; BIOL 200 or 211A.

Upper Division: ENGL 317 ( may be waived for students who achieved a standard score of 24 on the ACT English sub-test or who received an "A" or "B" grade in ENGL 100); a minimum of 24 units of courses selected in consultation with a major advisor. Work must be completed in each of the following fields: physics, chemistry, and geology. At least 18 units of this work must be in physics. Candidates for a teaching credential must complete at least six units selected from GEOL 102, 460, 461.

## Minor in Physics (code 0-7668)

### Requirements

A minimum of 20 units which must include:

Lower Division: PHYS 151 or 151P, 152 or 152P, 154,155

Upper Division: A minimum of nine units in physics (PHYS 360 will not count toward these nine units).

## Master of Science in Physics (code 6-7668)

The Department of Physics and Astronomy offers graduate study leading to the master of science degree. The M.S. degree is available in both a general option and an option in applied physics. A student may choose the general option either with a thesis (Plan I) or, if the department graduate committee gives permission, with a comprehensive examination (Plan II); the option in applied physics requires a thesis. Active areas of research are: observational astronomy, applied optics, laser spectroscopy, materials research, particle physics, atomic physics, quantum gravity, muon catalyzed fusion, intermediate energy physics, acoustics, and condensed matter physics.

Teaching associateships and graduate assistantships are available to students working on the master's degree.

Application should be made to the graduate advisor of the Department of Physics and Astronomy.

### Prerequisites

1. A bachelor's degree with a major in physics; or
2. A bachelor's degree with at least 24 units of upper division physics. (Students deficient in undergraduate preparation must take courses to remove these deficiencies with or without credit toward the degree at the discretion of the department graduate advisor.)

## Requirements

1. Advancement to Candidacy
  - a. Students must fulfill the University requirements for advancement to candidacy and must satisfy the Graduate Committee as to the adequacy of their preparation by passing the Physics Department screening examination. This will be done in the first semester in which they are registered for courses acceptable for credit toward the M.S., except in individual cases to be determined by the Graduate Committee.
  - b. A student must have a "B" average or better in six units of physics applicable toward the master's degree, of which at least three units are at the graduate level.
2. Recognizing that effective organization and verbal communication of physics are a necessary part of a successful graduate program, the Department of Physics and Astronomy normally requires that a graduate student serves at least one semester as a teaching associate or a graduate assistant as part of the M.S. program. Exceptions may be granted by the graduate advisor.

## Additional Requirements

### Plan I

1. A minimum of 30 units of upper division and graduate courses including PHYS 540A, 540B, 550A, 550B, 560A, and 695;
2. Completion of a written thesis, 6 units of Physics 698, and an oral presentation of the thesis research. The members of the candidate's thesis committee must approve the thesis before the student may schedule the oral presentation.

Note: Students must be advanced to candidacy before enrolling in PHYS 698. As early as possible, a graduate student should choose a thesis advisor who will help in selecting the student's thesis committee consisting of at least three members (including the thesis advisor and at least one other member of the department).

### Plan II

1. Permission of the Department Graduate Committee;
2. A minimum of 30 units of upper division and graduate courses including PHYS 510, 540A, 540B, 550A, 550B, 560A, and 695;
3. Passing a comprehensive examination.

The remaining required units, not more than 6 of which may be in related fields, are to be from courses selected in consultation with the graduate advisor.

## Option in Applied Physics (code 6-7669)

The Option in Applied Physics provides a master's degree program that emphasizes concepts and techniques particularly appropriate for applied physics. It is intended for students having a background in physics, engineering, or a related field.

### Prerequisites

1. A bachelor's degree with a major in physics, or
2. A bachelor's degree with a major in engineering with upper division physics substantially equivalent to PHYS 310, 340AB and 450, as determined by the Department Graduate Advisor, or

3. A bachelor's degree with upper division physics and mathematics courses essentially equivalent to PHYS 310, 340B, 450, and MATH 370A and 370B, as determined by the Department Graduate Advisor.

Students deficient in undergraduate preparation must take courses to remove these deficiencies as determined by the Department Graduate Advisor.

### Requirements

1. Advancement to Candidacy
  - a. Students must fulfill the University requirements for advancement to candidacy and must satisfy the Graduate Committee as to the adequacy of their preparation by passing the Physics Department screening examination. This will be done in the first semester in which they are registered for courses acceptable for credit toward the M.S., except in individual cases to be determined by the Graduate Committee.
  - b. A student must have a "B" average or better in six units of physics applicable toward the master's degree, of which at least three units are at the graduate level.
2. Recognizing that effective organization and verbal communication of physics are a necessary part of a successful graduate program, the Department of Physics and Astronomy normally requires that a graduate student serve at least one semester as a teaching associate or a graduate assistant as part of the M.S. program. Exceptions may be granted by the graduate advisor.

### Additional Requirements

Thirty units of upper division and graduate courses as described below.

1. PHYS 540A, 550A, 560A, 569, and 695.
2. Two of the following courses or combinations of courses: PHYS 502/503, 575/576, 580, and 586.
3. Completion of a written thesis, 6 units of Physics 698, and an oral presentation of the thesis research. The members of the candidate's thesis committee must approve the thesis before the student may schedule the oral presentation.
 

Note: Students must be advanced to candidacy before enrolling in Physics 698. As early as possible, a graduate student should choose a thesis advisor who will help in selecting the student's thesis committee consisting of at least three members (including the thesis advisor and at least one other member of the department).
4. Courses selected in consultation with the Department Graduate Advisor and/or thesis advisor to complete the remaining 2 to 4 units.

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## Physics Courses (PHYS)

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### Lower Division

#### 100A,B. General Physics (4,4) F,S

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent; a knowledge of basic trigonometry is strongly recommended. PHYS 100A or 101A is a prerequisite for PHYS 100B. Year course in introductory physics. This course is the same as PHYS 101A,B except for the absence of a weekly problem session. First semester considers properties of matter, mechanics, wave

motion and heat. Second semester considers electricity, light, and atomic and nuclear physics. Traditional grading only. (Lecture 3 hrs, laboratory 3 hrs.) A course fee may be required. (100A: CAN PHYS 2; 100B: CAN PHYS 4)

#### 101A,B. General Physics (5,5) F,S

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent; a knowledge of basic trigonometry is strongly recommended. PHYS 101A or 100A is a prerequisite for PHYS 101B. Year course in introductory physics. This course is the same as PHYS 100A,B except for the added weekly problem session. First semester considers properties of matter, mechanics, wave motion and heat. Second semester considers electricity, light, and atomic and nuclear physics. The added problem session is designed to allow students to obtain additional instruction in problem solving and analysis, increasing students' performance in this introductory physics course. (Lecture 3 hrs, laboratory 3 hrs, problem session 2 hrs.) A course fee may be required..

#### 102. Introduction to Physics (3) F,S

Prerequisite: MATH 117 (which may be taken concurrently) or three-and-one-half years of high school mathematics including two years of algebra, one year of geometry and one-half year of trigonometry. This course is designed to assist students who need additional preparation before enrolling in PHYS 100A or 151. Basic problems and concepts in physics, particularly in mechanics. Credit/No Credit grading only. (Lectures, problem sessions 4 hrs.) Course begins in the fourth week of the semester.

#### 104. Survey of General Physics (4)

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent; a knowledge of basic trigonometry is strongly recommended. Designed to acquaint the student with the more important aspects of elementary physics. Emphasis on physiological physics, color and sound. Recommended for art, music and physical education majors. (Lecture 3 hrs., laboratory 3 hrs.). A course fee may be required.

#### 151. Mechanics and Heat (4) F,S

Prerequisite: MATH 122. This course is the same as PHYS 151P except for the absence of a weekly problem session. Kinematics, Newton's Laws, rotational motion, fluid statics, laws of thermodynamics. The added problem session allows students to obtain additional instruction in problem solving and analysis, increasing students' performance in this introductory physics course. Traditional grading only. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required. (PHYS 151+152+154+155, CAN PHYS SEQ B)

#### 151P. Mechanics and Heat (5) F,S

Prerequisite: MATH 122. This course is the same as PHYS 151 except for the added weekly problem session. Kinematics, Newton's Laws, rotational motion, fluid statics, laws of thermodynamics. The added problem session allows students to obtain additional instruction in problem solving and analysis, increasing students' performance in this introductory physics course. (Lecture 3 hrs., laboratory 3 hrs., problem session 2 hrs.) A course fee may be required.

#### 152. Electricity and Magnetism (4) F,S

Prerequisites: PHYS 151 or 151P, MATH 123. This course is the same as PHYS 152P except for the absence of a weekly problem session. Mechanical waves, Coulomb's law, electrostatics, electric circuits, introductory electronics, magnetic fields, induction and Maxwell's equations. Traditional grading only. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required. (PHYS 151+152+154+155, CAN PHYS SEQ B)

#### 152P. Electricity and Magnetism (5) F,S

Prerequisites: PHYS 151 or 151P, MATH 123. This course is the same as PHYS 152 except for the added weekly problem session. Mechanical waves, Coulomb's law, electrostatics, electric circuits, introductory electronics, magnetic fields, induction and Maxwell's equations. The added problem session is designed to allow students to obtain additional instruction in problem solving and analysis, increasing students' performance in this introductory physics course. (Lecture 3 hrs., laboratory 3 hrs., and problem session 2 hrs.) A course fee may be required.

154. Modern Physics and Light (3) F,S

Prerequisites: PHYS 152 or 152P, MATH 224. Relativity, photoelectric effect; quantum theory, Bohr model of the atom, wave mechanics, geometrical optics, interference, diffraction and polarization. Not open to students with credit in PHYS 153. Traditional grading only. (Lecture 3 hrs.) (PHYS 151+152+154+155, CAN PHYS SEQ B)

155. Laboratory on Light and Modern Physics (1) F,S

Prerequisite: PHYS 154 which may be taken concurrently. Experimental work in geometrical and physical optics and atomic and nuclear physics. Not open to students with credit in PHYS 153. PHYS 154 and 155 together are equivalent to PHYS 153. (Laboratory 3 hrs.) A course fee may be required. (PHYS 151+152+154+155, CAN PHYS SEQ B)

## Upper Division

310. Mechanics I (3) F

Prerequisites: PHYS 151 or 151P. Prerequisite or Corequisite: MATH 370A or 364A. Kinematics and dynamics of mass points and systems of particles. Conservation laws. Harmonic motion. Central force problem. Noninertial frames of reference. Lagrangian and Hamiltonian formulation of the laws of mechanics. Traditional grading only. (Lecture 3 hrs.)

311. Mechanics II (3) S, even years

Prerequisite: PHYS 310. Dynamics of rigid body, constraints, inertia tensor, gyroscopic motion, deformable media: waves on strings and in fluids, variational methods and non-linear mechanics. (Lecture 3 hrs.)

320. Classical and Statistical Thermodynamics (3) F

Prerequisite: PHYS 152 or 152P. Prerequisite or Corequisite: PHYS 154. Laws of thermodynamics, thermodynamic potentials, kinetic theory methods, phase transitions, equilibrium ensembles and related formalism with applications to classical and quantum systems. (Lecture 3 hrs.)

330. Experimental Optics and Spectroscopy (3) S

Prerequisite: PHYS 154, 155. Interference, diffraction, polarization and elementary spectroscopy. (Lecture 2 hrs, laboratory 3 hrs.) A course fee may be required.

340A. Electricity and Magnetism I (3) S

Prerequisites: PHYS 152 or 152P, PHYS 310. Prerequisite or Corequisite: MATH 370A or 364A. Vector calculus, electrostatics, and magnetostatics. Formulation of Maxwell's equations in vector analytic form. (Lecture-discussion 3 hrs.)

340B. Electricity and Magnetism II (3) F

Prerequisite: PHYS 340A. Special relativity. Applications of Maxwell's equations: Plane electromagnetic waves, guided waves, radiation, interaction of electromagnetic waves and matter. (Lecture-discussion 3 hrs.)

350. Modern Physics (3) S

Prerequisites: PHYS 310, MATH 370A or 364A. Physical phenomena and models leading to the development of quantum mechanics. Schroedinger equation, one-dimensional quantum mechanical problems, uncertainty principle, one-electron atoms, elementary applications of quantum mechanics. (Lecture-discussion 3 hrs.)

360. Computers in Physics (3) F

Prerequisite: PHYS152 or 152P. Prerequisite or Corequisite: MATH 370A or 364A. Introduction to the use of the personal computer in physics calculations and analysis. Introduction to the Mathematica software. Introduction to interpolation and fitting of experimental data. Examples of symbolic (analytic) calculations, numerical solutions, and graphical display of results for a variety of physics problems. Introduction to programming in Mathematica. (Lecture-discussion 3 hrs.)

380. Fundamentals of Electronics (4) S

Prerequisite: PHYS 152 or 152P. Network analysis and complex impedance, transistor circuits, operational amplifiers, active filters and oscillators, digital electronics, analog-digital interfacing, microprocessors. (Lecture 3 hrs., laboratory 3 hrs.) A course fee may be required.

400I. History of Western Scientific Thought (3) F,S

Prerequisites: ENGL 100 and upper division status. An interdisciplinary introduction to the history of science for both scientists and non-scientists. Evolution of the scientists' views of the means and ends of their own activities; the ways in which science is affected by and affects contemporary cultures. Same as HIST 400I. (Lecture 3 hrs.)

402./502. Fourier Methods in Physics (3) F, odd years

Prerequisites: PHYS 310, MATH 370B or 461. (Undergraduates register in PHYS 402; graduates register in PHYS 502.) Fourier transforms in time and space, convolution, generalized functions, impulse response and transfer function. Application of Fourier techniques to problems in classical acoustics and optics: oscillators, directional radiators, holography and imaging in general. (Lecture 3 hrs.)

403./503. Fourier Physics Laboratory (1) F, odd years

Prerequisite: PHYS 402 which may be taken concurrently. (Undergraduates register in PHYS 403; graduates register in PHYS 503.) Selected experiments in acoustics and optics illustrating Fourier techniques in wave physics. Detailed study of the discrete Fourier transform and its application to experimental measurements and calculations. (Laboratory 3 hrs.) A course fee may be required.

410./515. Relativity (3) F, odd years

Prerequisite: PHYS 340A. Prerequisite or Corequisite: MATH 370A or 364A. (Undergraduates register in PHYS 410; graduates register in PHYS 515.) The Lorentz transformation, relativistic kinematics and dynamics, 4-vectors and tensors, transformation of electric and magnetic fields, covariant form of Maxwell's equations, introduction to general relativity. (Lecture-discussion 3 hrs.)

422./522. Thermal Physics (3) F, even years

Prerequisites: PHYS 310, 320, 350. (Undergraduates register in PHYS 422; graduates register in PHYS 522.) Entropy and temperature, Boltzmann distribution and Helmholtz free energy, thermal radiation, chemical potential, Gibbs distribution, ideal gas, Fermi and Bose gases, heat and work, Gibbs free energy and chemical reactions, phase transformations and kinetic theory. (Lecture-discussion 3 hrs.)

434./534. Astrophysics (3) F, even years

Prerequisites: PHYS 310, 320, and 340A or consent of the instructor. (Undergraduates register in PHYS 434; graduates register in PHYS 534.) Selected topics in astrophysics. A particular semester schedule might include one or two topics from: stellar interiors and evolution, radiative transfer and stellar atmospheres, relativistic cosmology, galaxy formation, accretion disk physics and quasars. (Lecture 3 hrs.)

444./544. Plasma Physics (3) S, odd years

Prerequisites: PHYS 340A. (Undergraduates register in PHYS 444; graduates register in PHYS 544.) Characteristic behavior of high temperature plasma. Particle trajectories, two-fluid and hydromagnetic models, waves, instabilities and transport processes. Applications to astrophysical, geophysical and laboratory plasmas. (Lecture 3 hrs.)

450. Quantum Physics I (3) F

Prerequisites: PHYS 310, 340A, 350. Schroedinger equation, atomic physics, harmonic oscillator, scattering, perturbation theory, Heisenberg and Dirac representations, spin, symmetries (angular momentum, time reversal, and parity), applications. (Lecture-discussion 3 hrs.)

\*451. Quantum Physics II (3) S, even years

Prerequisite: PHYS 450. Measurement processes, atomic physics, identical particles, quantum statistics, numerical methods, many-body systems, density matrix, applications. (Lecture-discussion 3 hrs.)

454./555. Elementary Particle Physics (3) S, even years

Prerequisites: PHYS 310, 340B, 450. (Undergraduates register in PHYS 454; graduates register in PHYS 555.) Feynman diagram language of scattering and decay, space-time symmetries, relativistic kinematics, hadron quantum numbers and quark models, QED, QCD and gluons, weak interactions. (Lecture 3 hrs.)

470./569. Introduction to Solid State Physics (3) S, odd years

Prerequisite: PHYS 450. (Undergraduates register in PHYS 470; graduates register in PHYS 569.) Study of the properties of solids from a quantum theoretical viewpoint. Topics include lattice vibrations, elastic constants, and thermal, electric and magnetic properties. (Lecture 3 hrs.)



475./575. Modern Optics (3) F, even years

Prerequisite: PHYS 340A. (Undergraduates register in PHYS 475; graduates register in PHYS 575.) Propagation of electromagnetic waves, optical resonators, laser spectroscopy and operation, optical phase conjugation, nonlinear optics and selected application. (Lecture 3 hrs.)

476./576. Modern Optics Laboratory (1) F, even years

Prerequisites: PHYS 475/575 which may be taken concurrently. (Undergraduates register in PHYS 476; graduates register in PHYS 576.) Selected experiments illustrating principles and techniques of current interest in electro-optics and laser physics. Applications include optical methods in communications, atomic spectroscopy, and nonlinear optics. Traditional grading only. (Laboratory 3 hrs.) A course fee may be required.

480./580. Computer Interfacing in Experimental Physic (3) S, even years

Prerequisite: PHYS 380 or consent of instructor. (Undergraduates register in PHYS 480; graduates register in PHYS 580.) Introduction to modern data acquisition and analysis methods using computer-based equipment and high level software. Selected physics experiments are performed with standard personal computers, research-quality data acquisition hardware, and programmable instruments. The use of the computer as a tool in the execution and interpretation of physics experiments is emphasized. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

486./586. Experimental Physics — Radiation (3) S, odd years

Prerequisites: Consent of instructor. (Undergraduates register in PHYS 486; graduates register in PHYS 586.) Interaction of gamma rays with matter. X-ray techniques. Charged Particle range and energy loss. Radiation detectors. Neutron production and detection. (Lecture 2 hrs., laboratory-demonstration and/or special project 3 hrs.) A course fee may be required.

490./590. Special Topics in Physics (3)

Prerequisite: Consent of instructor. (Undergraduates register in PHYS 490; graduates register in PHYS 590.) Topics of interest in physics selected from such areas as atomic and nuclear physics, astrophysics, physics of materials, low temperature physics, acoustics and theoretical physics. Both undergraduate and graduate students may take the course for a maximum of 6 units of credit. (Lecture 3 hrs.) A course fee may be required.

496. Special Problems in Physics (1-3)

Prerequisites: Consent of instructor and senior standing. Problems in physics. Problems selected by instructor for considered and mature analysis. A written and 10-minute oral report are required. May be repeated for credit to a maximum of 4 units. A course fee may be required.

## Graduate Division

500. Research Methods (1)

Prerequisite: Consent of instructor. Directed study of the literature about research methods in physics. May be repeated once but only one unit may be applied to the requirements for the Master of Science in Physics.

502./402. Fourier Methods in Physics (3) F, odd years

Prerequisites: PHYS 310, MATH 370B or 461. (Undergraduates register in PHYS 402; graduates register in PHYS 502.) Fourier transforms in time and space, convolution, generalized functions, impulse response and transfer function. Application of Fourier techniques to problems in classical acoustics and optics: oscillators, directional radiators, holography and imaging in general. (Lecture 3 hrs.)

503./403. Fourier Physics Laboratory (1) F, odd years

Prerequisite: PHYS 502 which may be taken concurrently. (Undergraduates register in PHYS 403; graduates register in PHYS 503.) Selected experiments in acoustics and optics illustrating Fourier techniques in wave physics. Detailed study of the discrete Fourier transform and its application to experimental measurements and calculations. (Laboratory 3 hrs.) A course fee may be required.

510. Graduate Mechanics (4) F

Prerequisite: PHYS 310. Variational principles, Lagrange's equations, Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, relativistic mechanics and small oscillation theory. (Lecture 4 hrs.)

515./410. Relativity (3) F, odd years

Prerequisite: PHYS 340A. Prerequisite or Corequisite: MATH 370A or MATH 364A. (Undergraduates register in PHYS 410; graduates register in PHYS 515.) The Lorentz transformation, relativistic kinematics and dynamics, 4-vectors and tensors, transformation of electric and magnetic fields, covariant form of Maxwell's equations, introduction to general relativity. (Lecture-discussion 3 hrs.)

522./422. Thermal Physics (3) F, even years

Prerequisites: PHYS 310, 320, 350. (Undergraduates register in PHYS 422; graduates register in PHYS 522.) Entropy and temperature, Boltzmann distribution and Helmholtz free energy, thermal radiation, chemical potential, Gibbs distribution, ideal gas, Fermi and Bose gases, heat and work, Gibbs free energy and chemical reactions, phase transformations and kinetic theory. (Lecture-discussion 3 hrs.)

534./434. Astrophysics (3) F, even years

Prerequisites: PHYS 310, 320, and 340A or consent of the instructor. (Undergraduates register in PHYS 434; graduates register in PHYS 534.) Selected topics in astrophysics. A particular semester schedule might include one or two topics from: stellar interiors and evolution, radiative transfer and stellar atmospheres, relativistic cosmology, galaxy formation, accretion disk physics and quasars. (Lecture 3 hrs.)

540A. Graduate Electricity and Magnetism and Electrodynamics I (3) S

Prerequisite: PHYS 340B. Boundary-value problems, applications of special functions to electro/magnetostatics, Green's function techniques, multipole expansion of the electrostatic field, dielectric media, Maxwell's equations, electromagnetic waves. (Lecture 3 hrs.)

540B. Graduate Electricity and Magnetism and Electrodynamics II (3) F

Prerequisites: PHYS 540A. Covariant formalism, simple radiating systems, radiation by moving charges, and selected topics in electrodynamics chosen from the following: wave guides, magnetohydrodynamics, thermodynamics and electrodynamics of continuous media, and radiation reaction. (Lecture 3 hrs.)

544./444. Plasma Physics (3) S, odd years

Prerequisites: PHYS 340A. (Undergraduates register in PHYS 444; graduates register in PHYS 544.) Characteristic behavior of high temperature plasma. Particle trajectories, two-fluid and hydromagnetic models, waves, instabilities and transport processes. Applications to astrophysical, geophysical and laboratory plasmas. (Lecture 3 hrs.)

550A. Quantum Mechanics I (3) F

Prerequisite: PHYS 450. Mathematical and postulational basis of quantum mechanics, one-dimensional problems, two-level systems, angular momentum, central potentials, time independent and time dependent perturbation theory. (Lecture 3 hrs.)

550B. Quantum Mechanics II (3) S

Prerequisite: PHYS 550A. Scattering, rotation group and irreducible tensor operations, identical particles, semi-classical radiation theory, atoms, path integral formalism, and other selected topics. (Lecture 3 hrs.)

554. Nuclear Physics (3)

Prerequisite: PHYS 550A. Deuteron problem, nucleon-nucleon potential, shell model, nuclear models, nuclear reactions, elementary particles, weak interactions, strong interactions. (Lecture 3 hrs.)

555./454. Elementary Particle Physics (3) S, even years

Prerequisites: PHYS 310, 340B, 450. (Undergraduates register in PHYS 454; graduates register in PHYS 555.) Feynman diagram language of scattering and decay, space-time symmetries, relativistic kinematics, hadron quantum numbers and quark models, QED, QCD and gluons, weak interactions. (Lecture 3 hrs.)

560A,B. Methods of Mathematical Physics (4,3)  
Prerequisites: MATH 370A,B or equivalent. Linear vector spaces, eigen-value problem, functions of a complex variable, special functions, properties and methods of solving partial differential equations of physics, integral equations, tensor analysis and group theory. (Lecture 4,3 hrs.)

569./470. Introduction to Solid State Physics (3) S, odd years  
Prerequisite: PHYS 450. (Undergraduates register in PHYS 470; graduates register in PHYS 569.) Study of the properties of solids from a quantum theoretical viewpoint. Topics include lattice vibrations, elastic constants, and thermal, electric and magnetic properties. (Lecture 3 hrs.)

570. Solid State Physics (3) F  
Prerequisite: PHYS 450. The modern theory of solids from the standpoint of quantum mechanics. Binding in solids, energy bands, electrical thermal and magnetic properties, imperfections, and semiconductors. (Lecture 3 hrs.)

575./475. Modern Optics (3) F, even years  
Prerequisite: PHYS 340A. (Undergraduates register in PHYS 475; graduates register in PHYS 575.) Propagation of electromagnetic waves, optical resonators, laser spectroscopy and operation, optical phase conjugation, nonlinear optics and selected applications. (Lecture 3 hrs.)

576./476. Modern Optics Laboratory (1) F, even years  
Prerequisite: PHYS 475/575 which may be taken concurrently. (Undergraduates register in PHYS 476; graduates register in PHYS 576.) Selected experiments illustrating principles and techniques of current interest in electro-optics and laser physics. Applications include optical methods in communications, atomic spectroscopy, and nonlinear optics. Traditional grading only. (Laboratory 3 hrs.) A course fee may be required.

580./480. Computer Interfacing in Experimental Physics (3) S, even years  
Prerequisite: PHYS 380 or consent of instructor. (Undergraduates enroll in PHYS 480; graduates enroll in PHYS 580.) Introduction to modern data acquisition and analysis methods using computer-based equipment and high level software. Selected physics experiments are performed with standard personal computers, research-quality data acquisition hardware, and programmable instruments. The use of the computer as a tool in aiding the execution and interpretation of physics experiments is emphasized. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

586./486. Experimental Physics-Radiation (3) S, odd years  
Prerequisites: Consent of instructor. (Undergraduates register in PHYS 486; graduates register in PHYS 586.) Interaction of gamma rays with matter. X-ray techniques. Charged Particle range and energy loss. Radiation detectors. Neutron production and detection. (Lecture 2 hrs., laboratory-demonstration and/or special project 3 hrs.) A course fee may be required.

590./490. Special Topics in Physics (3)  
Prerequisite: Consent of instructor. (Undergraduates register in PHYS 490; graduates register in PHYS 590.) Topics of interest in physics selected for intensive development. Topics to be selected from such areas as atomic and nuclear physics, astrophysics, physics of materials, applied optics and laser spectroscopy, low temperature physics, acoustics and theoretical physics. Both undergraduate and graduate students may take the course for a maximum of 6 units of credit. (Lecture 3 hrs.) A course fee may be required.

599. Quantum Field Theory (3)  
Prerequisites: PHYS 550B or permission of instructor. Selected topics to be chosen from: Many-particle systems and field theory; interactions, bound states, and the S-matrix; gauge theories and Q.E.D.; path-integral picture. Selected applications from condensed matter physics, electro-weak interactions, Q.C.D., lattice gauge theory, conformal field theory, string theory. (Lecture 3 hrs.)

691. Directed Study (1)  
Intensive study of advanced topics in physics. May be repeated once for credit.

694. Seminar in Special Topics (1)  
Prerequisite: Graduate standing. Study of research papers and research methods in selected topics. If demand for more than one subject exists, multiple sections may be given in any one semester. May be repeated; only one unit of credit may be applied toward requirements for the master's degree. (Seminar 1 hr.)

695. Colloquium (1)  
Prerequisites: Graduate standing. Weekly meetings for presentation and discussion of current research in physics even though only 1 unit is for the MS degree. All graduate students are expected to attend each semester they are enrolled in the University. Credit/No Credit grading only. (Seminar 1 hr.)

697. Directed Research (1-3)  
Theoretical and experimental problems in physics requiring intensive analysis. A course fee may be required.

698. Thesis (1-6)  
Planning, preparation, and completion of an acceptable thesis in partial fulfillment of the requirements for the master's degree. A half-hour seminar presenting and defending the results of the thesis is required. Credit to be obtained only upon formal acceptance of thesis. A course fee may be required.

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## Astronomy Courses (ASTR)

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### Lower Division

100. Astronomy (3) F,S  
Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Introductory course in astronomy. The earth moon system and the planets, the stars and their constitution. Survey of the methods of astronomical observation. (Lecture 3 hrs.)

100L. Introductory Astronomy Laboratory (1) F,S  
Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent; and ASTR 100 which may be taken concurrently. Astronomical coordinates, star maps, magnitude, spectral classification, ages of stars, distance to star clusters. Traditional grading only. Not open to students with credit in ASTR 101. (Laboratory 3 hrs.) A course fee may be required.

101. Astronomy II (3) F,S  
Prerequisite: ASTR 100. Deep sky objects will be discussed in lecture and studied by direct observation from images available on the Internet. Students will learn to use image processing software. Through computer simulations and direct observation, students will become familiar with major stars and constellations and will learn to use celestial coordinates to locate objects of interest. The course will normally include one or more weekend or evening field trips to local dark-sky observing sites. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

### Upper Division

370I. Extraterrestrial Environments (3) F,S  
Prerequisites: A course in the life or physical sciences with lab; two years of high school algebra, ENGL 100 and upper division status. Analysis of our own solar system and nearby stars with a focus on the capacity of various environments to sustain human habitation. Review of processes of planetary, biological and stellar evolution and extrapolation to estimate the prevalence of life elsewhere in the universe. Critical analysis of available data on probable distances, masses and ages of nearest stars to determine spatial distribution of those most likely to have Earth-like planets. (Lecture 3 hrs.)

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## Physical Science Courses (PHSC)

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### Lower Division

#### 112. Introduction to the Physical Sciences (3) F,S

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010) or the equivalent. Selected processes which illustrate some of the basic principles used by scientists to interpret modern ideas of matter and energy in the physical universe. Students with a full year course in high school physics or chemistry should elect some other lower division course in chemistry, geology or physics. Not open for credit to majors in any of the physical sciences. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

### Upper Division

#### 331. Light, Lasers and the Visual Image (3)

Nonmathematical course that describes light, its behavior and applications. Emphasis on image formation, optical instruments, science of color, lasers, holography and analysis of light for elements, planets and stars. Colorful demonstrations using lasers and holograms including kinetic art. Recommended for art and other non-science majors. (Lecture-demonstration 3 hrs.)

# POLITICAL SCIENCE

*College of Liberal Arts*

Department Chair

Gerry Riposa

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Barry H. Steiner

A. Jay Stevens

Associate Professors

Larry George

Larry F. Martinez

Gerry Riposa

Edwin Roberts

Paul C. Schmidt

Assistant Professors

Mary Caputi

Teresa Wright

Department Secretary

Nancy St. Martin

Students desiring information should contact the department office for referral to one of the faculty advisors:

Credential Advisor

Schwartz (History)

Undergraduate Advisor

Mary Caputi

Gerry Riposa

Graduate Coordinator

Charles Noble

Pre-Law Advisor

William Leiter

The political science major is designed to provide the student with a systematic knowledge of the nature and scope of political science. A student may elect to major in political science as a preparation for such fields as: (1) college or university teaching, (2) law, (3) government career service, (4) foreign career service, and (5) politics. In addition, a political science major is preparation for general education, good citizenship and participation in political life. Students interested in the fields mentioned above should consult with an advisor to secure aid in planning their programs.

### *Pre-Legal Program and Preparation*

Political Science continues to be one of the more popular and successful roads to law school and careers in the legal field. Combining a broad exposure to liberal arts and other social sciences with an in-depth immersion in government studies and public law, plus opportunities to intern in legal settings, Political Science provides a rich preparation for those interested in pursuing careers in law. Students interested in our program should consult with the Pre-law advisor in Political Science both to plan a carefully thought out undergraduate course of study and to successfully prepare for admission to law schools.

### *General Education Requirements in Government*

The Education Code requires each college graduate to meet (1) a federal government requirement and (2) a California state and local government requirement. Both of these requirements can be met by POSC 100 (for lower division students) or POSC 391 (for upper division students). If the student has completed the federal government requirement, but not the California state and local government requirement, the student should take POSC 326. Students who have taken American federal, state or local government at another institution should check with the political science advisor before enrolling.

## Bachelor of Arts in Political Science (code 2-8536) (124 units)

### Requirements

Required Courses: (9 units) POSC 300A, 300B, and POSC 100 or 391

Breadth Requirement: (24 units) Three upper division units from five of the following six areas:

- International Relations
- Comparative Politics
- Political Theory
- Public Law
- American Government and Politics
- Public Policy and Administration

Nine units of electives in Political Science courses, 6 of which may be in the lower division. Any upper division courses may be used to fulfill this requirement including POSC 395I, 418, 447, 448, 494I, 496, 497, 498, or 499. A maximum of 6 units of internship may be used to fulfill degree requirements.

Concentration Requirement: (9 units) Nine units from a sixth area, three units of which must be the proseminar in that area (e.g., POSC 409, 419, 429, 449, 469, or 489.)

Social Science Requirement: (6 units) Six upper division units taken from American Indian Studies, American Studies, Anthropology, Asian and Asian American Studies, Black Studies, Chicano and Latino Studies, Computer Studies, Economics, Geography, History, Human Development, Psychology, Sociology, Women's Studies, chosen in consultation with a Political Science Advisor. Total Units: 48

### Option in Public Administration (code 2-8540) (124 units)

Required Courses (12 units): POSC 100 or 391, POSC 300A, 3 units of Economics, 3 units of Statistics

Breadth Requirement (24 units): 3 units from each of the following five areas:

- International Relations
- Comparative Politics
- Political Theory
- Public Law
- American Government and Politics

Nine units of electives in Political Science, six of which may be in the lower division

Concentration Requirement (15 units): POSC 300B or 431, 430, 449

6 additional units in the area of Public Policy and Administration.

A maximum of 6 units of internship may be used to fulfill the degree requirement. Total Units: 51

### Bachelor of Arts in Political Science with Honors

Students with a major in Political Science may be admitted to the Political Science Department's honors program (option of the University Scholar's Program) provided they have:

1. Junior standing, completed POSC 300A and at least two additional upper-division courses in Political Science;
2. A minimum of three semesters remaining before graduation;
3. A minimum cumulative GPA of 3.3, and 3.5 in Political Science courses;
4. Submitted to the Department Honors Committee two letters of recommendation from faculty members and an example of a research or analytical paper written for a previously taken course in Political Science;
5. Received admission approval from the Department Honors Committee.

In order to graduate with Honors in Political Science a student must:

1. Complete all regular requirements for the major in Political Science;
2. Complete 3 units of POSC 490H: Honors Seminar;
3. Complete 3 units of POSC 491H: Honors Research;
4. Complete 3 units of POSC 492H: Honors Thesis;
5. Have at the time of graduation a cumulative GPA of at least 3.3 and a GPA of at least 3.5 in Political Science courses.

### Minor in Political Science (code 0-8536)

A minimum of 21 units which must include: POSC 100 or 391, 300A. An additional five upper division courses selected from POSC 303, 312, 322, 326, 353, 371, 430.

### Minor in Public Administration in Political Science (code 0-8540)

A minimum of 21 units which must include: (a) POSC 430; (b) 9 units selected from POSC 431, 432, 433, 436, 437, 438, 442, 449; (c) 6 units selected from POSC 300B, 322, 323, 326, 327, 328, 329, 420, 447, 448; (d) Three elective units from any area in political science chosen in consultation with an advisor.

### Master of Arts in Political Science (code 5-8536)

The Department of Political Science offers graduate study leading to the master of arts degree. The student is urged to become acquainted with the general requirements of the University and the specific requirements of the department as stated in this Catalog. Important supplementary information about the steps leading to the master's degree in political science is contained in the Handbook for Graduate Students, which is available from the department upon request.

Before or soon after entering the program, the graduate student will normally consult with the department graduate advisor.

After beginning graduate study, the student is responsible for obtaining the consent of three fulltime members of the department's graduate faculty to serve on her/his graduate committee: one of these committee members, the chair, will be drawn from the student's major field of concentration and will serve as the student's academic advisor while two others will be drawn from the second and third fields of concentration respectively. The student should seek to have established her/his committee prior to the completion of the first year or the first 18 units of work as a graduate student in political science unless an exception is granted by the Department Graduate Committee.

#### Prerequisites

1. A bachelor's degree with a major in political science or a bachelor's degree with 24 upper division units in political science comparable to those required for a major in political science at this university.
2. Completion of a minimum of one upper-division political theory course equivalent to POSC 301 or POSC 303 at CSULB, with a grade of "B" or better.
3. Students whose undergraduate work is deficient in political science will be required to make up certain courses. Deficiencies will be determined by the Department's Graduate Committee after taking into account each student's background and goals. These courses will not count toward credit in the M.A.
4. A 3.0 ("B") GPA in political science courses taken as an undergraduate. (A student whose GPA is less than 3.0 may appeal to the Department's Graduate Committee for a possible waiver of this requirement.)
5. Three letters of recommendation (preferably from academic sources).

## Advancement to Candidacy

1. Satisfy the general requirements of the University for advancement to candidacy;
2. In order to be recommended for advancement to candidacy, students must obtain the written approval of their master's degree program of course work by their committee chair and graduate advisor.

## Requirements

1. A student's program is formulated in consultation with an advisor selected from the department's faculty. A minimum of 30 units of acceptable upper division and graduate courses is required. All students are required to take both POSC 500 and POSC 550. A minimum of 15 units must be concentrated in three of the fields into which the department's curriculum is divided. An additional six units may be taken in Political Science or in another field of study closely related to the candidate's educational objectives. The program must include a minimum of 18 units in the 500/600 series of POSC;
2. The graduate student must complete one of the following requirements: (a) A comprehensive examination in each of two fields of Political Science (b) A thesis;  
Students following the comprehensive examination option will earn 3 units of credit in POSC 697 and those writing a thesis will be granted three units of credit in POSC 698;
3. In addition to completing the above requirements, the graduate student must complete (or show that she/he has completed) one of the following requirements:
  - a. A minimum of two semesters of an acceptable foreign language taken at the college level with a grade of "B" or better;
  - b. A demonstrated reading knowledge of an acceptable foreign language;
  - c. A minimum of two semesters of acceptable course work in statistics with a grade of "B" or better.

## Interdisciplinary Minor in Public Policy (code 0-8538)

The purpose of this program is to enable persons majoring in fields related to public policy to gain a broader understanding of the substance of public policies, the underlying social, economic and political factors related to policy alternatives, the dynamics of the public policy decision-making process, the values implicit in these decisions, and methods by which these aspects of public policy may be analyzed.

The minor consists of 21 units including a core curriculum of 12 units and 9 units of electives. A maximum of 6 units may be taken in the student's major department, but no units may be counted in both the major and the minor.

## Requirements

1. Core Curriculum: (12 units required): (A) Introduction to Public Policy. Three units chosen from among the following courses: ECON 352, GEOG 466, POSC 328, PSY 375, SOC 349, U/ST 401;(B) PPA 350; (C) PPA 400; (D) PPA 450.

Note: It is strongly recommended that students take the core curriculum courses in sequence, the first two courses during the Junior year; the second two during the Senior year.

2. Electives: (9 units required): At least 6 units of the 9 elective units must be taken in one of the policy area concentrations outlined below. The remaining 3 units may be taken from among any of the elective courses approved for the minor. See program director or a member of the Faculty Advisory Committee for a student handbook that lists all courses approved as electives.

Policy Area Concentrations: Community Relations and Social Services, Health Care, Housing and Recreation, Education, Economic Regulation, Justice and Law, Land Use and Ecology, Computational Skills for Public Policy, Foreign Policy and International Relations, Values and Public Policy, Government Processes and Policy.

## Courses (POSC)

### Lower Division

100. Introduction to American Government (3)  
Introductory survey of American Political Institutions, politics, and policy, including government and politics in California. Constitutional foundations and current controversies. Satisfies the general education requirement and the California teaching credential requirement. (CAN GOVT 2)
201. Introduction to Political Science (3)  
Introduction to the principles of political science. Major terms, concepts, functions and institutions relating to the processes of politics.
210. Issues of American Politics (3)  
Prerequisite: POSC 100. Intensive study of issues associated with the concepts of democracy, limited government, federalism, separation of powers, judicial review and preservation of individual rights.
215. Issues of Comparative Politics (3)  
Intensive study of issues associated with selected foreign governments, modernization, revolution, political change and world ideological conflict.
220. Issues in Global Politics (3)  
Divergences between nations as they affect political differences between states. The political significance of the encounter of individuals with those of different nationalities.
225. Issues in Political Theory (3)  
Study and discussion of issues including revolution, power, justice, alienation, the nature of democracy, and other important political concepts. Views of theorists such as Plato, Hobbes, Rousseau, Mill, and Marx will be examined.
230. Issues in Political Economy (3)  
The relationship between politics and economics in contemporary societies; theories of political economy; the development of economic and regulatory policies in advanced capitalist democracies.

The Political Science Department upper division courses fall into several curricular sub-groups, as follows:

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### Political Theory

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301. Classical Political Theory  
\*303. Modern Political Theory  
\*304. Recent Political Theory  
\*306. Contemporary Political Ideologies  
\*308. American Political Theory  
\*401. Women and the Feminine in Western Political Theory  
\*409. Proseminar in Political Theory

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## Public Law

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- \*311. Constitutional Law: Power
- \*312. Constitutional Law: Rights
- \*316. Administrative Justice and Law Making
- \*318. Modern Legal Systems
- 412. Law and Social Change
- \*414. Jurisprudence
- 418. Legal/Judicial Apprenticeship
- \*419. Proseminar in Public Law

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## American Government and Politics

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- 322. Political Parties
- 323. Minority Politics in the United States
- 325. American Political Economy
- 326. California Government in Comparative Perspective
- \*327. Urban Politics
- \*420. Voting, Campaigns and Elections
- \*422. Public Opinion
- \*423. The American Presidency
- \*424. The Legislative Process
- \*428. Political Behavior
- \*429. Proseminar in American Government and Politics

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## Public Policy and Administration

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- 328. Introduction to Public Policy
- \*329. The Policy Making Process
- 430. Fundamentals of Public Administration
- \*431. Program Evaluation and Policy Analysis
- \*432. Public Values and Public Policy
- \*433. Public Organization and Management
- \*436. Public Personnel Administration
- \*437. Taxation and Budgetary Policy
- \*438. Comparative Public Administration
- \*442. Planning Cities and Urban Regions
- 447. Public Administration Internship I
- 448. Public Administration Internship II
- \*449. Proseminar in Public Policy and Administration

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## Comparative Politics

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- 353. Government and Politics of Western Europe
- \*354. Government and Politics of Scandinavian Countries
- \*356. Politics of the Soviet Union and its Successors
- \*357. Politics of East-Central Europe
- \*358. Contemporary Latin American Politics
- \*359. Latin American Comparative Political Systems
- \*362. Society and National Politics of China
- \*363. Society and National Politics of Japan
- \*364. Society and National Politics of India
- \*366. Governments and Politics of Southeast Asia
- \*367. Governments and Politics of the Middle East
- \*455. Comparative Revolutionary Change
- 4611. The Politics of Development
- \*469. Proseminar in Comparative Politics

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## International Relations

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- 371. Introduction to International Politics
- \*376. International Law
- \*378. International Organization and Administration
- \*481. Interamerican Relations
- 482. American Foreign Policy
- \*484. Foreign Policy of the Soviet Union and its Successors
- \*485. International Political Economy
- \*486. National Security Policies
- \*489. Proseminar in International Politics

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## General

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- 300A. Methodological Controversies in Political Science
- 300B. Quantitative Methods in Political Science
- 388. Cyberspace Citizenship
- 391. American Government
- 395I. Politics Through Culture
- 490H. Honors Seminar
- 491H. Honors Research
- 492H. Honors Thesis
- \*493. Special Topics
- 494I. Politics of the Future
- 496. Washington Center Internship
- \*497. Special Topics
- \*498. Practicum in Politics
- \*499. Readings and Conference in Political Science

## Upper Division

General Education Category A must be completed prior to taking any upper division course.

**300A. Methodological Controversies in Political Science (3)**  
An examination of the key debates over what constitutes the proper methodological approach to the study of political and social phenomena. Topics include the philosophy of science and theoretical problems in Liberal, Marxist, and Post-Structuralist thought. (Lec 3 hrs)

**300B. Quantitative Methods in Political Science (3)**  
Problems of data collection and analysis. Impact of research methods on findings. No prior knowledge of statistics is assumed. Only basic mathematical skills are needed for success in this course. (Lecture 3 hours)

**301. Classical Political Theory (3)**  
The roots of political inquiry in the works of ancient Greek and Roman political theorists such as Socrates and the Sophists, Plato, Aristotle, Cicero, Polybius, and the Stoics. Major themes will be the relationship between the individual citizen and the Polis, justice and equality, democracy and dictatorship, and the political culture of the Mediterranean world.

**\*303. Modern Political Theory (3)**  
The emergence of modern political thought from the 17th through the 19th century in Western Europe in reaction to the English Civil War and Industrial and French Revolutions. Views of state and society expressed in the differing perspectives of John Locke, Thomas Hobbes, Jean Jacques Rousseau, John Stuart Mill, Edmund Burke, George Hegel, and Karl Marx.

**\*304. Recent Political Theory (3)**  
A critical study of major themes in political thought in industrial and post-industrial society, from the late 19th century until today. Recent thinkers who have made significant contributions to the understanding of the relationships among the individual, society, and politics will be examined.

**\*306. Contemporary Political Ideologies (3)**  
A critical examination of the nature and role of ideologies in contemporary politics. Among the major political belief systems studied will be important examples of conservatism, liberalism, socialism, communism and fascism in theory and practice.

**\*308. American Political Theory (3)**  
Critical examination of theorists, concepts and forces which have shaped American political consciousness from the Puritans to the present.

**\*311. Constitutional Law: Power (3)**  
Prerequisite: POSC 100 or 391 or equivalent. Judicial interpretation of the U.S. Constitution regarding judicial review; the power of the Presidency and the Congress; state governmental authority; nature of the American Federal System. Not open to students with credit in POSC 315.

- \*312. **Constitutional Law: Rights (3)**  
Prerequisite: POSC 100 or 391 or equivalent. Analysis of the rights and guarantees contained in the Bill of Rights and other constitutional and statutory provisions with leading cases. Not open to students with credit in POSC 314.
- \*316. **Administrative Justice and Law Making (3)**  
Process by which administrative agencies decide quasi-judicial cases involving private rights, and make rules and regulations of a quasi-legislative nature affecting private rights with reference to leading judicial decisions. Not open to students with credit in POSC 346.
- \*318. **Modern Legal Systems (3)**  
Nature of law, public and private. Emphasis on cases and materials illustrating development of Anglo-American legal institutions and processes. Background for the professional study of law.
322. **Political Parties (3)**  
Organization, functions and practices of political parties in the United States with special emphasis on California parties. Analysis of the part the political parties play in government and the importance of the two-party system in American government. Party responsibility in the United States in comparison with parties in other countries.
323. **Minority Politics in the United States (3)**  
Systematic examination of racial and ethnic minority groups in the American political system. examination of selected public policy issues of significance to American minority communities.
325. **American Political Economy (3)**  
History, structure and dynamics of the American political economy; the politics of economic policy; political responses to changes in the global economy; theories of capitalist democracy.
326. **California Government in Comparative Perspective (3)**  
The government and politics of American States including intergovernmental relations. Special focus on political institutions, current issues, and public policies in California. May not be taken to fulfill G.E. credit except under category D.1.b.
- \*327. **Urban Politics (3)**  
The institutions and processes by which social conflicts in American urban areas are generated, articulated, and managed. Urban political culture, power structures, group development and activity, and governance and policy-making are emphasized. Special attention directed toward the evaluation of urban political problems and solutions.
328. **Introduction to Public Policy (3)**  
Analysis of major contemporary United States domestic policies including agriculture, income maintenance, economic regulations, manpower training, conservation, crime control and revenue-sharing.
- \*329. **The Policy Making Process (3)**  
Examination of the processes through which public policies are formulated, adopted and implemented, and the political and organizational contexts which condition these processes.
353. **Government and Politics of Western Europe (3)**  
Governments of representative European democracies, with emphasis on governmental structure, functions and political processes and their relationship to current problems.
- \*354. **Government and Politics of Scandinavian Countries (3)**  
Comparative study of the politics of the Scandinavian "social democracies" with particular emphasis on political structures, processes and development in Sweden. Cross-national comparisons with the political systems of other West European countries and the U.S.
- \*356. **Politics of the Soviet Union and its Successors (3)**  
Examination and analysis of the evolution and fall of the Soviet system, with particular emphasis on the crisis of one-party rule and the rise of new political institutions and forces.
- \*357. **Politics of East-Central Europe (3)**  
Comparative examination and analysis of the political evolution of the countries of East-Central Europe. Particular emphasis on the post-World War II period, the rise and fall of one-party systems, and the impact of Soviet domination.
- \*358. **Contemporary Latin American Politics (3)**  
Study of government and politics with emphasis on similarities and differences of the Latin American states. Major focus on principal groups and major issues in the political process. Conflicting explanations of the obstacles to development and other current problems will be examined.
- \*359. **Latin American Comparative Political Systems (3)**  
Comparative study of the political process and public policies of selected Latin American states. Includes an examination of major political, social, and economic issues and problems associated with modernization.
- \*362. **Society and National Politics of China (3)**  
Study of the People's Republic of China, including its origin, ideology, and organization. Contemporary social, economic, and political developments.
- \*363. **Society and National Politics of Japan (3)**  
Examination of Japan's political development since 1868 with special emphasis on the social and cultural bases of Japan's political system, party politics, governmental process, political economy, and foreign relations.
- \*364. **Society and National Politics of India (3)**  
Developments in government, parties, process of elections and political ideology in India.
- \*366. **Governments and Politics of Southeast Asia (3)**  
Emergence and development of the contemporary political systems of Southeast Asia.
- \*367. **Governments and Politics of the Middle East (3)**  
Emergence and development of the contemporary political systems of the Middle East; the Arab-Israeli dispute; the role and importance of the region in international politics.
371. **Introduction to International Politics (3)**  
Study of relations among nation-states. Structure of the international political system, and adaptation by states to that structure through the use of power and diplomacy, while maintaining diversity. Instrumentalities appropriate for war and peace.
- \*376. **International Law (3)**  
Nature and historical development of international law. Determination of rules of international law. International community under law. Recognition of states and governments. Jurisdiction. Settlement of international disputes. War aggression and neutrality.
- \*378. **International Organization and Administration (3)**  
Examination of historical development, of international organization from the Concert of Europe to the United Nations. Analysis of contemporary international organization, its functions, problems and prospects in the context of the world situation.
388. **Cyberspace Citizenship (3)**  
Prerequisites: POSC 100 or approval of instructor. Study how people and institutions are migrating political, social, and economic functions to the Internet. Examine how the Internet is merging mass media, computer, and telecommunications into a new realm for human civilization: Cyberspace. Survey of cyberspace landscapes being settled by "virtual" communities, online commerce centers, Web free speech fora, and evolving governmental institutions for managing property rights, Internet expansion and resolving cyberspace conflicts. Explore the multiple dimensions of participatory citizenship in cyberspace.
391. **American Government (3)**  
Survey of American government and politics, including attention to California government. Constitutional foundations and current controversies. Satisfies the general education requirement and the California teaching credential requirement. Not open to students with credit in POSC 100.
3951. **Politics Through Culture (3)**  
Prerequisites: ENGL 100 and upper division status. Students will explore normative political issues such as justice, alienation, and oppression through a close examination of political theory, films, and literature.



- \*401. Women and the Feminine in Western Political Theory (3)  
Prerequisite: Students must have completed one course in either political science or women's studies. Differential treatment of women and men in western political theories, including femininity, power, rationality and the role of the women in the family. Classic and contemporary texts. Same course as W/ST 402.
- \*409. Proseminar in Political Theory (3)  
Prerequisites: 6 units in political theory courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in political theory. Not open to students with credit in POSC 490C.
412. Law and Social Change (3)  
Issues currently being dealt with in the American legal system (e.g., busing, affirmative action, problems of the environment, sexual discrimination). Examination of both the courts' part in creating these problems and the degree to which the courts have the potential to correct them.
- \*414. Jurisprudence (3)  
Fundamental legal philosophies, sources and classifications of law. Relationship of law to other disciplines and societal institutions.
418. Legal/Judicial Apprenticeship (3)  
Prerequisite: Consent of instructor. Courtroom, law office, public legal agency, and/or non-profit legal agency experience in conjunction with reading and research directed by a faculty member. May be repeated for a maximum of six units. No more than three units of this internship course may apply toward the major in political science. A maximum of six units may be earned in 418, 447, 448, and 498 combined. Credit/No credit grading only.
- \*419. Proseminar in Public Law (3)  
Prerequisites: Six units in public law courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in public law.
- \*420. Voting, Campaigns and Elections (3)  
Analysis of factors influencing citizen's voting choices; methods used by candidates seeking electoral support; changes and trends in American elections.
- \*422. Public Opinion (3)  
Formation and development of public opinion; methods of measuring public opinion in the political system.
- \*423. The American Presidency (3)  
The roles and powers of the American presidency with emphasis on major public policies of recent presidents.
- \*424. The Legislative Process (3)  
Analysis of the origin, development, and behavior of U.S. legislative bodies. Leadership, organization and procedures, problems and principles of law-making. Legislative relations with the executive and other governmental agencies.
- \*428. Political Behavior (3)  
Introduction to the socio-psychological basis of individual political behavior. Emphasis upon political socialization, political culture and personality as explanations of political participation, the development of political values and political action.
- \*429. Proseminar in American Government and Politics (3)  
Prerequisites: Six units in politics and policy formation courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in policy formation and politics. Traditional grading only.
430. Fundamentals of Public Administration (3)  
Principles and practices of federal, state and local administration. Not open to students with credit in POSC 331.
- \*431. Program Evaluation and Policy Analysis (3)  
Examination of the meaning and use of concepts and methods employed in public policy decision analysis, including an overview of the decision process, sources and methods of handling policy-relevant data, and methods and techniques of program evaluation and policy analysis.
- \*432. Public Values and Public Policy (3)  
Critical examination of selected value choices involving how and by whom public policy is to be made, and choices involving what should be the content and goals of public policy.
- \*433. Public Organization and Management (3)  
Theories of organization and management with emphasis on their relation to administrative problems in civilian and military spheres of American government. Not open to students with credit in POSC 334.
- \*436. Public Personnel Administration (3)  
Survey of public personnel administration, including the growth and development of the civil service, the personnel agency, recruitment procedures, position classifications, training programs, employee organization and retirement systems. Not open to students with credit in POSC 336.
- \*437. Taxation and Budgetary Policy (3)  
Social and political aspects of taxation policy. Current budgetary policymaking and administration at the federal, state and local levels. Politics and international finance and trade. Not open to students with credit in POSC 338.
- \*438. Comparative Public Administration (3)  
Theories, models, structure and function of public administration in selected countries. Not open to students with credit in POSC 348.
- \*442. Planning Cities and Urban Regions (3)  
Policymaking and the role of the planner in cities and urban regions. Activities of federal, state and local governments. Social and environmental consequences of land use, zoning, transportation and design. Historic preservation. New communities.
447. Public Administration Internship I (3)  
Prerequisite: Consent of instructor. Internships in one of the various federal, state or local governmental units in the immediate area. A maximum of six units may be earned in POSC 418, 447, 448, and 498 combined. Credit/No Credit grading only.
448. Public Administration Internship II (3)  
Prerequisite: Consent of instructor. Internships in one of the various federal, state, or local governmental units in the immediate area. A maximum of six units may be earned in POSC 418, 447, 448, and 498 combined. Credit/No Credit grading only.
- \*449. Proseminar in Public Policy and Administration (3)  
Prerequisites: Six units in public policy and administration courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in public policy and administration.
- \*455. Comparative Revolutionary Change (3)  
Roots of revolution. Emphasis on the historical setting, ideology, socio-economic factors, political leadership, organization and nationalism. Analysis of revolutionary conditions, courses and tactics past and present.
- 461I. The Politics of Development (3)  
Prerequisites: ENGL 100 and upper division status. Problems of political development in the emergent nations of Asia, Africa and Latin America.
- \*469. Proseminar in Comparative Politics (3)  
Prerequisites: Six units of comparative politics courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in comparative politics.
- \*481. Interamerican Relations (3)  
International relations among the nation-states of the Western Hemisphere and its multicultural nature. The development and role of the OAS and problems of foreign intervention, border disputes, conflict resolution, extrahemispheric and geopolitical relations. Additional issues are studied such as economic development, trade and investment, dependency, immigration and drug trafficking. (Lecture 3 hours.)
482. American Foreign Policy (3)  
Concepts, strategies, and the shaping of American relations with other states, with special emphasis on the post-World War II period. National security, economic, and political-diplomatic concerns as they present new challenges to the United States.
- \*484. Foreign Policy of the Soviet Union and its Successors (3)  
The evolution and determinants of foreign policy, with particular emphasis on the postwar period and events since 1985.

\*485. International Political Economy (3)  
Politics of global economic relations, including monetary and trade regimes, markets and multinational corporations. Emphasis on issues of confrontation and collaboration between countries regarding development strategies, services trade and technology transfer. Prospective students are strongly recommended to take POSC 371, 230, ECON 300 or the equivalent.

\*486. National Security Policies (3)  
Analysis of strategic posture with emphasis on military, political and economic inter-relationships as they influence national security and international politics.

\*489. Proseminar in International Politics (3)  
Prerequisites: Six units of international relations courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in international relations.

490H. Honors Seminar (3)  
Prerequisites: Admission to the Honors Program in Political Science. The nature and development of political science and its relationship to other disciplines in the Social Sciences. Recent developments in conceptual analysis and theory are emphasized. (Seminar.) Traditional grading only. Course meets with POSC 500.

491H. Honors Research (3)  
Prerequisite: Admission to the Honors Program in Political Science. Research for writing an Honors thesis under the direction of a faculty member. (Independent Study.) Traditional grading only.

492H. Honors Thesis (3)  
Prerequisites: POSC 491H. Research and writing of an Honors thesis under the direction of a department faculty advisor. (Independent Study.) Traditional grading only.

\*493. Special Topics (3)  
Prerequisite: Consent of instructor. Analysis of selected contemporary issues and problems. Topics to be announced in the Schedule of Classes.

494I. Politics of the Future (3)  
Prerequisites: ENGL 100 and upper division status. Study of present-day global problems: overpopulation, depletion of resources, environmental decay and their future political implications. Examination of alternative policies, future politics and institutional change. The technological revolutions and the totalitarian temptation.

496. Washington Center Internship (3)  
Prerequisites: Upper division standing and consent of instructor. Students who are accepted by the Washington Center will be assisted in locating a 30-35 hr. per week career related internship in a federal, corporate or independent sector agency located in Washington D.C. All participants utilize a learning contract. A final written report is required. Students must enroll concurrently in an independent studies course to earn credit for participation in the Washington Center's seminar. Credit/No Credit grading only. Course may be repeated for a max of 9 units. Directed Studies.

\*497. Special Topics (3)  
Prerequisite: Consent of instructor. Analysis of selected contemporary issues and problems. May be repeated for a maximum of six units with different topics. Topics to be announced in the Schedule of Classes.

#### A. The German Question

\*498. Practicum in Politics (1-3)  
Prerequisite: Consent of instructor and department chair. Political or governmental experience supplemented by reading and research under the direction of a faculty member. May be repeated for a maximum of six units. No more than three units may apply toward the major in political science. A maximum of six units may be earned in POSC 418, 447, 448, and 498 combined. Credit/No Credit grading only.

\*499. Readings and Conference in Political Science (1-3)  
Prerequisite: Consent of instructor. Directed reading to permit independent pursuit by advanced students on topics of special interest. Hours to be arranged. Graduate students who have had this course as an undergraduate may repeat it.

## Graduate Division

500. Foundations and Scope of Political Science (3)  
Prerequisite: Graduate status or consent of instructor. Approaches applied to the conceptual analysis of political phenomena. Substantive models of social and political order and change as well as methodological arguments about the nature of explanation in political science.

550. Research Methods in Political Science (3)  
Prerequisite: POSC 500. Methods of empirical research in political science including the formulation of hypotheses, problems and standards of measurement and observation, methods of data collection, research design and logic of data analysis. No prior knowledge of statistics is assumed. Only basic mathematical skills are needed for success in this course.

590. Advanced Study (3)  
Prerequisite: Consent of Graduate Coordinator and Instructor. Study under the supervision of a faculty member. Student must fulfill requirements of a selected upper division course plus additional work appropriate to graduate study as determined by the Instructor of the course. May be repeated for a maximum of 6 units with different topics.

599. Graduate Studies (3)  
Prerequisites: Consent of Graduate Coordinator and instructor. Individual graduate level study and research of special topics under the supervision of a faculty member. Traditional grading only.

600. Seminar in International Politics (3)  
Prerequisite: POSC 371 or equivalent. Seminar is designed to examine in depth various aspects of International Politics, such as the role of power, multiple dimensions of national interest, collective security, world peace, nationalism, and imperialism. Different themes selected for a given seminar become the subject of discussion and exchange of ideas in every session. May be repeated for a maximum of six units.

610. Seminar in Comparative Government (3)  
Prerequisite: Three upper division units in comparative government. Comparative study of government and politics in selected foreign countries. Intensive study of the political institutions and policies of selected foreign governments. Emphasis on political parties and contemporary governmental policy. May be repeated for a maximum of six units.

620. Seminar in Political Theory (3)  
Prerequisite: POSC 301 or 303 or equivalent. Analytical and critical examination of the major concepts of political theory. May be repeated for a maximum of six units.

640. Seminar in American Government and Public Law (3)  
Prerequisite: Three upper division units in American Politics or Public Law. Intensive study of topics and problems in American government including issues in constitutional law and the judicial process. May be repeated for a maximum of 6 units.

670. Seminar on Special Topics in Political Science (3)  
Prerequisites: Graduate standing and consent of instructor. Research, discussion, and critical evaluation of selected topics and problems of current interest in political science. May be repeated for a maximum of 6 units with different topics. Traditional grading only.

695. College Teaching Practicum (3)  
Prerequisite: Consent of Graduate Director. Internship provides teaching experience in community college. No more than three units of this practicum may be applied to the Masters requirements in Political Science. Credit/No Credit grading only.

697. Directed Research (1-6)  
Prerequisite: Consent of Department Chair. Individual research or intensive study under the guidance of a faculty member. Three units required of non-thesis students who have been advanced to candidacy for the master's degree in political science. A maximum of three units may be earned by students with credit in POSC 698. May be repeated to a maximum of six units.

698. Thesis (1-4)  
Planning, preparation and completion of thesis for the master's degree.

# PSYCHOLOGY

*College of Liberal Arts*

Department Chair

Keith R. Colman

Department Office

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Robert E. Thayer

Associate Professor

Scott L. Hershberger

Assistant Professors

Kellina M. Craig

Karen Maher

Lisa M. Maxfield

David J. Whitney

Department Administrator

Robin Moore

The Psychology Department maintains an advising and admission office in PSY-206, (562) 985-5680, for undergraduate students. Advisors are available during the Fall and Spring semesters to assist students with admission, registration, and degree requirements, as well as information about graduate study. An undergraduate handbook is available.

Students desiring graduate information should contact the department office for referral to the Graduate Coordinator.

## *Admission Under Impaction*

The number of applicants to the major in Psychology exceeds the number that can be accommodated by the Department's resources. For this reason the undergraduate Psychology major has been designated as impacted by California State University. Applicants for admission to the University with a major in Psychology will be designated as pre-majors and assigned a pre-major code. Acceptance into the pre-major category does not imply or assure subsequent acceptance into the major. Similarly, acceptance into the pre-major is not a prerequisite for admission into the major.

Admission into the major is determined solely on the basis of meeting all of the following supplemental criteria:

1. To be admitted to the psychology major, students must have received a grade of "C" or above in PSY 100 (General Psychology), PSY 200 (Research Methods), and PSY 210 (Statistics) or their equivalents.
2. Students who meet these criteria and have at least 56 semester units of college level coursework with a GPA of at least 2.50 or at least 36 semester units with a GPA of at least 3.00 will be guaranteed admission to the major. Students with at least 56 semester units of college level coursework and a GPA between 2.00 and 2.49 will be admitted on a space-available basis.

To apply for admission to the Psychology major after meeting the supplemental criteria above, a student must complete the departmental application form obtainable from the Peer Advising Office in PSY-206, and attach transcripts of all previous college work at CSULB or elsewhere. The deadline for application for admission to the major for the Fall semester is February 18th of the preceding semester and for the Spring semester is September 24th of the preceding calendar year in order to register through VRR. However, applications are accepted on an ongoing basis.

## **Bachelor of Arts in Psychology (code 2-8130) (124 units)**

Students who graduate with a major in psychology should have current knowledge of:

1. the major theories in psychology and their influences across subfields and time.
2. the major methodologies of psychological research and fundamental statistical concepts.
3. the biological processes underlying behavior.
4. sensation, perception, information processing and retention.
5. how behaviors develop and change throughout the life span.

6. how internal, environmental, and social factors influence behavior.
7. individual differences in behavior, including those related to gender, ethnicity, and culture.
8. different perspectives on the origin and treatment of abnormal behavior.
9. ethical issues in teaching, research, and the practice of professional psychology.

In the course of learning the above, students are expected to graduate with the ability to:

1. design and implement research, analyze data appropriately and judge the significance of findings.
2. critically evaluate psychological research as well as popular notions of human nature.
3. use the primary literature of the field and prepare a clear, organized summary of a topic.
4. use computers for the preparation of manuscripts, the analysis of data, and communication.
5. understand and work effectively with a diversity of individuals and groups.
6. apply theory and research to contemporary problems.
7. maintain currency in the field and utilize that knowledge in their lives.

The psychology curriculum is designed to provide undergraduate students with a broad background in the principles of Psychology.

#### Requirements

Lower Division: (14 units) PSY 100, 200, 210, 241.

Upper Division: (31 units in psychology plus 6 units chosen from outside the Psychology Department as specified below.)

1. 1 unit – PSY 301;
2. 6 units – two courses from PSY 331, 332, 333, 336 or 337, 340 or 341 or 342 or 345;
3. 6 units – two courses from PSY 351, 356, 361 or 365;
4. 6 units – two courses (not from the same group):
  - a. PSY 352, 354, 366, 370;
  - b. PSY 310, 314, 315, 359;
  - c. PSY 339I, 346I, 373, 375, 378,381;
5. 6 units – 400-level PSY courses. No more than 3 units from 405, 406A, or 406B may be counted in this category. PSY 499 cannot be counted to satisfy this requirement;
6. 6 units – any upper division psychology courses not used to satisfy the requirement of sections 2 through 5;
7. 6 units – upper division units in American Indian Studies, American Studies, Asian and Asian American Studies, Anthropology, Black Studies, Chicano and Latino Studies, Computer Studies, Economics, Educational Psychology, Geography, History, Human Development, Political Science, Social Work, Sociology, Women's Studies. At least 3 of the units must have an emphasis in contemporary U.S. ethnic studies. A list of acceptable ethnic studies courses may be obtained from the Psychology Advising Office in PSY 206.

Students are advised to consult with the Psychology Advising Office for course choices most relevant to their individual goals.

#### Minor in Psychology (0-8130)

A minimum of 23 units which must include: PSY 100, 200, 210, twelve upper division psychology units including at least one course from PSY 331, 332, 333, 336, 337, 341 or 342; and at least one course from PSY 351, 356, 361 or 365.

#### Graduate Programs

The MS Program in Psychology has been indefinitely suspended and is currently not accepting applications nor admitting students. For those seeking MFCC licensure, it is suggested they contact the Educational Psychology and Administration Department.

The Department of Psychology offers graduate study leading to the Master of Science in Psychology (community clinical) and the Master of Arts degree with two options in (1) Research or (2) Industrial and Organizational psychology. In each program a basic core, including a thesis, is required, and there is opportunity for additional work in areas of special interest. The Master of Arts Research option program prepares students for doctoral study and provides a general background in psychology. Clinical electives are available in the Master of Arts Research option program. The Master of Arts Industrial and Organizational option prepares students for professional work; some graduates have entered doctoral programs. Admission to both programs is limited.

The Department has wide and varied course offerings and is housed in specially-designed facilities, including laboratories in physiological, social-personality, human factors and other areas of psychology and computer labs.

#### Admission to Graduate Programs

Write directly to the Psychology Graduate Office for an application for admission to the graduate program in psychology. Acceptance by the department is contingent on (a) GPA based on last 60 units of undergraduate work available at time of application; (b) Graduate Record Examination scores on the verbal and quantitative sections and on the advanced psychology test, except MS program; and (c) three letters of recommendation. All application materials, including complete transcripts, GRE scores and letters of recommendation, must be received by the department graduate coordinator before March 1 for the fall semester for the Master of Arts Research option and Master of Arts Industrial and Organizational option.

A limited number of graduate assistantships are available. Students accepted into the program may be considered. Work-study assignments are available in the department, but must be applied for through the University Financial Aid Office one or two semesters prior to obtaining the assignment.

#### Master of Arts in Psychology

##### Option in General Research (code 5-8130)

This 30-unit degree program provides graduate psychology training for further study leading toward a doctorate. Core courses include quantitative and research methods as well as courses in the basic content areas of Psychology. Students from our program who later enter doctoral programs consistently inform us that they find themselves very well prepared for doctoral study as compared to other students.

#### Prerequisites

1. A bachelor's degree with a major in psychology that includes:

- A. two courses from the following (not from the same group):
  - a. PSY 331, 332, 333
  - b. PSY 336, 337
  - c. PSY 340, 341, 342, 345
- B. one of the following: PSY 351; 356; 361; 365
- C. PSY 310

or

- 2. A bachelor's degree with a major other than psychology and 24 units of upper division psychology substantially equivalent to those required for the baccalaureate degree at this university, including:
  - A. two courses from the following (not from the same group):
    - a. PSY 331, 332, 333
    - b. PSY 336, 337
    - c. PSY 340, 341, 342, 345
  - B. one of the following: PSY 351; 356; 361; 365
  - C. PSY 310
- 3. Six units of college level work in chemistry, physics, biology or mathematics as approved by the graduate coordinator. No more than three of the six units may be in approved mathematics courses.

#### Advancement to Candidacy

- 1. Classified status.
- 2. An approved program of studies for the Master of Arts, General Research Option degree.
- 3. Satisfactory completion of the CSULB Writing Proficiency Examination. Information is available in the Testing Office (SS/A-216). This requirement can also be met by evidence that the student passed the WPE while an undergraduate at CSULB or at certain CSU campuses.
- 4. A minimum 3.0 overall GPA and a 3.0 GPA in all units undertaken for the program (at least 6 graduate units).
- 5. Be enrolled in regular session.
- 6. Application for Advancement to Candidacy must be done prior to or concurrent with enrollment in PSY 698, Thesis.

#### Requirements

- 1. The student must complete, as a graduate student, 30 units of graduate coursework, 24 of which must be in Psychology (not including PSY 697 or including only three units of 678) including:
  - a. either 511 or 512 if 411 or 412 or equivalent not taken as an undergraduate;
  - b. one course chosen from 518, 527, 533, 537, 541, 545, 551, 556, 561, or 582, if corresponding 400-level course or equivalent not taken as an undergraduate;
  - c. 696;
  - d. one course chosen from 631, 632, 634, or 637; one course chosen from 651, 656, or 661; and one additional course chosen from either group; 698 (6 units).
- 2. With the graduate coordinator's approval a maximum of six units from related areas may be used for six of the 30 units.
- 3. Attendance at 12 Department Colloquia, six of which must be completed prior to preliminary oral examination.
- 4. Completion of all requirements as established by the M.A. Research Committee.

- 5. Comprehensive examinations taken in three of the four required graduate seminars.
- 6. A preliminary oral examination on the thesis proposal and a final oral examination in defense of the completed thesis.

### Master of Arts in Psychology

#### Option in Industrial and Organizational Psychology (code 5-8132)

This program admits about 20 students each Fall. Students prepare for business and industrial positions including personnel and industrial relations, employee and customer training, applicant and employee testing, etc. Graduates usually go directly into business and industry. A few have entered Ph.D. programs.

#### Prerequisites

- 1. A bachelor's degree with a major in psychology or 24 upper division units of psychology.
- 2. PSY 200 (Research Methods), PSY 310 (Intermediate Statistics), PSY 314 (Psychological Assessment) or PSY 315 (Principles of Psychological Testing), PSY 332 (Cognition) or PSY 333 (Learning) and PSY 351 (Social Psychology) or PSY 453/553 (Group Dynamics). Students may be admitted to the MAIO Program if they lack only one required course. The missing course must be completed within the first year of graduate study. Students missing more than one prerequisite course at the time of application may be offered provisional admission if they submit an approved plan to take the missing courses prior to admission.

#### Advancement to Candidacy

- 1. Classified status.
- 2. An approved program of studies of the Master of Arts, Industrial and Organizational Option degree.
- 3. Satisfactory completion of the CSULB Writing Proficiency Examination. Information is available in the Testing Office (SS/A-216). This requirement can also be met by evidence that the student passed the WPE while an undergraduate at CSULB or at certain CSU campuses.
- 4. A minimum 3.0 overall GPA and a 3.0 GPA in all units undertaken for the program (at least 6 graduate units).
- 5. Be enrolled in regular session.
- 6. Application for advancement to candidacy must be done prior to or concurrent with enrollment in PSY 698, Thesis.

#### Requirements

- 1. The student must complete a minimum of 30 units of graduate course work. Students would select either the Organizational Track or the Personnel Track. Organizational Track requirements include the following courses:
  - PSY 581, 585, 683, 512, either 575 or 696, 582, 590 (Special Topics, subject to Graduate Coordinator approval), 681, 688 and 698.
- Personnel Track requirements include the following courses:
  - PSY 581, 585, 686, 515, either 511 or 512, 582, 590 (Special Topics, subject to Graduate Coordinator approval), 681, 688 and 698.

2. A preliminary oral examination on the thesis proposal and a final oral examination in defense of the completed thesis.
3. Students with credit in 411, 412, 475 or 481 as undergraduates may petition the MAIO Program Committee to substitute a maximum of 3 units from related areas towards the 30 unit program.

### Master of Science in Psychology (code 6-8134)

The MS Program in Psychology has been indefinitely suspended and is currently not accepting applications nor admitting students. For those seeking MFCC licensure, it is suggested they contact the Educational Psychology and Administration Department.

The Master of Science in Psychology degree program covers a broad spectrum of theory and skills in the areas of community and clinical psychology and is specifically designed to meet California State requirements for Marriage, Family and Child Counseling licensure. The program provides training in a wide range of professional skills, including prevention of mental health problems, promotion of social competence, empowerment of disadvantaged groups, and development of counseling and psychotherapy skills.

#### Prerequisites

1. A bachelor's degree with a major in psychology or a major in a related field and 25 units of upper division psychology.
2. PSY 310 Intermediate Statistics; 314 Psychological Assessment or 315 Principles of Psychological Testing; 332 Cognition or 333 Psychology of Learning (or course in Behavioral Modification); 354 Psychology of Women; Ethnic Studies 319 or any upperdivision survey course; 370 Abnormal Psychology; a developmental psychology course; and 373 Introduction to Clinical Psychology.
3. Written application which is designed to screen applicants for skill and interest match with the overall program including a statement of goals and past experience in the field.
4. A personal interview conducted by a selection committee.

#### Advancement to Candidacy

#### Prerequisites

1. Classified status.
2. An approved program of studies for the Master of Science in Psychology degree.
3. Satisfactory completion of the CSULB Writing Proficiency Examination. Information is available in the Testing Office (SS/A-216). This requirement can also be met by evidence that the student passed the WPE while an undergraduate at CSULB or at certain CSU campuses.
4. A minimum 3.0 overall GPA and a 3.0 GPA in all units undertaken for the program (at least 6 units).
5. Be enrolled in regular session.
6. Application for Advancement to Candidacy must be done prior to or concurrent with enrollment in PSY 698, Thesis.

#### Requirements

1. The program is a 55-unit Master's degree. The following courses are required: PSY 516, 571 or 661, 573, 575, 576, 577, 578, 595, 672, 673A, 673B, 673C, 677 (6 units), 678 (6 units), 679, 698.
2. A preliminary oral examination on the thesis proposal and a final oral examination in defense of the completed thesis.

## Courses (PSY)

All courses in this department are traditional grading only unless otherwise stated.

### Lower Division

#### 100. General Psychology (3)

Introduction to the scientific study of human behavior. Designed to provide the student with a basic background for further study and for practical application in everyday life. (CAN PSY 2)

#### 150. Personality and Social Behavior (3)

Psychological principles pertinent to the understanding of personality and interpersonal adjustment. Discussion of research and theories of social motivation, conflict and anxiety, adjustment mechanisms and personality change.

#### 200. Research Methods (4)

Prerequisites: PSY 100 and ENGL 100 or equivalent. Introduction to basic research methods in Psychology. Principles of experimentation, naturalistic observation, correlational studies. (Lecture 3 hours, laboratory and field 3 hours.)

#### 210. Introductory Statistics (4)

Prerequisites: PSY 100 and completion of a mathematics course suitable for General Educational credit. Calculation and meaning of statistical measures. Descriptive and inferential statistics: probability, normal curve, correlation, sampling, hypothesis testing. (Lecture 3 hours, laboratory 2 hours.)

#### 230. Critical Thinking (3)

Prerequisite: Completion/concurrent enrollment in ENGL 100 or equivalent. The nature of critical thinking; models and strategies; common fallacies of reasoning; self-regulation in the thinking process; application of critical thinking to specific areas.

#### 241. Psychobiology (3)

Prerequisites: PSY 100 and ENGL 100 or equivalent. Introduction to the study of behavior from a biological point of view. Biological systems and processes underlying behavior, with emphasis on brain mechanisms, presented in the context of fundamental concepts and issues in psychology.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 300I. Mind Control or Freedom (3)

Prerequisites: ENGL 100 and upper division status. How people control others using informational, manipulative and coercive approaches. Consideration of basic processes of persuasion, coercive persuasion and coercive control; sources of power in society; and the psychological and ethical implications of freedom and responsibility in coping with control attempts by friends, government, advertisers, cults, etc.

#### 301. Introduction to Psychology as a Discipline and Profession (1)

Prerequisite: PSY 100. The course will cover the value of psychology as a field of study including its application for the BA student as well as those seeking advanced degrees. Careers and preparation for graduate work will be stressed. In addition, key ethical considerations will be discussed, as well as contemporary controversies within the field.

#### 301A. Psychology as a Discipline and a Profession — Advanced (1)

Prerequisite: PSY 100. Must be taken concurrently with PSY 301. Designed to provide the psychology major with in depth knowledge of the discipline as well as detailed information about graduate study and careers as professional psychologists. Recommended for students expecting to pursue graduate study in psychology.

**\*310. Intermediate Statistics (4)**

Prerequisite: PSY 210 or introductory statistics course. Basic theoretical concepts of statistics and the use of these concepts in the selection and development of model testing, hypothesis testing and parameter estimation procedures. Both single measure (univariate) and correlation (bivariate) concepts are included. (Lecture 3 hours, laboratory 2 hours.)

**\*314. Psychological Assessment (3)**

Prerequisites: PSY 200 and 210. Principles of assessment applied to the measurement of individual behavior and to programs intended to affect behavior. Includes interviews, tests and other methods.

**\*315. Principles of Psychological Testing (3)**

Prerequisites: PSY 210 or one statistics course. Principles and practices of group and individual testing in the fields of intelligence, aptitude, achievement, personality and interest. Emphasis on the evaluation of tests as measuring devices, their applicability and limitations.

**\*331. Sensation and Perception (3)**

Prerequisite: PSY 200. Basic phenomena of the senses, their physiological correlates and integration in complex perceptual judgments.

**\*332. Cognition (3)**

Prerequisite: PSY 200. Study of higher-order processes basic to the acquisition of knowledge. Includes thinking, problem solving, creativity, information processing, decision making, judgment, concepts and imagination.

**\*333. Psychology of Learning (3)**

Prerequisite: PSY 200. Human and animal learning with special emphasis on experimental evidence and techniques.

**\*336. Psychology of Emotion (3)**

Prerequisite: PSY 200. Discussion of research, theories and coping mechanisms of human emotions.

**\*337. Psychology of Motivation (3)**

Prerequisite: PSY 200. Situational and physiological determinants of human and animal behavior, theories of motivation and emotion, discussion of techniques and problems in the study of motivation.

**339I. Psychology of Sport Behavior and Athletic Performance (3)**

Prerequisites: PSY 100, ENGL 100, and upper division standing. Psychological dimensions of attitudes, behaviors, and performance in sport and exercise environments. Same course as KPE 339I.

**\*340. Physiology of Behavior (3)**

Prerequisite: PSY 241. An in-depth examination of central nervous system (CNS) components that underlie the major elements of our behavioral capabilities. Topics include the major structural and functional features of the neuron and of selected systems that are representative of the sensory, integrative, and motor capabilities of the CNS.

**\*341. Neuropsychology (3)**

Prerequisite: PSY 200. Neurological correlates of behavior with special emphasis upon central nervous system structure and function. Experimental evidence on which neuropsychological theories of behavior are based.

**\*342. Psychopharmacology (3)**

Prerequisites: PSY 100, 241, or equivalent. This course offers a broad introduction to the effects of various medications on the central nervous system and behavior. This includes neurotransmitter functions, physiological and biochemical mechanisms of drug action with emphasis on the effect of psychiatric medications, common "street drugs" and those sold over the counter; their potential for abuse is also considered.

**\*345. Psychophysiology (3)**

Prerequisite: PSY 200. Physiological activity occurring in humans during particular behavior states. Theoretical problems and methodological approaches.

**346I. Human Sociobiology (3)**

Prerequisites: PSY 100, BIOL 200 or 210B, or consent of instructor; ENGL 100 and upper division status. Human social behavior as seen in context of evolutionary biology. Topics include the importance of kinship in human societies, altruism and reciprocity, human sexuality, parent-offspring relations, ethical and legal systems and religion.

**350I. Psychology and Contemporary Social Issues (3)**

Prerequisites: PSY 100, ENGL 100, and upper division status. Application of social psychological principles toward understanding major contemporary social issues.

**351. Social Psychology (3)**

Prerequisite: PSY 100. Study of individuals and groups as they are affected by social interactions. Includes such topics as social cognition and learning, attitudes and persuasion, social influence (conformity, obedience), interpersonal perception and attraction (liking and loving), anti- and prosocial behavior (aggression, violence, altruism), cooperation and competition, leadership, group dynamics, sexual behavior. Not open to students with credit in SOC 335I.

**352. Psychology of Male Roles (3)**

Prerequisite: PSY 100. Exploration of male roles as they affect interactions between men and men, men and women, and men and children, as well as interactions related to work and play. Course is designed to enhance personal understanding through an examination of theory, research and experience.

**353. Humanistic Psychology (3)**

Prerequisite: PSY 100. Examination of theories, findings and methods derived from humanistic psychology, including encounter groups, mediation, sex roles, ESP, dreams, death and application of humanistic approaches to social institutions, education and psychotherapy.

**354. Psychology of Women (3)**

Prerequisite: PSY 100. Psychology of sexism; the biological and social determinants of the psychology of women. Open to all qualified men and women students.

**356. Personality (3)**

Prerequisite: PSY 100. Discussion of theories, research and assessment in personality.

**359. Self-Observation and Self-Development (3)**

Prerequisite: PSY 100. Examination of personal traits and behavior patterns as reflected by objective measures, group interactional procedures and video feedback. Development of self through systematic self-observation.

**361. Psychology of Child and Adolescent Development (3)**

Prerequisite: PSY 100. Theoretical and methodological approaches in the study of developmental change processes from prenatal development through adolescence. Emphasis on ethnic, gender, and social class differences in development combined with emphasis on the universal features of human development. Topical coverage includes physical-motoric, social, physiological, and cognitive aspects of development.

**365. Psychology of Adult Development and Aging (3)**

Prerequisite: PSY 100. Methodological and theoretical problems and issues in the study of developmental change processes from young adulthood through old age. Topical coverage includes physical-motoric, social, physiological and intellectual aspects of behavioral functioning.

**366. Fathers and Fathering: A Psychosocial View (3)**

(This course is for both women and men.) Prerequisites: PSY 100, SOC 100 or FCS 111. An overview of the psychological literature on parenting with emphasis on fathers/fathering in the U.S. Focus on current literature and research regarding the perceived and changing roles of fathers, including ethnic fathers, in an effort to diminish stereotypes. Same course as FCS 358.

**370. Abnormal Psychology (3)**

Prerequisite: PSY 100. An overview of abnormal behavior as a portion of the continuum of human behavior. The course will cover the field's historical approaches, the range of psychological disorders, as well as their biological, psychological, social consequences, and treatment.

- 373 Introduction to Clinical Psychology (3)  
Prerequisite: PSY 370. Survey of the field of clinical psychology including an introduction to its history, diagnostic procedures, therapeutic process, clinical training, research approaches, and ethical issues.
375. Community Psychology (3)  
Prerequisite: PSY 100. Basic concepts and skills of community psychology, including community assessment, community intervention, program evaluation and social policy analysis, relationships between social systems and individual behavior. Emphasis on economically disadvantaged, minorities, women, youth and the aged.
378. Health Psychology (3)  
Prerequisite: PSY 100. Research and theory regarding attitudes, beliefs, and behaviors related to health and illness. Individual difference variables will be examined. Analysis of applications of psychology to prevention, counseling, and treatment of major health problems.
381. The Psychology of Work Behavior (3)  
Prerequisite: PSY 100. Problems and procedures in industrial psychology. Consideration of job analysis, personnel selection and appraisal, organizational and social context of human work, physical environment and consumer behavior.
- \*390. Special Topics in Psychology (3)  
Prerequisite: Consent of instructor. Topics of current interest in psychology selected for intensive development. May be repeated with different topics to a maximum of nine units, but no more than six units may be used to satisfy requirements of the major.
- 401./501. History of Psychology (3)  
Prerequisite: Six upper division units in psychology. The historical background and development of psychology as a science. Contributions of major individuals and systems.
- \*405. Field Work in Psychology (3)  
Prerequisites: Psychology major, junior or senior standing (3.0 GPA), PSY 200, 210, 12 upper division units in psychology, letters of recommendation, consent of instructor. Student works under the supervision of, or in association with, a professional having an advanced degree in a psychological discipline and who is engaged in the practice of some aspect of psychology in the surrounding community. Placements include schools, hospitals, clinics, and community mental health agencies. Nine hours of field work per week for a minimum of 13 weeks. May be repeated to a total of six units. Credit/No Credit grading only.
- 406A,B. Applications of Psychology (3)  
Prerequisite: Consent of instructor. Students are expected to take 406B during the spring semester. Students apply for the 406A-B sequence during the spring of the academic year before the courses are taken. Theoretical and laboratory training in the topic areas are followed by applied work with clients, schools, businesses, etc., as appropriate. Students are supervised by the course instructor. Same course as SW 406A,B.
- 407./507. Introduction to Family Therapy (3)  
Prerequisites: PSY 200, 373, 475 or consent of the instructor. Survey of the field of family therapy including origins of differences in family structure, historical development of family therapy theory and practice.
- 411./511. Statistical Design and Analysis of Experiments (3)  
Prerequisite: PSY 310 or 412 or consent of instructor. Simple and complex designs. Statistical inference in economical experimentation and in scientific inference and prediction.
- 412./512. Multivariate Statistical Analysis (3)  
Prerequisite: PSY 310 or 411 or consent of instructor. Accuracy and cost of inference from multiple variables. Theoretical implications of inferred structures. Applications.
416. Introduction to Program Evaluation and Needs Assessment (3)  
Prerequisites: PSY 310, 314. Introduction to the methods of assessing needs and designing, implementing, analyzing and reporting evaluations of programs in mental health, industry, criminal justice, education and community settings. (Lecture 2 hrs, lab 3 hrs.)
- 418./518. Computer Applications in Psychology (3)  
Prerequisites: PSY 310 or equivalent or consent of instructor. Foundations of computer technology and its application to psychology. Emphasis on real-time control by digital computers in psychological research and applications. (Lecture 2 hours, laboratory 2 hours.)
- 427./527. Human Factors (3)  
Prerequisites: PSY 310 and two of the following: PSY 331, 332 or 333. Systematic application of psychological principles to the design of person-machine systems. Emphasis in the laboratory on the development of skills required of a human factors psychologist. These skills will include systems and analysis, cognitive task analysis, rapid prototyping and usability testing. (Lecture 2 hrs, laboratory 3 hours) Traditional grading only.
- 433./533. Research in Cognition and Learning (3)  
Prerequisites: PSY 200, 310, and 331 or 332 or 333. Research methods in cognition, learning, and perception. Laboratory includes experiments on selected topics. (Lecture 2 hours, laboratory 3 hours.)
- 436./536. Psychology of Mood (3)  
Prerequisites: PSY 100, 200, 310, or permission of instructor. Analyses of normal mood states, including survey of existing literature. Topics may include the relationship of mood to important antecedents and consequences such as sleep-wake cycles, exercise, nutrition, physical health, stress, and cognition. Self-applications for purposes of mood regulation also will be covered.
- 437./537. Research in Emotion and Motivation (3)  
Prerequisites: PSY 200, 310, and 336 or 337. Research methods in emotion and motivation. (Lecture 2 hours, laboratory 3 hours.)
- 438./538. Psycholinguistics (3)  
Prerequisites: Six units of linguistics or upper division psychology. Psychological and linguistic approaches to the study of language. Theory and research in the production and understanding of language, language acquisition, memory for language, and use of language in its social context.
- 439./539. Language Acquisition (3)  
Prerequisites: Six units of linguistics or upper division psychology, or consent of instructor. Theory and research on the acquisition of first and second languages in children and adults. Psycholinguistic perspectives on the development of phonological, syntactic, semantic, and pragmatic aspects of language. The interacting roles of developmental stages, cognitive processes, individual differences, social influences, and the cultural context will be stressed. (Seminar)
- 441./541. Research in Physiological Psychology (3)  
Prerequisites: PSY 200, 310, and 341. Research methods in psychobiology. Includes fundamentals of neuroanatomy, surgical procedures for stimulation, lesioning and recording, pharmacological procedures used in neuropsychological research. (Lecture 2 hours, laboratory 3 hours.)
- 445./545. Research in Psychophysiology (3)  
Prerequisites: PSY 200, 310, 345. Research methods in human psychophysiology. Includes polygraph recording and analysis in human response systems such as brain, skin, cardiovascular and respiratory systems. (Lec 2 hrs, lab 3 hrs)
- 451./551. Research in Social Psychology (3)  
Prerequisites: PSY 200, 310, 351, or consent of instructor. Research methods and problems in social psychology. (Lecture 2 hrs, lab 3 hrs)
- 453./553. Principles of Group Dynamics (3)  
Prerequisite: PSY 200, 210, 351, or consent of instructor. Behavior in groups with attention to such factors as leadership, followership, interaction and influence including organization, management, morale, and efficiency. Problems, techniques and methods of investigation.
- 456./556. Research in Personality (3)  
Prerequisites: PSY 200, 310, 356, or consent of instructor. Research methods and problems in personality. (Lecture 2 hrs, laboratory 3 hrs.)



**\*457. Psychology of Sexuality (3)**

Prerequisites: PSY 351 or 356 or 370, and Psychology Major with senior class standing. Survey of topics in human sexuality with emphasis on developmental psychology of sexuality, attitudes and feelings related to sexuality, sexual variations and deviations, and sexual dysfunction and sex therapy.

**458. Current Issues in Personality (3)**

Prerequisites: PSY 200 and 356. Current theoretical, philosophical and methodological issues in personality. Coverage may include the person-situation interaction, the role of genetics, aggression, altruism, stress/coping, and gender differences.

**461./561. Research in Developmental Psychology (3)**

Prerequisites: PSY 200; 310; 361 or 365. Research methods in life-span developmental psychology. Includes cross-sectional and sequential design and statistical models. (Lecture 2 hours, laboratory 3 hours.)

**462. Cognitive Development (3)**

Prerequisites: PSY 200; PSY 332, 361, or equivalent. Phenomena of lifespan cognitive development considered within the framework of major theories. Examination of research on topics including development of perception; thinking, reasoning, and intelligence; language; memory; and metacognition. Integration of developmental processes; biological and cultural constraints.

**463. Social and Personality Development (3)**

Prerequisites: PSY 361. The development of social behavior and personality in children and adults. Coverage will include theoretical approaches and processes as well as content areas, such as the development of aggression, morality, prosocial behavior, peer relations, and sex differences.

**475./575. Clinical Interviewing (3)**

Prerequisites: Permission of instructor, PSY 314. Study and development of the clinical techniques of observation and the interview.

**477. Psychology of Drinking and Smoking (3)**

Prerequisites: PSY 200, PSY 210, and six upper division psychology units. An examination of theory and research on psychological causes and effects of drinking of alcohol and smoking of cigarettes, including analyses of individual differences on major demographic variables of sex, age, and ethnicity. Consideration of major approaches and methods to recovery from alcohol dependency and achieving smoking cessation. Traditional grading only.

**481./582. Research in Industrial & Organizational Psychology (3)**

Prerequisites: PSY 200 and 310. Research methods and problems in industrial psychology. Includes direct observational, psychophysical, regression, survey, experimental, and quasi-experimental methods. (Lecture 2 hrs, lab 3 hrs.)

**\*490. Advanced Topics in Psychology (3)**

Prerequisite: One 300-level course in the subject matter of the course. Advanced study of selected topics in one basic area of psychology, e.g., cognition and learning, emotion and motivation, physiological, social, personality or developmental. May be repeated with different topics to a maximum of nine units. See Schedule of Classes for subjects being offered during a given semester.

**A. Applied Social Psychology**

**\*491. Advanced Topics in Psychology (3)**

Prerequisite: One 300-level course in the subject matter of the course. Advanced study of selected topics in one basic area of psychology, e.g., cognition and learning, emotion and motivation, physiological, social, personality or developmental. See Schedule of Classes for subjects being offered during a given semester.

**495./595. Ethical and Legal Issues in Psychology (3)**

Prerequisites: PSY 200, 370 and six additional units of upper division psychology. Ethical principles in human and animal research and in applied areas of psychology. Emerging legal issues in the fields of forensic psychology, behavior modification, criminal justice and clinical practice will be discussed.

**499. Independent Study (1-3)**

Prerequisite: Consent of department. Student will conduct independent laboratory or library research and write a report of the research. May be repeated for a maximum of 6 units.

**Graduate Division**

**501./401. History of Psychology (3)**

Prerequisite: Six upper division units in psychology. The historical background and development of psychology as a science. Contributions of major individuals and systems. Traditional grading only.

**507./407. Introduction to Family Therapy (3)**

Prerequisites: PSY 200, 373, 475 or consent of the instructor. Survey of the field of family therapy including origins of differences in family structure, historical development of family therapy theory and practice. (Lecture/ Discussion.) Traditional grading only.

**511./411. Statistical Design and Analysis of Experiments (3)**

Prerequisite: PSY 310 or 412/512 or consent of instructor. Simple and complex designs. Statistical inference in economical experimentation and in scientific inference and prediction. (Lec 3 hours.) Traditional grading only.

**512./412. Multivariate Statistical Analysis (3)**

Prerequisite: PSY 310 or 411/511 or consent of instructor. Accuracy and cost of inference from multiple predictors. Discovering structural relationships among multiple variables. Theoretical implications of inferred structures. Applications. (Lecture 3 hours.) Traditional grading only.

**515. Test Construction Theory and Practice (3)**

Prerequisites: PSY 314 or 315. Consideration of problems in the construction of tests for personnel selection, educational screening, personality assessment, aptitude estimating, and measurement of academic achievement. Practice in the development of tests. (Lecture 2 hrs, laboratory 2 hrs.) Traditional grading only.

**516. Program Evaluation (3)**

Prerequisites: PSY 310, 314. Methods of designing, implementing, analyzing, and reporting evaluations of programs in mental health, industry, criminal justice, education, and community settings. Traditional grading only.

**518./418. Computer Applications in Psychology (3)**

Prerequisites: C/ST 200 or equivalent; PSY 310 or equivalent or consent of instructor. Foundations of computer technology and its application to psychology. Emphasis on real-time control by digital computers in psychological research and applications. (Lecture 2 hrs, laboratory 2 hrs.) Traditional grading only.

**527./427. Human Factors (3)**

Prerequisites: PSY 310 and two of the following: PSY 331, 332 or 333. Systematic application of psychological principles to the design of person-machine systems. Emphasis in the laboratory on the development of skills required of a human factors psychologist. These skills will include systems analysis, cognitive task analysis, rapid prototyping and usability testing. (Lecture 2 hrs, laboratory 3 hours.) Traditional grading only.

**533./433. Research in Cognition and Learning (3)**

Prerequisites: PSY 200, 310, and 331 or 332 or 333. Research methods in cognition, learning, and perception. Laboratory includes experiments on selected topics. (Lecture 2 hrs, lab 3 hrs.) Traditional grading only.

**536./436. Psychology of Mood (3)**

Prerequisites: PSY 100, 200, 310, or permission of instructor. Analyses of normal mood states, including survey of existing literature. Topics may include the relationship of mood to important antecedents and consequences such as sleep-wake cycles, exercise, nutrition, physical health, stress, and cognition. Self-applications for purposes of mood regulation also will be covered.

**537./437. Research in Emotion and Motivation (3)**

Prerequisites: PSY 200, 310, and 336 or 337. Research methods in emotion and motivation. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

- 538./438. Psycholinguistics (3)  
Prerequisites: Six units of linguistics or upper division psychology. Psychological and linguistic approaches to study of language. Comparison of human language with communication in lower animals. Language development, disorders, symbolism and universals. (Lecture 3 hours.) Traditional grading only.
- 539./439. Language Acquisition (3)  
Prerequisites: Six units of linguistics or upper division psychology, or consent of instructor. Theory and research on the acquisition of first and second languages in children and adults. Psycholinguistic perspectives on the development of phonological, syntactic, semantic, and pragmatic aspects of language. The interacting roles of developmental stages, cognitive processes, individual differences, social influences, and the cultural context will be stressed. (Seminar.) Traditional grading only.
- 541./441. Research in Physiological Psychology (3)  
Prerequisites: PSY 200, 310, and 341. Research methods in psychobiology. Includes fundamentals of neuroanatomy, surgical procedures for stimulation, lesioning and recording, pharmacological procedures used in neuropsychological research. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
542. Techniques of Physiological Psychology (3)  
Prerequisites: PSY 541./441. Development of physiological methods and animal surgical procedures in the study of behavior. (Discussion 1 hour, laboratory 6 hours.) Traditional grading only.
- 545./445. Research in Psychophysiology (3)  
Prerequisites: PSY 200, 310, 345. Research methods in human psychophysiology. Includes polygraph recording and analysis in human response systems such as brain, skin, cardiovascular and respiratory systems. (Lec 2 hrs, lab 3 hrs.) Traditional grading only.
- 551./451. Research in Social Psychology (3)  
Prerequisites: PSY 200, 310, 351, or consent of instructor. Research methods and problems in social psychology. (Lecture 2 hrs, laboratory 3 hrs.) Traditional grading only.
- 553./453. Principles of Group Dynamics (3)  
Prerequisites: PSY 200, 210, 351, or consent of instructor. Behavior in groups with attention to such factors as leadership, followership, interaction and influence including organization, management, morale, and efficiency. Problems, techniques and methods of investigation. (Lecture/Discussion.) Traditional grading only.
- 556./456. Research in Personality (3)  
Prerequisites: PSY 200, 310, 356, or consent of instructor. Research methods and problems in personality. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
- 561./461. Research in Developmental Psychology (3)  
Prerequisites: PSY 200; 310; 361 or 365. Research methods in life-span developmental psychology. Includes cross-sectional and sequential design and statistical models. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
571. Behavior Disorders of Children (3)  
Prerequisites: PSY 370; PSY 361 or ED P 301, consent of graduate coordinator. Investigation of the etiology, classification, diagnosis and treatment of behavior disorders in children from birth through adolescence. Traditional grading only.
573. Clinical Psychology (3)  
Prerequisites: PSY 373 or consent of the instructor. Consideration and evaluation of clinical assessment, psychotherapeutic processes and current trends in clinical psychology. Traditional grading only.
- 575./475. Clinical Interviewing (3)  
Prerequisites: PSY 314 or 315. Permission of Instructor. Study and development of the clinical techniques of observation and the interview. Traditional grading only.
576. Cross-Cultural Psychology: Approaches, Theories, and Issues About Minority-Americans (3)  
Prerequisites: AMST 319, AIS 319, ASAM 319, B/ST 319, CHLS 319 or W/ST 319. This course focuses on the development and practice of mental health service delivery in minority-American communities. The purpose of the seminar is for students to obtain an understanding of past and present issues in the delivery of mental health services for particular third world groups in the United States, i.e., Chicanos, Blacks, Asian Americans. This understanding will hopefully facilitate the student's conceptualization of mental health service delivery and enable the integration of theoretical concepts within the socio-cultural context of these groups. Traditional grading only.
577. Counseling Ethnically Diverse Populations (3)  
Prerequisite: PSY 576; open to second year MS students. This course focuses on specific clinical and interviewing techniques for treating children, adolescents, couples, families and adults from a "diverse" perspective. The course will help prepare students to handle their placement and practical experiences. Traditional grading only.
578. Sex and Child and Substance Abuse (3)  
Prerequisites: Enrollment in the Masters of Science in Psychology Program and/or consent of the instructor and Graduate Coordinator. Assessment and treatment issues in human sexuality, child abuse, alcoholism and chemical dependency. Traditional grading only.
581. Organizational Psychology (3)  
Prerequisites: PSY 351 or 453/553. Analysis of organizational behavior and practices from a systems point of view. Consideration of employee motivation, power, leadership, communication, decision-making, and organizational change. Research methods for studying organizations. Traditional grading only.
- 582./481. Research in Industrial and Organizational Psychology (3)  
Prerequisites: PSY 200 and 310. Research methods and problems in industrial psychology. Includes direct observational, psychophysical, regression, survey, experimental, and quasi-experimental methods. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.
585. Proseminar in Personnel Psychology (3)  
Prerequisites: PSY 314 or 315. Advanced consideration of problems and procedures in personnel psychology. Includes both differentiation and synthesis of major areas within this field. Not open to students with credit in PSY 586. Traditional grading only.
590. Advanced Topics in Psychology (1-3)  
Prerequisites: Consent of instructor. Topics of current interest in psychology selected for intensive development. May be repeated (with selection of different topics) for a maximum of six units. Topics will be announced in the Schedule of Classes. Traditional grading only.
- A. Large Group Intervention  
B. SPSS-Data Analysis  
C. Levels of Analysis  
D. Introduction to Time Series Analyses  
E. SAS (Statistical Analysis System)  
F. Designing Effective Teams
- 595./495. Ethical and Legal Issues in Psychology (3)  
Prerequisites: PSY 200, 370 and six additional units of upper division psychology. Ethical principles in human and animal research and in applied areas of psychology. Emerging legal issues in the fields of forensic psychology, behavior modification, criminal justice and clinical practice will be discussed. Traditional grading only.
599. Independent Study (1-3)  
Prerequisite: Consent of department. Unclassified graduate student will conduct independent laboratory or library research and write a report of the research. May be repeated for a maximum of 6 units. Traditional grading only.
631. Seminar in Perception and Physiological Psychology (3)  
Prerequisite: PSY 331 or 340 or 341 or 342 or 345 or consent of instructor, consent of graduate coordinator. Critical examination of selected topics in perception, information processing and neurophysiological correlates of behavior. Student emphasis on either perception or physiological psychology. Traditional grading only.

**632. Seminar in Learning (3)**

Prerequisites: PSY 333 or consent of instructor, consent of graduate coordinator. Advanced consideration of selected topics in learning. Traditional grading only.

**634. Seminar in Cognition (3)**

Prerequisites: PSY 333 or 332 or consent of instructor, consent of graduate coordinator. An examination of method, theory and experimental evidence in selected topics from the area of cognition. Traditional grading only.

**637. Seminar in Emotion and Motivation (3)**

Prerequisites: PSY 336 or 337 or consent of instructor, consent of graduate coordinator. Advanced consideration of selected topics in animal and human motivation and emotion. Traditional grading only.

**651. Seminar in Social Psychology (3)**

Prerequisites: PSY 351 or consent of instructor, consent of graduate coordinator. Critical examination of interpersonal relations, social influence, group membership and influence, and intergroup relations. Traditional grading only.

**656. Seminar in Personality (3)**

Prerequisites: PSY 356 or consent of instructor, consent of graduate coordinator. Theories of personality structure, dynamics, and development. Critical examination of research deriving from different theoretical approaches. Traditional grading only.

**661. Seminar in Developmental Psychology (3)**

Prerequisites: PSY 361 or consent of instructor, consent of graduate coordinator. Consideration of theoretical and methodological issues in life span developmental psychology. Critical examination of research on selected topics, including development of physiological function, intelligence, language, learning processes, sensory processes, perception, personality and social behavior. Traditional grading only.

**672. Seminar in Community Psychology (3)**

Prerequisites: Enrollment in MS graduate program and/or consent of instructor and graduate coordinator. Survey of topics in community/clinical psychology such as development of discipline, changing roles of mental health professionals and the nature of indirect vs. direct helping roles. Traditional grading only.

**673A. Practicum in Prevention, Promotion and Empowerment (3)**

Prerequisites: PSY 672. Supervised exposure to projects that emphasize prevention of mental health problems, promotion of social competence and empowerment of disadvantaged groups. Students to be supervised in small groups. Projects to be conducted either in community agencies or at the University. Traditional grading only.

**673B. Practicum in Program Development (3)**

Prerequisites: PSY 673A. Supervised experience on program development to include: needs assessment, grant writing, agency collaboration, and program evaluation. Programs will reflect community psychology emphasis of prevention, education and meeting the needs of underserved populations.

**673C. Practicum in Program Implementation (3)**

Prerequisites: PSY 673A,B. Supervised experience in implementation of projects developed in PSY 673B. Traditional grading only.

**677. Clinical Practicum/Community (3)**

Prerequisite: Open to second or third year MS students. Students will serve under the supervision of a licensed MFCC professional in selected community agencies for at least 16 hours per week for two semesters. They will perform duties in the areas of community and/or clinical psychology; e.g., doing individual or group therapy, running "rap groups" for drug abuse prevention in the school, leading parent effectiveness groups, or working with teen mothers. Course must be repeated for a maximum of 6 units. Traditional grading only.

**678. Clinical Practicum/Campus (3)**

Prerequisites: PSY 370, 475/575, 573, consent of instructor and graduate coordinator, advancement to candidacy. Clinical practice in varied clinical settings. Individual work with clients, diag-

nostic procedures, staff conferences, and case management. May be repeated for a maximum of six units of credit. Traditional grading only.

**679. Clinical Family Therapy (3)**

Prerequisites: PSY 373. Didactic training in the theories and practice of family therapy.

**681. Seminar in Applications of Psychology to Industry (3)**

Prerequisites: At least 12 units of graduate-level work within the MA/IO program including 511 or 512 and 582. Psychological applications to current problems of industry. Development of thesis proposal and pretest of thesis research techniques required. Traditional grading only.

**683. Issues of Organizational Development (3)**

Prerequisites: PSY 581. An examination of the theory, research, techniques, and practices in the field of organizational development, the professional practice of managing change in organizations. The organizational development steps of diagnosis, contracting, data collection, intervention, and evaluation will be covered. Techniques, such as team building, systems analysis, process consultation, large-group interventions and survey feedback will be examined. Special attention will be paid to challenges of organizational development in diverse and international organizations. Traditional grading only.

**686. Issues in Training (3)**

Prerequisites: PSY 332 or 333, and 585. This course is designed to provide students enrolled in the MA/IO program with advanced training in the area of training and development programs for organizations. The course will cover issues in the adult learning environment, needs assessment, training design and implementation, evaluation of training, executive and management development, special issues in training, and the learning organization. As the intent of the course is to prepare students to be competent developers and presenters of training programs, a major focus will be placed on providing students with experiential skill practice in the areas of needs assessment, design, and implementation. Traditional grading only.

**688. Practicum in Industrial and Organizational Psychology (2)**

Prerequisites: At least 12 units of graduate-level coursework within the MA/IO program. Practice of industrial psychology or human factors in various industrial settings. Individual research and consultation with industrial or governmental organizations. Traditional grading only.

**690. Seminar in Psychology (3)**

Prerequisites: Consent of instructor and graduate coordinator, advancement to candidacy. Seminar on topics of current interest in psychology selected for intensive development at an advanced level. May be repeated for a maximum of six units with different topics. Traditional grading only.

**696. Research Methods (3)**

Prerequisites: PSY 411/511 or 412/512, consent of graduate coordinator. The nature and function of research in the behavioral sciences. Experimental, correlational and case study methods. Research design and analysis using multiple linear regression model, general probability models and Bayesian inference. This course is offered particularly for Master of Arts students and includes the required comprehensive examination for MA Research students. Traditional grading only.

**697. Directed Research (1-3)**

Prerequisites: Consent of graduate coordinator and department. Theoretical and experimental problems in psychology requiring intensive analysis. Traditional grading only.

**698. Thesis (1-6)**

Prerequisites: Advancement to candidacy, consent of advisor. MA/IO students: PSY 681 as prerequisite or corequisite. Planning, preparation, and completion of a thesis in psychology. Must be repeated for a total of six units of credit.

# PHYSICAL THERAPY

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## Master of Physical Therapy (code 7-1226)

The Master of Physical Therapy program is designed to provide entry-level professional preparation in physical therapy consistent with national trends. The proposed curriculum consists of 60 units of didactic course work followed by 12 units of postgraduate clinical internship for licensure to practice physical therapy in the State of California. The professional course work is preceded by appropriate prerequisite courses at the undergraduate level. This program will provide an opportunity for the student with a baccalaureate degree in physical therapy or in a related field of study, or who currently holds a license to practice physical therapy, to pursue a professional masters degree in physical therapy (not an advanced clinical speciality degree). Graduates will be prepared to assume responsible clinical administrative and consultative roles in a broad spectrum of physical therapy practice settings; and be responsive to changing expectations, the expanding body of knowledge, and the physical therapy practice environment.

### Requirements

The Master of Physical Therapy program requires completion of all prerequisite and professional course work described in the following:

#### Program Prerequisites

Natural Sciences: CHEM 111A, 111B, 327; PHYS 100A, 100B

Biological Sciences: A/P 208, 341, 441; BIOL 211A, 211B; HHS 401, 460, 471

Biostatistics: BIOL 260 (or equivalent)

Behavioral Sciences: PSY 100; HHS 374

(Note: Computer literacy is expected.)

#### MPT Core Requirements

Core: P T 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 522, 523, 524, 604, 605, 606A, 606B, 607, 696, 698

Electives: 610-619

#### Postgraduate Internship Certification Requirements

P T 525 (must be completed to be eligible to take the state examination for licensure)

#### Admission to the Master of Physical Therapy Program

The physical therapy masters program is open to all college graduates with a Bachelor of Science degree in Physical Therapy, or other disciplines, who have met prerequisite requirements and demonstrate academic promise and the ability to perform at a satisfactory level during their graduate studies.

To be considered for acceptance into the graduate program, the applicant must:

1. Complete all prerequisite courses with a minimum of "C";

2. Hold, or be eligible to hold, an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by an appropriate campus authority;
3. Have attained a grade point average of at least 2.5 (A=4.0) in the last 60 semester (90 quarter) units attempted;
4. Submit results of the General Aptitude Section of the Graduate Record Examination (quantitative, verbal, and analytical), taken within the past 5 years;
5. Provide academic and personal references as required;
6. Provide documentation of personal experience in a variety of physical therapy settings; and
7. Be recommended by the physical therapy faculty.
8. All candidates whose preparatory education was principally in a language other than English must demonstrate competency in English. Refer to the CSULB Bulletin for requirements for completing the Test of English as a Foreign Language (TOEFL).

The master's degree program is a 60-unit, four semester full-time course of study. Graduates who have not met licensure eligibility requirements or who do not hold a valid physical therapy license (have not completed the BS degree in physical therapy) will be required to take a post-graduate internship (6 units). The course of study is most appropriate for graduates with degrees in related fields but does not exclude the person holding a baccalaureate degree in physical therapy. For graduates holding the BS degree in physical therapy, courses may be petitioned for the purpose of waving them providing a similar or like course has been completed which meets licensure standards. The emphases in the curriculum is to prepare graduates who desire to practice in a variety of clinical settings, e.g., private practice, acute care, rehabilitation, home health and extended care.

#### Advancement to Candidacy Requirements

1. Classified graduate student status.
2. Satisfactory completion of the CSULB Writing Proficiency Examination.
3. A minimum 3.0 overall grade point average in all graduate level course work.
4. Be recommended by the faculty to take the comprehensive examination.
5. Enrollment in regular session.

#### Requirements for Admittance to Clinical Practice

1. Complete all requirements for the master's at the time of application to clinical practice.
2. Earn a minimum of 3.0 (B) in each professional course attempted.
3. Successfully complete a research thesis or project under the guidance of a faculty advisor.
4. Successfully complete a comprehensive examination.

## Courses (P T)

### Lower Division

210. Orientation to Health Care Professions (1)  
Prerequisite: Consent of instructor. Orientation to health care professions.

### Upper Division

301. Anatomy and Kinesiology I (4)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Covers normal human anatomy, kinesiology and pathkinesiology with emphasis on the upper extremity, head, neck, and trunk. Also includes histology, tissue mechanics and tissue pathomechanics. (Lecture 2 hours, laboratory 6 hours).

302. Anatomy and Kinesiology II (4)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Continuation of PT 301 with emphasis on the normal anatomy, kinesiology and pathomechanics of posture and gait. (Lecture 2 hours, laboratory 6 hours).

325. Human Development for Therapists (2)  
Prerequisites: Admission to physical therapy professional program and consent of instructor. Human development from conception through changes accompanying the aging process with emphasis on normal development of the sensorimotor system. Also includes normal and abnormal reflex development, assessment of the developmental level, sensory, perceptual and psychosocial development.

350. Principles of Physical Therapy I (3)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. The recognition, specification and performance of definitive musculoskeletal physical therapy assessment procedures, including treatment planning process. (Lecture 2 hrs, lab 3 hrs)

351. Principles of Physical Therapy II (3)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in basic patient care, including massage, hydrotherapy, traction, intermittent compression, wrapping, bandaging and aseptic technique. (Lecture 2 hours, laboratory 3 hours.)

353. Principles of Physical Therapy III (3)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in electrotherapy and assessment procedures for neuromuscular disorders. Course fees not to exceed \$25.00. (Lecture 2 hours, laboratory 3 hours.)

360. Neuroanatomy for Therapists (3)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Normal human neuroanatomy with emphasis on the central nervous system, its structure, function, and blood supply. Includes laboratory experiences with CNS and brain specimens. (Lecture 2 hrs, laboratory 3 hrs).

371. Clinical Medicine I (3)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Survey of general pathology with emphasis on the role of the physical therapist in patient care.

380. Clinical Practice I (1-4)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Initial supervised preclinical experience in designing, implementing and managing a physical therapy plan of care, including recognition, specification and performance of definitive physical therapy assessment procedures. Credit/No Credit grading only.

407. Systems Physiology for Therapists (3)  
Prerequisites: Admission to the physical therapy professional program and consent of the instructor. Mechanisms of action and interaction of the physiological body systems with emphasis on the cardiovascular, immune, respiratory, and renal systems. Pathological and clinical considerations relevant to physical therapy are also presented. (Lecture 2 hrs, laboratory 3 hrs).

425. Biophysical Aspects of Human Growth (3)  
Prerequisites: A/P 207, HHS 401 (concurrently). Study of human development from birth to senescence with emphasis on concepts of motor, skeletal, and neurological development processes necessary to prepare for evaluation and treatment intervention in musculoskeletal and neurological disabilities. (Lecture 2 hrs, lab 3 hrs) Traditional grading only.

430. Principles of Physical Therapy IV (4)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in designing, implementing and managing a physical therapy plan of care, including therapeutic exercise design, assistive devices and the recognition, specification and performance of definitive physical therapy assessment procedures. (Lecture 3 hours, laboratory 3 hours.)

431. Principles of Physical Therapy V (4)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in advanced therapeutic exercise, including the recognition and performance of definitive physical therapy assessment procedures. (Lecture 2 hours, laboratory 3 hours.)

440. Administration in Physical Therapy (2)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Design and management of a physical therapy service by applying the administrative principles of planning, organization, supervision, control and evaluation. Also includes the relationship of physical therapy to other health agencies and professions in the health care delivery systems.

446. Learning Principles for Therapists (1)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Application of basic educational concepts of learning theories in designing, implementing and evaluating learning experiences for patients and families, and to design and implement community education in-service programs. Traditional grading only. (Discussion, 1 hour).

450. Principles of Physical Therapy VI (3)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Application of basic knowledge of cardiopulmonary physiology, electrocardiography, graded exercise test administration and establishment and operation of intervention and rehabilitation cardio-pulmonary exercise programs. Course fees not to exceed \$25.00. (Lecture 2 hours, laboratory 3 hours.)

461. Neuromuscular Physiology (4)  
Prerequisites: A/P 207, PHYS 100A&B. Advanced regulatory physiology of the central and peripheral nervous systems including modern development in neuron physiology and function. (Lecture 3 hours, lab 3 hours.) Traditional grading only.

475. Research Methods (3)  
Prerequisites: Any basic course in statistics and admission to the physical therapy program including research planning, research designs measurement, clinical research designs, and library research. Course fees not to exceed \$22.00. (Lecture 3 hours.)

480. Clinical Practice II (1-4)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. A continuation of P T 380 with emphasis on advanced principles and practice in designing, implementing and managing a physical therapy plan of care. Credit/No Credit grading only.

485. Clinical Practice III (6)  
Prerequisites: Completion of all professional courses with a minimum passing grade of 2.0 (C) and consent of instructor. Supervised clinical experience (internship) in designing, implementing and managing a physical therapy plan of care in a variety of clinical settings for 18-40 hour weeks.

490. Independent Studies (1-3)  
Prerequisite: Consent of department. Independent projects in any area of physical therapy. Human dissection is available as a special study. May be repeated to a maximum of six units.

D. Human Dissection

499. Special Topics (1-3)  
Prerequisites: Admission to the physical therapy professional program and consent of instructor. Identification and investigation of current topics in selected areas of physical therapy. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units of credit with change of topic.

## Graduate Courses

501. Musculoskeletal and Biomechanical Principles I (3)  
Prerequisites: HHS 401, admittance to MPT program or consent of instructor. Advanced study of tissue (bone, muscle, dense fibrous connective tissue, cartilage, nerve) and joint mechanics and pathomechanics including use, disuse, aging, with application to therapeutic procedures and posture and movement of the upper limb. (Lecture/discussion 2 hours, laboratory 3 hours.)

502. Musculoskeletal and Biomechanical Principles II (3)  
Prerequisites: PT 501 and consent of instructor. Continuation of the investigation and analysis of the biomechanics and the principles of motion analysis. Includes applied mechanics, pathomechanics, investigation of regional pathomechanics of the trunk and lower limb with emphasis on gait and muscle strength testing. (Lecture/discussion 2 hours, laboratory 3 hours.)

503. Management of the Musculoskeletal System I (3)  
Prerequisites: PT 501, PT 502, PT 504 (concurrent), PT 505 and consent of instructor. The elements of patient/client management of musculoskeletal disorders provided by physical therapists—examination (history, systems review, tests and measures), evaluation, diagnosis, prognosis, and intervention (with anticipated goals) including reexamination, outcomes, and criteria for discharge. Also includes primary prevention/risk factor reduction strategies for specific diagnostic groups, the use of prosected materials and selected lectures by medical and physical therapy clinicians. (Lecture/discussion 2 hours, laboratory 3 hours.)

504. Physical Therapy (4)  
Prerequisites: PT 501, PT 502 and PT 503 (concurrent), and consent of instructor. The investigation of disorders of the musculoskeletal system including exercise prescription, strengthening regimens, exercise testing, effects of disuse, life sequence, wellness and prevention, and the theories of pain and pain management and selected preferred practice patterns provided by physical therapists. (Lecture/discussion 3 hours, laboratory 3 hours.)

505. Management of Human Growth and Development (2)  
Prerequisites: HHS 401, 460 and consent of instructor. Investigation and analysis of human development from birth to senescence with emphasis on concepts of motor, skeletal and neurological development processes necessary to prepare for evaluation and treatment intervention in musculoskeletal and neurological disabilities. (Lecture/discussion 1 hour, laboratory 3 hours.)

506. Exercise Physiology for Physical Therapy (2)  
Prerequisites: A/P 341, 441; HHS 401, 460, 471 and consent of instructor. Study of control systems challenged by exercise and altered by chronic exercise that will be critical for patient management. Introduction to exercise measurement and clinical exercise related tools including basic metabolism, analysis of systems involved, exercise test design for different patient subjects, and the pharmacology of exercise. Study of pathology will always be preceded by study of the of the healthy individual. (Lecture/discussion 1, laboratory 3 hours.)

507. Management of the Neurological System (4)  
Prerequisites: HHS 460, PT 505 and consent of instructor: The elements of patient/client management of neuromuscular disorders provided by physical therapists—examination (history, systems review, tests and measures), evaluation, diagnosis, prognosis, and intervention (with anticipated goals) including reexamination, outcomes, and criteria for discharge. Also includes primary prevention/risk factor reduction for specific diagnostic groups, the use of prosected materials and selected lectures by medical and physical therapy clinicians. (Lecture/discussion 3 hours, laboratory 3 hours.)

**508. Management of the Pediatric Population (2)**

Prerequisites: PT 505, PT 507, admission to the physical therapy program, and consent of instructor: Management of the pediatric physical therapy patient with neuromusculoskeletal disorders. Includes the examination (history, systems review, tests and measures), evaluation, diagnosis, prognosis to determine the extent of limitations. Also includes the pathophysiology and selection of appropriate intervention approaches and clinical decision making. May include lectures from medical and physical therapy practitioners. (Lecture/discussion 1 hour, laboratory 3 hours.)

**509. Management of the Cardiopulmonary System (3)**

Prerequisites: A/P 341, A/P 441, PT 505, PT 506 and consent of instructor. The elements of patient/client management of cardiopulmonary disorders provided by physical therapists—examination (history, systems review, tests and measures), evaluation, diagnosis, prognosis, and intervention (with anticipated goals) including reexamination, outcomes, and criteria for discharge. Also includes primary prevention/risk factor reduction for specific diagnostic groups, circulatory disorders and selected lectures by medical and physical therapy clinicians. (Lecture/discussion 2 hours, laboratory 3 hours.)

**510. Patient Management and Functional Training (2)**

Prerequisites: PT 501, 505, 606A and consent of instructor. Patient/client management with emphasis on assistive and adaptive devices, community and work reintegration, environmental, home, and work barriers, ergonomics and body mechanics, and self care and home management (including activities of daily living and instrumental activities of daily living). May include lectures from medical and physical therapy practitioners on selected topics. (Lecture/discussion 1 hour, laboratory 3 hours.)

**511. Management of the Geriatric Population (3)**

Prerequisites: PT 503, PT 504, PT 505, PT 507 and consent of instructor. The elements of patient/client management of the geriatric population provided by physical therapists—examination (history, systems review, tests and measures), evaluation, diagnosis, prognosis, and intervention (with anticipated goals) including reexamination, outcomes, and criteria for discharge. Also includes primary prevention/risk reduction strategies for specific diagnostic groups, and selected lectures by medical and physical therapy clinicians. (Lecture/discussion 2 hours, laboratory 3 hours.)

**512. Clinical Electrophysiology I (3)**

Prerequisites: A/P 341, HHS 460, PT 507 (concurrent) and consent of instructor. The investigation of the physiological and neurological basis for the selection of electromyographic assessment tools and for the selection of electrotherapeutic modalities for the management of neuromusculoskeletal disorders. Also includes specific interventions used in the management of the patient/client with neuromuscular disorders. (Lecture/discussion 2 hours, laboratory 3 hours.)

**513. Clinical Electrophysiology II (2)**

Prerequisites: PT 512 and consent of instructor. Physiological considerations in the use of nerve stimulation studies and electromyography with the patient/client with neuromuscular disorders emphasizing the rationale for the selection of electrical stimulation techniques for physical therapy intervention as well as functional use of electrical stimulations systems. (Lecture/discussion 1 hour, laboratory 3 hours.)

**522. Clinical Practice I (1)**

Prerequisites: PT 501, 505 and concurrent enrollment in PT 502, 503 and 506. Initial directed clinical practice in a variety of health care delivery systems emphasizing the management of musculoskeletal conditions. (Clinical practice 40 hours.)

**523. Clinical Practice II (1)**

Prerequisites: Completion of the first year of professional program. Supervised clinical practice in a variety of health care delivery systems emphasizing neuromuscular, developmental and pediatric conditions. (Clinical practice 40 hours.)

**524. Clinical Practice III (1)**

Prerequisites: Completion of PT 523. Supervised clinical practice in a variety of health care delivery systems emphasizing single and multiple systems impairments but including the management of

cardiopulmonary, prosthetic, and spinal/extremity mobilization conditions. (Clinical practice 40 hours.)

**525. Clinical Internship (1-12)**

Prerequisites: Completion of all requirements for the MPT degree. Twenty-four weeks of supervised full-time clinical practice in a variety of health care delivery systems. Six weeks of clinical practice will be completed during the summer following the first year of the academic program and the culminating clinical experience will follow the completion of the second year of the academic program. Satisfactory completion of the internship is required for licensure to practice in the state of California. Must be repeated for total of twelve units. (Clinical practice 24 weeks.)

**597. Independent Study (1-3)**

Prerequisite: Consent of instructor. Supervised projects in physical therapy.

**604. Seminar in Health Care Issues I (2)**

Prerequisites: Admission to the professional program, PT 606A and PT 606B. Investigation of the health care delivery system including the regulatory, political, ethical, legal and promotional aspects of health care. (Seminar 2 hours.)

**605. Seminar in Health Care Issues II (2)**

Prerequisites: PT 604 and consent of instructor. Investigation and discussion of the process of planned direction, organization, management, and economics of physical therapy and physical therapy delivery. Includes theories of disease prevention and health promotion. (Seminar 2 hours.)

**606A. Seminar in Clinical Decision Making I (1)**

Prerequisites: Admittance to the physical therapy program. The critical analysis of professional literature differentiating documented evidence from secondary information, theory and opinion for the selection of effective evaluation and treatment techniques and the objective summarization of professional literature using clear, concise, scientific writing. The course also includes an introduction to Part I of the Guide to Physical Therapy Practice. (Seminar 1 hour.)

**606B. Seminar in Clinical Decision Making I (1)**

Prerequisites: PT 606A, PT 503 (concurrent) and consent of instructor. The examination of social/cultural issues, patient compliance and advocacy, and patient/family education. (Seminar 1 hour.)

**607. Seminar in Clinical Decision Making II (2)**

Prerequisites: PT 604, PT 605, PT 606A and PT 606B. Continuation of the investigation and synthesis of the data base for the management of the patient/client with disorders of the cardiopulmonary and neuromuscular systems. Includes examination of the psychosocial aspects of disability, community resources to meet the needs of the patient family, social/cultural aspects, patient compliance and advocacy, and learning theories and principles. (Seminar 2 hours.)

**610. Advanced Study in Biomechanics and Kinesiology (2)**

Prerequisites: PT 501, 502 and consent of instructor. Advanced study in the biomechanical evaluation of pathological posture and movement with emphasis on gait. (Lecture/discussion 1 hour, laboratory 3 hours.)

**611. Advances in Orthopaedic Physical Therapy (2)**

Prerequisites: PT 503, 504 and consent of instructor. Exploration of advanced clinical orthopaedic management strategies. (Lecture/discussion 1 hour, laboratory 3 hours.)

**612. Advanced Study in Clinical Electroneuromyography (2)**

Prerequisites: PT 512 and 513 and consent of instructor. Advanced electromyographic assessment and electrical stimulation technology with an emphasis on objective documentation and improvement of neurological status, muscle performance, walking ability and functional capacity. (Lecture 1 hour, laboratory 3 hours.)

**613. Advances in the Management of the Geriatric Population (2)**

Prerequisites: PT 505, 509, 511 and consent of instructor. Exploration of the clinical management strategies and intervention of aging. (Lecture/discussion 1 hour, laboratory 3 hours.)

614. Advances in the Management of the Pediatric Population (2)

Prerequisites: PT 505, PT 507 (concurrent), 508 and consent of the instructor. Exploration of advances in the management of the pediatric patient with emphasis on various pathologies. (Lecture/discussion 1 hours, laboratory 3 hours.)

615. Advances in the Management of the Neurological Patient (2)

Prerequisites: PT 506, 507, 508 and consent of the instructor. Exploration of special considerations in the patient with neurological impairment. (Lecture/discussion 1 hours, laboratory 3 hours.)

616. Advances in the Management of the Cardiopulmonary Patient (2)

Prerequisites: P T 509 and consent of instructor. Exploration in the special considerations in the management of the patient with cardiopulmonary and circulatory disability. (Lecture/discussion 1 hours, laboratory 3 hours.)

617. Management and Development of Independent Practice (2)

Prerequisites: P T 604, 605 and consent of the instructor. Exploration of the management and business strategies in independent practice. (Lecture 2 hours.)

618. Advanced Clinical Anatomy (2)

Prerequisites: PT 501, 502, 503, 504 and consent of the instructor. Exploration of the advanced application of clinical anatomy. (Lecture/discussion 1 hours, laboratory 3 hour.)

619. Contemporary Issues in Physical Therapy (2)

Prerequisites: PT 604 and consent of instructor. Exploration of contemporary and emerging trends in physical therapy practice. (Lecture/discussion 2 hours.)

620. Management of Patients with Orthotic and Prosthetic Needs (2)

Prerequisites: PT 503, 504, 506, 511 and 512. The prescription, application, and, as appropriate, fabrication of devices and equipment (orthotic, prosthetic, and supportive splinting, taping, devices), including wheelchair seating prescription and adjustments. (Lecture/discussion 1 hour, laboratory 3 hours.)

622. Clinical Pathophysiology (3) F, S, SS

Prerequisites: PT 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 512, 513 (Concurrent), 606A, 606B, 620, 696. Pathophysiology of connective tissue in musculoskeletal, neuromuscular, cardiopulmonary and integumentary disorders as a basis for physical therapy evaluation, diagnosis, goal setting and conservative as well as pre and post-operative intervention in patients with multiple systemic disorders. (Lecture/discussion 3 hours.)

696. Research Methods (2)

Prerequisites: PT 606A, PT 606B and consent of instructor. Scientific inquiry with emphasis on information searching. Epidemiology, research design (qualitative and quantitative), measurement theory, and applied statistics. Also includes critical inquiry and clinical decision-making guidelines, research ethics, and the development of a proposal on the validation of physical therapy practice. (Lecture/discussion 2 hours.)

698. Research Thesis/Project (1-4)

Prerequisites: PT 606A, 606B, 696, advancement to candidacy and consent of instructor. Planning, preparation, and completion of thesis or project in physical therapy. Must be completed for a total of four units.



# GRADUATE CENTER FOR PUBLIC POLICY AND ADMINISTRATION

*College of Health and Human Services*

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Public administrators today are becoming increasingly aware of the fact that government is, indeed, the people's business. They are challenged to be both effective and efficient. They believe that people tend to support what they help to create. Working with citizens, they have brought the practice of public management to its highest level without giving up the desire to constantly change and improve. The difference is that today's public servants are recognized and rewarded in personal and material ways, making the study of public policy and administration a highly desirable career option.

The Graduate Center for Public Policy and Administration offers the Master of Public Administration degree; Options in the degree program include Public Works Administration and Urban Affairs; and graduate certificate programs exist in Urban Executive Management, the Public Management Analyst, Employer-Employee Relations and Personnel Management, Public Sector Financial Management, and Transportation Policy and Planning. The Center's graduate level programs are designed with a professional emphasis and a recognized need to provide course work that will increase the student's competency in public administrative processes and analysis. The Center's curriculum also is designed to emphasize the student's ability to apply new knowledge, skills, and leadership techniques to the solution of public problems.

Admission applications are encouraged from persons with successful government service who wish to pursue, part-time or full-time, a graduate program designed to prepare them for new opportunities in public service or to expand or extend their capacities in a present position. The Center provides education in public policy and administration to professional persons in such fields as public works, social services, public health, community development, criminal justice, educational administration, recreation administration, finance, personnel, policy analysis, urban and regional planning, systems analysis and urban administration. The Center is accredited by the National Association of Schools of Public Affairs and Administration, Commission on Peer Review and Accreditation (NASPAAA, 1120 G Street, NW, Suite 730, Washington, DC 20005, phone: 202-628-8965).

A detailed summary of requirements, current course offerings and procedures for the Master of Public Administration degree program, the Options in Public Works Administration and in Urban Affairs, and the graduate certificate programs are contained in student handbooks available from the Graduate Center for Public Policy and Administration.

## *Program Standards and Requirements*

### Admission

Students seeking admission to one of the Center's programs should have an undergraduate degree and preparation for graduate study in public administration. A student must have an undergraduate grade point average of 2.75 or

better. A student whose overall undergraduate grade point average is less than 2.75, but who presents acceptable evidence of professional potential shown through recent academic performance and experiential background, may be admitted by special action of the Center.

Students applying for admission to one of the Center's programs are required to submit:

1. A completed Center Application Form for the specific degree or certificate program.
2. Official transcripts of all course work completed in higher education.
3. Two letters of recommendation from members of the academic profession under whom the applicant has studied, or from persons in positions of administrative leadership with whom the applicant has worked.
4. A one or two page statement concerning the applicant's reasons and plans for pursuing a career in public administration.

Following admission to the University and acceptance in one of the graduate programs, each student should meet with a faculty advisor. The faculty advisor will provide advice to the student on program course requirements and elective opportunities, and counsel the student in the chosen elective area.

#### Advancement to Candidacy

The following are requirements for the degree and certificate programs:

1. Satisfaction of the general University requirements for advancement to candidacy;
2. Completion of all degree or program prerequisites;
3. Approval of the candidate's program by a faculty advisor and the Director of the Graduate Center for Public Policy and Administration;
4. Completion of six units of course work at this University toward the degree or program objective;
5. Earned a minimum GPA of 3.0 in all graduate work completed at this University, or transferred from other sources, to meet degree or program requirements.
6. Have passed the WPE.

#### Transfer of Credit

Students who have completed a graduate certificate program in the Public Management Analyst, Employer-Employee Relations and Personnel Management, Public Sector Financial Management, or Transportation Policy and Planning, may transfer up to 15 units of credit earned in the certificate program to be applied to the Center's Master of Public Administration degree program. The student must apply to the Center for admission as a degree candidate.

Students who have completed the academic requirements for the Master of Public Administration degree, prior to applying for admission to a graduate certificate program in the Center, may apply up to 6 units of credit earned in the MPA program for the required or elective courses in a certificate program.

## Master of Public Administration Degree (code 7-9550)

The Center offers an innovative professional graduate program of studies leading to the degree of Master of Public Administration. The 36-unit program is designed with a professional emphasis and a recognized need to provide students with an increased competency and perspective of the analytical and administrative processes of government. The MPA degree is sufficiently flexible that students may select a program of elective courses oriented toward a generalist program of studies, place emphasis on a staff specialization such as personnel, or permit a focus on a specific public program field such as criminal justice administration. In all cases, a common grounding in the core areas of public policy and administration is required; but beyond this, considerable freedom of choice enables students to select subjects which fit their particular backgrounds or career objectives.

#### Requirements

1. A minimum of 36 course units in graduate course work, with a minimum of 21 units of 500/600 level courses in public policy and administration;
2. Satisfactory completion of PPA 500, 555, 577, 660, 670, and 696;
3. Completion of approved internship program (PPA 585) as required course work beyond the 36-unit minimum, or waiver of the internship requirement based on professional experience;
4. Additional elective course work in elective fields to meet the 36-unit minimum;
5. Successful completion of a written Comprehensive Examination and PPA 697 Directed Research.

#### University Courses Acceptable for the Master of Public Administration

Graduate course descriptions are found in the department listings in which they are offered. Graduate courses applicable for the degree are: ANTH 505; ART 545A-B; COMM 512, 534, 546, 600, 610, 611, 620, 632; COTA 510, 520, 545, 610; CRIM 512, 531, 541, 581, 582, 583, 599, 621, 622, 623, 624, 630, 640, 641, 650, 694; ECON 500, 581, 586, 636, 650, 670, 686, 690; EDAD 541, 544, 641, 647, 648, 649, 657, 658, 659; GEOG 600, 640, 650, 666; GERN 550, 600, 605; H/SC 500, 508, 524, 535; FCS 511, 515, 521, 531, 533, 561, 562; HCA 500, 505, 510, 515, 524, 530, 535, 536, 537, 538; HIST 590, 673; IS 501, 502, 580, 584, 625; LI 510, 520, 540, 550, 570; MGMT 510; NRSB 556A, 556B, 557, 559; OCST 501, 502, 503, 504, 505, 508; POSC 500, 550, 600, 610, 620, 640; PSY 516, 576, 581, 585; REC 501, 521, 571, 587, 595; S W 503, 505, 550, 594, 597A, 597B, 642, 643, 662, 663, 664, 665, 666, 667, 668, 669, 672, 673, 677, 681, 682.

A wide variety of courses in Engineering and Educational Psychology also are acceptable. Consult with Center Faculty.

#### Option in Urban Affairs (code 7-9551)

The purpose of the Option in Urban Affairs within the Master of Public Administration degree is to provide students who have particular interests in urban problems and processes with the opportunity to expand their knowledge and awareness in the field. In this broadly based interdisciplinary program, students can develop an understanding of the systemic nature of the

urban environment and the interrelatedness of many urban problems. The program is designed to provide urban managers with ideas and techniques for dealing with various urban situations. Emphasis is on state and local government issues and responses.

#### Admission

The general standards for admission are identical to those for the Master of Public Administration degree program. An applicant must demonstrate a background of related undergraduate course work of twelve units, or significant management and/or staff experience in public administration.

#### Requirements

1. Minimum of 36 semester units in graduate course work with a minimum of 24 units of 500/600 level courses in PPA;
2. Satisfactory completion of 500, 555, 577, 610, 660, 670, and 696;
3. Completion of an approved internship program (PPA 585) as required work beyond the 36-unit minimum, or waiver of the internship requirement based on professional experience;
4. Completion of 12 units of elective course work selected from: PPA 512, 517, 523, 525, 522, 527, 540, 544, 546, 547, 548, 549, 550, 567, 571, 575, 580, 581, 590; ANTH 516; CE 506; CRIM 512, 551, 581, 621, 622, 623, 624, 630, 640, 641, 650, 690; ECON 536, 537, 636, 650; EDAD 541, 544; EDP 520, 530, 536, 540, 555, 574, 576, 582, 615; GEOG 567, 600, 650, 652, 666; HIST 568, 673; NRSRG 557, 558; POSC 640, 660; REC 502, 521, 571;
5. Successful completion of a written Comprehensive Examination, and PPA 697 - Directed Research.

#### Option in Public Works Administration (code 7-9552)

This Option is designed to provide advanced knowledge to practitioners and pre-career students in the growing field of public works management. Course work prepares students in general public administration and specialized public works management activities, including appropriate technical subjects such as air and water pollution, water supply, waste disposal and management, energy, housing, and transportation.

#### Admission

The general standards for admission are identical to those for the Master of Public Administration degree program. An applicant must demonstrate a background of related undergraduate course work of twelve units, or significant management and/or staff experience in public administration. For this degree option, the experiential background would be targeted to the public works and infrastructure sector.

#### Requirements

1. A minimum of 36 semester units in graduate course work with a minimum of 27 units of 500/600 courses in PPA and civil engineering;
2. Satisfactory completion of PPA 500, 554, 555, 577, 660, 670, and 696; CE 556;

3. Completion of an approved internship program (PPA 585) as required course work beyond the 36-unit minimum, or waiver of the internship requirement based on professional experience;
4. Completion of 9 units of elective course work selected from: PPA 515, 522, 527, 535, 540, 544, 545, 547, 549, 550, 551, 552, 560, 575, 590; CE 504, 506, 520, 522, 564, 565, 602;
5. Successful completion of a written Comprehensive Examination, and PPA 697 or C E 697.

#### Graduate Certificate in Urban Executive Management (code 1-9050)

This program is designed to serve the post-graduate executive development needs of men and women in aspiring to top level positions in city and county governments. The goal of this program is to provide urban executives with a comprehensive knowledge of strategic planning processes; dynamics of human relations; strategies for implementing policies; consensus building techniques; and economic and financial forces impacting on local governments

#### Prerequisite

In addition to the general admission requirements, applicants for the graduate certificate in Urban Executive Management should have significant upper level management experience in Public Administration, and a minimum of 10 years of progressively responsible management experience in government.

#### Requirements

1. A minimum of 18 course units in graduate course work, including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 544, 547, and 571;
3. Satisfactory completion of 3 elective courses selected from PPA 512, 525, 535, 545, 550, 555, 560, 575, and 577.

#### Graduate Certificate in Public Management Analyst (code 1-9010)

This program is designed for men and women who work or desire to work in budgeting, policy formulation, financial management, or program evaluation offices of government agencies. The program prepares candidates with such skills as defining a problem; conducting cost benefit analysis; utilizing basic statistical techniques; conducting behavioral/political analysis; preparing and presenting reports; learning the ability to blend qualitative, behavioral, and political skills necessary for success as an analyst in government.

#### Prerequisite

In addition to the general admission requirements, students should be employed in public service or related activities, or have a goal of public service-related activities.

#### Requirements

1. A minimum of 18 course units in graduate course work, including 4 required and 2 elective courses.
2. Satisfactory completion of PPA 515, 517, 521, and 555;
3. Satisfactory completion of 2 elective courses selected from PPA 522, 523, 527, 540, and 560.

## Graduate Certificate in Public Sector Employer-Employee Relations and Personnel Management (code 1-9020)

This program is designed for public sector managers and those aspiring to enter public service who need the knowledge, skills, and abilities required to deal effectively with the critical area of public sector employee relations and personnel management. The primary goal is to provide the necessary training for public managers to effectively utilize human resources to their greatest potential in conjunction with the needs of the public organization.

### Requirements

1. A minimum of 18 course units in graduate course work, including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 555, 575, and 577.
3. Satisfactory completion of 3 elective courses selected from PPA 527, 570, 571, 580, and 581.

## Graduate Certificate in Public Sector Financial Management (code 1-9030)

This Certificate Program is designed for public managers and others interested in obtaining an understanding of governmental financial management concepts, functions, techniques, and issues. The program is designed to familiarize students with financial management problems and the techniques available for solving them. An emphasis is placed on how to recognize, evaluate, and utilize financial information in decision making.

### Requirements

1. A minimum of 18 course units in graduate course work, including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 555, 560, and 567;
3. Satisfactory completion of 3 elective courses selected from PPA 522, 527, 540, and 547.

## Graduate Certificate in Transportation Policy and Planning (code 1-9040)

The purpose of this certificate program is to provide instruction in the skills and knowledge appropriate to professional activity in transportation policy and planning for urban transportation. Key support areas include urban planning, policy analysis, environmental policy, intergovernmental policy, personnel policy, and grants administration.

### Requirements

1. A minimum of 18 course units in graduate course work, including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 550, 551, and 522;
3. Satisfactory completion of 3 elective courses selected from PPA 535, 540, 545, 575, 670, CE 506, 520, 522; ECON 636, 690.

## Courses (PPA)

500. Foundations of Public Policy and Administration (3)  
Concepts of the discipline; fundamentals of public organization theory, policy formulation and analysis, and administrative and management processes; management of the public interest; and ethics in government.

510. Public Administrative/ Management Processes (3)  
Analysis of public administrative/management processes from perspective of public executive, public finance and budgeting, public personnel systems, standards of efficiency and effectiveness in conduct of the public's business, and role and use of organizations and administrative processes to achieve public objectives.

512. Urban Executive Management (3)  
Students will be provided an overview of the various types of problems confronting today's urban administrator and the possible means of solving some of these pressing problems. Subjects to be included are public policy in a changing society; new strategies for managing local government; new frontiers in planning and controlling financial resources; the dynamics of personnel and labor relations.

514. Municipal Law for Administrators (3)  
Examination of major laws and legal issues affecting local government today. Basic powers of cities including regulatory (police) powers, corporate (service) powers, taxation and eminent domain will be studied. Will develop problem solving abilities through legal analysis, and will explore new parameters and changing standards in litigious society looking for "deeper pockets," slower growth, and greater citizen involvement in local government. Selected areas of study will include the impact of recent U.S. Supreme Court cases on land use regulation; California Redevelopment Agency law; municipal tort liability, including personal liability and civil rights matters; public-private financial ventures and bond financing; city council meeting and hearing procedures; the "Brown Act," and public records; public works contracts and building code enforcement; and public labor law trends and developments.

515. Administrative Report Writing (3)  
Preparation of written documents required of public administrators.

517. Analytical Skills Development (3)  
This course is designed to develop or improve the skills needed to perform analytical work in the public sector. There will be a dual emphasis wherein both quantitative and behavioral/ political aspects of analysis in government are explored. Cost-benefit analysis, and report preparation and presentation will be covered.

521. Microcomputer Management for Public Administrators (3)  
A seminar for public administrators focusing on the design, development, and management of microcomputer systems and applications in public organizations. There is a dual emphasis in the course: analysis of critical concepts and issues relating to the management of micro-computer systems, and hands-on computer laboratory experience in the design, development and use of microcomputer applications.

522. Automating Government Administration (3)  
An examination of the use of computers to assist government management, with special emphasis on automation of services such as finance, police and library departments. Will provide an introductory background in computers and their applications to government systems and files for non-computer specialists.

523. Urban Information Systems for Public Management (3)  
The purpose of this course is to expose MPA students to the most significant information technologies impacting government management as we move to the 21st century: the World-Wide Web (Internet) and G.I.S. (Geographic Information Systems.) This course will introduce students to the tools and techniques used to construct Web pages and their appropriate usage. Students will also be exposed to the design, development and use of GIS in public organizations. This is a hands-on course which makes extensive use of computer technology, including Internet access to the World-Wide and e-mail.

525. Non-Profit Management (3)  
Examination of the history, principal characteristics, scope, and unique management challenges confronting the nonprofit sector in the United States. While the sector as a whole, in all its variety, will be addressed, particular attention is given to the traditional and important role of nonprofits in the delivery of government-contracted health and human services. Traditional grading only.

527. **Productivity in Local Government (3)**  
This course will identify and develop a concept of productivity for the government executive. The various approaches to management of organizations will be examined to determine their relationship to productivity. The application of behavioral science to productivity will be considered to determine its significance. Finally, management techniques and methods will be reviewed to provide some knowledge of substantive approaches to the increases of productivity.
533. **Race, Inequality and Public Policy (3)**  
There has been considerable political debate over the problems of income inequality and poverty in the U.S. and the inability of public policies to remedy this situation. The Los Angeles "riots" have renewed this debate. The purpose of this seminar is to critically examine this debate and guide students to an understanding of the multiple sources of inequality in American cities. Particular attention will be paid to ways in which race, ethnicity and gender play a role in structuring the urban environment in which inequality originates and operates. In this way, our discussion of racial inequality and social policy will serve as a springboard for a more elaborate and critical examination of the fundamental philosophical, political and socio-economic problems currently afflicting our post-industrial society.
535. **Intergovernmental Relations (3)**  
This course will present fundamental concepts and issues of intergovernmental relations in the United States. Topics covered include history of the field, intergovernmental revenues and expenditures, state and federal legislative processes, legislative advocacy, interorganizational management, and current issues.
540. **Grants Administration and Management (3)**  
Study of the various types of financial and technical assistance to local public and quasi-public agencies; the strategies for locating and obtaining grant programs support; and the development of effective project systems for externally funded projects.
542. **Emergency Planning and Management (3)**  
Students will study the planning and management processes and the issues involved in large scale emergencies. The nature of natural and technological risk and emergency will be explored via case studies. The public sector roles in contingency planning and response will be assessed.
543. **Coastal/Marine Resource Policy (3)**  
Students will study the policy processes as applied to coastal/marine resources. The course will review the uses, issues and conflicts within the coastal and exclusive economic zone, and the public sector responses to balancing development and preservation demands via policy mechanisms.
544. **Strategic Planning and Management in the Public Sector (3)**  
Study of strategy formulation and implementation in public sector organizations and in public/private strategic endeavors for communities and regions. Management roles and analytical techniques explored through case studies. Integration with traditional management processes assessed.
545. **Urban Planning Policies Processes and Techniques (3)**  
Historical development of urban planning concepts and practices; general plan formulation; general plan housing and conservation elements; general plan open space and seismic safety elements; general plan noise and scenic highway elements; general plan safety and optional elements; public participation; environmental impact analysis; development of Southern California's infrastructure; governmental programs influencing Southern California planning (Federal, State); governmental planning in Southern California.
546. **The Urban Crisis and the Public Administrator (3)**  
A survey of the history of urbanization, the literature of urban power relations and decision-making, and the dynamics of race relations in the urban environment. Extensive interface with urban agency representatives will be a major focus of this course.
547. **Local Government Economic Development Processes (3)**  
A detailed discussion of the nature, goals and processes of locally based economic development programs. Definition of governmental incentives designed to maximize private investment. A thorough explanation of property-related revenues from both the public and private perspectives.
548. **Housing Problems and the Urban Administrator (3)**  
An overview of housing problems in contemporary urban society. This course will increase the public administrator's awareness of the interrelationships between local government administration and housing problems, and facilitate the public administrator's ability to deal with these problems.
549. **The Municipal Community Development Process (3)**  
Overview of the municipal community development process with particular emphasis on the integration of municipal planning, zoning, housing, social service, and redevelopment functions. The course will explore basic concepts of each function, their interrelationships and administrative practices. Emphasis will be given to the impact of federal community development block grants and the local process.
550. **Urban Transportation Policy and Planning (3)**  
Examines the status of urban transportation activities and needs today and discusses the near and long-term options for the future. Analyzes local, state, federal policy and inter-governmental system; Los Angeles urban transportation development, transit proposals and new policies and activities.
551. **Transportation Regulatory Public Policy (3)**  
Transportation regulatory public policy, management and planning; fundamental knowledge of intermodal services in international, national and Southern CA context; special emphasis on deregulation movement since 1980.
552. **Airport and Seaport Policy and Management (3)**  
Airport management, policy and planning; key management and staff tasks for commercial and general aviation operations, including ground access and facility management; specialized functions addressed include forecasting demand capital facility design, construction, operation and funding, continuing planning, board management, operations, licensing, safety, environment; interrelationship with other transportation modes, passenger and freight.
554. **Public Works Facilities and Urban Policy (3)**  
Provides a study of public infrastructure essential to urban communities, and an analysis of urban policies and impacts from the perspective of the urban administrator. Students will examine infrastructure maintenance and expansion needs assessment, and intergovernmental financing with concentration on water and wastewater, transportation, solid waste, and public facilities, including schools.
555. **Government Budgeting and Finance (3)**  
This course will provide an understanding of government finance and budgeting functions. It will develop specific skills in techniques for relating revenues to expenditures, budget design and analysis, and the politics of the process. New methods of balancing citizen demands with revenue limitations will be considered as will traditional behaviorally-oriented controls.
560. **Public Financial Management Techniques and Issues (3)**  
The course will provide an understanding of current governmental financial management techniques and issues. Financial problems confronted by a number of government organizations has stimulated considerable interest in financial management and a record for improved methods of managing fiscal affairs. This course will provide an introduction to important financial management issues and to new analytical techniques which are being used to improve financial decision making.
567. **Basic Governmental (Fund) Accounting (3)**  
Provides a basic introduction to the unique characteristics of governmental and commercial accounting. Differences between governmental and commercial accounting are explained. Governmental accounting terminology basic and principles are

discussed. Information is provided on the structure and types of funds and methods of classifying and recording accounting information. Types of financial reports and interpretation of financial statements are discussed. Particular emphasis is focused on the relationship between accounting and budgeting, financial reporting, auditing and other financial management activities for governmental and non-profit agencies.

**570. Negotiating Dynamics: Strategies and Skills (3)**

Examination of negotiating strategies and skills based on tested use of power and psychological principles in negotiations. Different strategies and skills examined for negotiating under varying levels of cooperation and conflict.

**571. Leadership Skills and Strategies in the Public Sector (3)**  
Increasingly, urban governments are being criticized for a "lack of leadership" and an inability to move their bureaucracies toward solutions to complex problems. This course examines the theories of administrative leadership and the strategic application of leadership skills in an urban government environment. Students will also review current approaches to organizational excellence and its applicability to urban government leadership.

**575. Public Sector Employer-Employee Relations (3)**

Analysis of prevailing practices and techniques of collective bargaining and its continuing ramification on the economic, political and organization structure in the public sector. Emphasis is placed on a review of the entire employee relations field including the financial implications, costing techniques, impasse resolution including binding arbitration, job action and strike contingency planning, contract administration, worker compensation and public retirement systems. Instruction also provided on negotiation techniques through mock negotiation sessions.

**577. Public Sector Personnel Administration (3)**

The historical development of the civil service/merit system and how this impacts public personnel systems; laws which affect the operation of a personnel system; analysis of the various components of a personnel system; impact of labor negotiations on personnel systems; importance of written policies and procedures; and role of the personnel system as a change agent.

**580. Legal Issues in Public Personnel (3)**

Analysis of the historical, social and legal bases for equal employment opportunity and affirmative action laws and programs. Course will review the impact of Civil Rights legislation and its enforcement by compliance agencies and the courts. Attention will be given to basic data collection and analysis for planning and reporting, affirmative action program planning and implementation, developing and evaluating a model affirmative action plan, discrimination complaint handling, monitoring and evaluating an affirmative action program. Institutionalizing equal employment opportunity into the personnel process as well as current and future issues in equal employment opportunity and affirmative action will be covered.

**581. Government/Community Relations (3)**

An investigation of the inter-relationship between governments and community based organizations and the communities in which they operate and serve. Particular attention is paid to strategies and tactics used in diagnosing problems and opportunities and prescribing courses of action in such diverse areas as public safety, planning and community development, arts and culture and health, education and welfare. Elective for graduate students in Master of Public Policy and Administration. Traditional grading only.

**582. Citizen Advocacy and Public Policy Making (3)**

An in-depth analysis of citizen involvement and how it impacts upon policy formulation and public administration. The course involves classroom input from community leaders, action groups, legislators, public administrators, with interaction by the student.

**585. Public Policy and Administration Internship (3-12)**

Prerequisite: Consent of the instructor. A learning experience designed to provide an exposure to and understanding of the governmental environment. Students seeking the MPA degree who do not have managerial experience in government are required to participate in the Internship program. May be repeated for 12 units. Academic credit earned for the Internship program is beyond the 36 units required for the MPA degree.

**590. Special Topics in Public Policy and Administration (3)**

An investigation of a special problem as defined by the instructor that is of current interest to the field of public policy and administration. Course may be repeated for a maximum of 9 units with different topics.

E. Waste Management Policy and Regulation

K. Seminar on Public Policy and Higher Education

N. Urban Shoreline Hazard Policy

**597. Directed Studies (1-3)**

Prerequisite: Consent of instructor. Independent study in public policy and administration.

**610. Seminar in Urban Affairs (3)**

A broadly based interdisciplinary course which will give students an opportunity to develop expanded awareness of the interrelationships between various urban problems in the urban systemic environment.

**624. Development Policy Management and Planning (3)**

A seminar approaching the problems of development from the perspective of formulation and implementation of public policy, with special emphasis on the bureaucratic process in terms of its relationship to differing governmental structures.

**650. Seminar on Issues in Contemporary Public Administration (3)**

Survey of various issues and topics critical to effective public administration in the contemporary United States including the social and political context of contemporary public administration (e.g., increasing diversity of public demands of public agencies, increasing complexity of the intergovernmental network, etc.), responsibilities and obligations of public servants in contemporary governments and selected issues of public management.

**660. Seminar in Organization Theory and Behavior (3)**

Organizational change, effectiveness and allocation processes in public agencies. Theoretical models of open systems, rationalist, conflict, coalition and decision-making theories will be investigated with the aim of presenting a unified set of propositions about organizations. Leadership and small group theory.

**670. Policy Issue Analysis (3)**

This course introduces theories and approaches to policy analysis and a working knowledge of the skills involved in that practice. The core of the course follows the policy analysis cycle and includes: problem recognition, problem definition, development of alternative solutions, analysis of alternatives, selection of policy options, policy implementation and evaluation.

**696. Research Methods in Public Administration (3)**

Application of relevant research techniques to problems in public sector management and analysis. This course focuses on the design, development, and implementation of public sector research projects. The course is centered around the tools and techniques of research and their application in the development of a formal research design. Topics covered include: theories of research strategy, research design development, hypothesis design and testing, qualitative and quantitative data acquisition methods, survey research, initial data analysis techniques, statistical analysis, research results reporting and presentation, and evaluation research applications. Note: It is suggested that students take PPA 696 early in their MPA program in order to accrue maximum benefit in subsequent courses.

**697. Directed Research (1-3)**

Prerequisites: Consent of Center graduate advisor, advancement to candidacy. The definition, presentation and discussion of selected problems in public administration.

# RECREATION AND LEISURE STUDIES

*College of Health and Human Services*

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Michael A. Blazey

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Graduate Advisor  
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The experience of leisure is one of the basic facets of life. It is an elemental experience, essential to the total well-being of every person; it is a reflection and expression of the cultural values of a society; it is an important treatment modality. The provision of recreation services is one of the largest industries in the world, whether measured in dollars spent, persons served, hours of time devoted, or resources used. The study of leisure and recreation is a broad discipline, combining aspects of diverse fields of study and professional practice.

The Department of Recreation and Leisure Studies exists to promote a broader and deeper understanding of the role of leisure and recreation in the lives of all people, and to enhance the quality of experiences available to each person. This purpose is expressed in the four-fold mission of the Department of Recreation and Leisure Studies: (1) to offer a curriculum which leads the student to an increased understanding of the leisure phenomena; (2) to conduct basic research which contributes to the general body of knowledge; (3) to serve the community by conducting applied research and providing consultation and training to practitioners; and (4) to serve society by providing professional practitioners who are skilled, dedicated, and ethical stewards of the profession.

The Department is accredited by the Accreditation Council of the National Recreation and Park Association and American Association for Leisure and Recreation (National Recreation and Park Association, Council on Accreditation, 22377 Belmont Ridge Road, Ashburn, VA 20148, phone: 703-858-0784).

Students desiring information on undergraduate or graduate degrees or certificate programs in Therapeutic Recreation, Administration of Volunteer Services, Administration of Outdoor Recreation, and Travel and Tourism should contact the department office for referral to one of the faculty advisors.

## Bachelor of Arts in Recreation (code 2-1220) (124 units)

### Academic Program

The curriculum is designed to prepare men and women for positions of supervision and administration in public recreation and parks, armed forces recreation, employee services, therapeutic recreation, outdoor education, camp administration, voluntary youth and adult services, travel and tourism, and commercial recreation.

The curriculum includes courses selected to provide an understanding of human development, service management, and a variety of specialty areas within the leisure services profession.

### Departmental Policies

Each major student must maintain a cumulative 2.0 GPA on all units attempted and achieve a "C" or better in each course of the Recreation major to progress in the sequence of study. Students earning less than a "C" grade in a course required in the major must repeat that course.

Students wishing to substitute courses or deviate in any way from the Department requirements must submit a letter of request to the Department faculty. No more than six units of Recreation-prefix courses may be taken by contract. The Internship is graded Credit/No Credit. The Internship is typically taken the last semester before graduation, concurrently with REC 483. No other courses may be taken concurrently with the Internship.

#### Requirements

Lower Division: REC 100, 211, 241;

Upper Division: REC 300, 321, 325, 340I, 351, 371, 421, 423, 425, 427, 431, 441, 448, 480, 483, 498.

Additional courses: Each major student is required to complete courses from the following groups: Choose one course from the following: HDEV 307I, 357I, or PSY 370; Choose nine units from the following: REC 215, 322, 324, 337, 400, 401, 405, 407, 410, 412, 413, 414, 415, 416, 428, 430, 433, 451, 452, 454, 462, 468, 473, 490, 499.

#### Minor In Recreation (code 0-1220)

A minimum of 21 units approved by departmental advisor which must include: REC 211, 241, 321, 340I, 371, 448 and one of the following: REC 322, 324, 337, 351, 428, 430, 431, 433, 462, 473 or 490 with consent of the advisor.

#### Certificate Program in Therapeutic Recreation (code 1-1150)

Goals of the program: To offer the course work to qualify student to sit for the California Board of Recreation and Park Certification exam and for the National Council for Therapeutic Recreation Certification exam.

#### Requirements

Lower Division: REC 100;

Upper Division: REC 300, 325, 351, 451, 452, 498;

Additional Courses: Students must take the following three unit courses: an anatomy/physiology course (3 units), abnormal psychology (3 units) and a human growth and development course (3 units); in addition, nine (9) units of upper division support courses from the following areas must be completed: sociology, psychology, educational psychology, health sciences, adapted physical education, and special education.

#### Certificate Program in Administration of Volunteer Services (code 1-1020)

Students pursuing an approved degree at CSULB may, at the same time, earn a Certificate in Management of Volunteer Services. Courses taken to meet the requirements of the certificate may also be used simultaneously, where appropriate, to meet the general education requirements of the degree or credential requirements of cooperating departments. The certificate may be earned through continuing education by students not regularly enrolled at the University. The program is also open to persons who have years of volunteer services in their background and are interested in becoming employed as paid volunteer coordinators.

#### Requirements

1. A baccalaureate degree which may be awarded concurrently;

2. Satisfactory completion of 23 units which must include 15 units of core requirements as follows: REC 427, 428, 488, 499; REC 490 or 590; plus at least one three-unit course in administrative skills, one in communication skills, and one in an area related to the student's special interest. All electives must have prior approval from the advisor of the certificate program;
3. Overall GPA of 2.5 and maintenance of 2.5 GPA in all courses in the program.

#### Certificate Program in Administration of Outdoor Recreation Resources (code 1-1000)

Students pursuing an approved degree at California State University, Long Beach may at the same time earn a Certificate in Administration of Outdoor Recreation Resources. Courses taken to meet the requirements of the certificate may also be used simultaneously, where appropriate, to meet the general education requirements of the degree or credential requirements of cooperating departments.

#### Requirements

1. A baccalaureate degree which may be awarded concurrently;
2. Satisfactory completion of 24 units as follows: REC 427, 430, 431, REC 337 or BIOL 305; and one of the following: REC 433, 486, 499; Plus nine units of elective courses from biology, geology or geography with approval of the certificate advisor.
3. Overall GPA of 2.5, and maintenance of 2.5 GPA in all courses in the program.

#### Certificate Program in Administration of Travel and Tourism (code 1-1010)

Travel and tourism is a very large and growing field in which there are usually many opportunities for well-trained individuals. The certificate program provides instruction in the history and theoretical bases of tourism, including its economics, psychology, and sociology as well as the political and legal aspects. The fundamentals of business, food and food service technology, the performing arts, and resources management are themes throughout the program.

#### Admission Standards and Requirements

To be eligible for admission a student must have an overall GPA of 2.5. A student must maintain a 2.5 GPA in all courses taken for the certificate.

Only REC 481 and 484 may be taken for Credit/No Credit grading.

#### Prerequisites

Permission of the instructor and 1,000 paid or volunteer hours of experience in a recognized travel/tourism situation; other course prerequisites as listed.

#### Requirements

A total of 27 semester units as follows: REC 462, 468, 498, 490 or 499, GEOG 352; Electives: Six units of upper division courses listed in the University Catalog under the "Regional" category in the Department of Geography; three additional upper-division units selected in consultation with the Program advisor.



## Graduate Certificate Program in Leisure Counseling (code 1-1110)

Admission/Prerequisites: Persons holding a bachelor's or master's degree in Recreation or Therapeutic Recreation or a closely related allied health field, e.g., Occupational Therapy, Music Therapy, Gerontology, Psychology, Adapted Physical Education, Counseling; Two years verified experience in counseling approved by program advisor.

### Requirements

Satisfactory completion of 25 units of coursework which must include:

1. REC 454/554, 503, 588, 590;
2. EDP 434, 532, 533;
3. Electives, selected in consultation with program advisor, 3 units.

## Master of Science in Recreation Administration (code 6-1220)

The Department of Recreation and Leisure Studies offers a program of graduate studies leading to the Master of Science degree in Recreation Administration. Information about the program is available from the Department. The program helps prepare professional personnel who can contribute to the development of a philosophy of leisure, are competent managers of private and public agencies and programs, and can accomplish the field research necessary to support current and future operations. Unusually fine opportunities exist in this area for interaction with recreation agencies of all kinds.

Applicant should request a copy of official transcript or all college course work be sent to the graduate advisor in Recreation and Leisure Studies Department in addition to the copies required by the Office of Admissions and Records.

### Prerequisites

1. A bachelor's degree with a major in recreation; or,
2. A bachelor's degree with a minimum of 24 units of upper division courses comparable to those required in the undergraduate recreation major at this University. (Students deficient in undergraduate preparation must take courses to remove these deficiencies at the discretion of the departmental graduate committee.)

### Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy;
2. Completion of the Graduate Record Examination and the CSULB Writing Proficiency Examination;
3. Approval of the department graduate advisor and the Associate Dean of Graduate Studies and Research, College of Health and Human Services.

### Requirements

1. Thesis option program: 30 units with a minimum of 24 units in Recreation including REC 521, 571, 595, 591, 696 and 698 (Thesis [4 units] with an oral examination on the thesis); Comprehensive Examination option program: thirty-six units with a minimum of 30 units in Recreation including REC 521, 571, 595, 696, and 697 (Directed Studies and the oral and written comprehensive examinations).

2. REC 696, Research Methodology, must be completed in the first year of the program, or concurrently with the first enrollment in a 500 or 600 course.
3. A maximum of six units may be elected outside the department.

## Courses (REC)

### Lower Division

- 100./300. Orientation to the Recreation Major (3)  
Orientation to the professional roles in the field of leisure services; the philosophy, academic requirements, standards, documentation, procedures of the Department of Recreation and Leisure Studies; and computer applications required of all majors. Traditional grading only. (Discussion, 3 hours.)
211. The Recreation Program (3)  
Methods and materials used in planning and conducting organized recreation programs in public and private agencies. Theory and practicum. Special emphasis on supervised programming in field experiences. (Lec 2 hrs, Act 2 hrs.) (CAN REC 4)
215. Management of Outdoor Field Trips (1)  
Field experiences in unique outdoor recreation programs. Course content will include planning, logistics and leadership techniques involved in field trip organization. (Activity 2 hours.)
241. Introduction to Leisure Services (3)  
Principles and organization of community recreation. Concepts of community structure. Survey of public and private agencies engaged in community-wide recreation. (CAN REC 2)

### Upper Division

- 300./100. Orientation to the Recreation Major (3)  
Orientation to the professional roles in the field of leisure services; the philosophy, academic requirements, standards, documentation, procedures of the Department of Recreation and Leisure Studies; and computer applications required of all majors. Traditional grading only. (Discussion, 3 hours.) Not open to students with credit in REC 100.
304. Computers in Leisure Services (3)  
Emphasis is on the practical aspects of computers in Leisure Service Agencies. Techniques of analyzing agency needs, selecting hardware and software, and utilizing communication capability are included. Laboratory projects involving student use of the computer are required. (Lecture/activity 3 hours.)
320. The Universality of Play (3)  
Prerequisites: ENGL 100, Upper Division standing. Examination of the theories of play. Exploration of the ethnic origins of play from an international perspective. Influence of play on the creativity, drive and self-image of society. Theory and practicum.
321. Recreation Leadership (3)  
Prerequisites or corequisites: REC 211, 241, 100/300 or consent of instructor. Theory and application of leadership as it pertains to leisure service agencies. Analysis of interpersonal and group skills necessary for effective leadership. (Lecture/activity 3 hours.)
322. Recreational Sports Supervision (3)  
Organization and supervision of recreational sports for community-wide participation. (Lecture 2 hours, Activity 2 hours.)
324. Campus Recreation Services (3)  
Prerequisites: Junior Standing. Principles and practices in provision of recreation services on college, secondary, and elementary school campuses.
325. Advanced Program and Event Management (3)  
Prerequisites: REC 100, 211, 241, 300. Advanced management of recreation and leisure service programs with special emphasis on event planning and promotion. Includes interpretations of needs assessments and market analysis; analysis and selection of prospective client bases; program design, marketing, promotion, implementation and evaluation.

337. Environmental and Cultural Interpretation (3)  
Principles and practices of environmental and cultural interpretation of outdoor recreation resources, including tours, brochures, slide shows and exhibits. (Discussion, 3 hours)
- \*340I. Leisure in Contemporary Society (3)  
Prerequisite: Upper division standing. Intensive study of the new leisure and its impact on contemporary society.
350. Media Relations in Leisure Service Agencies (3)  
Basic knowledge and skills in media relations explored to provide techniques to effectively promote and publicize recreation and leisure activities.
351. Foundations of Therapeutic Recreation (3)  
Prerequisites or corequisites: REC 100, 211, 241, 300, 325, or consent of instructor. Philosophical and Historical foundations of therapeutic recreation and principles of planning, implementing, and evaluating leisure services for individuals with disabilities. (Lecture/Activity 3 hours.)
371. Human Services Programming in Urban Areas (3)  
Exploration of the social problems, minority populations and community resources of the urban impacted areas in relation to concerns of recreation and human needs. (Lecture/Activity 3 hours.)
- 400./500. Policy-Making Boards (1)  
Study of policy-making structures within private and public organizations with special attention to volunteers working in the administrative area.
- \*401. Swimming Pool Management (1)  
On-site, hands-on experiences in swimming pool operation and facility management. Classroom theory in areas of pool water chemistry, filtration and public health requirements for private and public pool operation.
405. Management of Assaultive Behavior (1)  
Current techniques and procedures utilized by the California State Hospital system to deal with the assaultive patient/client, emphasizing preventive, therapeutic approaches. Certificate issued upon successful completion of this course. (Lecture 1/2 hour, Activity 1 hour.)
- \*406. Legal Aspects in Leisure Services (1)  
A survey of legal aspects relating to park land acquisition, liability, constitutional issues, and employment in recreation and park agencies. Students will participate in legal research, case studies, lecture, problem solving.
- \*407. Starting a Recreation Business (1)  
Examines the basic legal, financial, and practical concerns related to starting a recreation business in California.
410. Designing Effective Workshops and Conferences (1)  
Course will enable a student to analyze elements of workshop and conference design, and provide the student with the knowledge and skills necessary to develop effective, participative group meetings.
- \*412. Political Realities in Leisure Services (1)  
A survey of the political attitudes, values, and philosophical positions of elected and appointed officials in leisure services, both public and non-profit sectors.
413. Community Recreation for Individuals with Disabilities (1)  
A survey of current methods and practices of integrating individuals with disabilities into typical leisure services in the community. Not open to students with credit in REC 416. (Discussion 1 hour.)
414. Cultural Arts for Individuals with Disabilities (1)  
A survey of practices and methods utilized in bringing cultural arts to individuals with disabilities. Not open to students with credit in REC 416. (Discussion 1 hour.)
415. Camping for Individuals with Disabilities (1)  
A survey of specialized camping services to persons challenged by handicapping conditions. Not open to students with credit in REC 416. (Discussion 1 hour.)
416. Recreation Services for Individuals with Disabilities (3)  
Survey of camping, cultural arts, and community-based recreation services for individuals with disabilities. Not open to students with credit in REC 413, 414, or 415. (Discussion 3 hours.)
- \*421. Supervisory and Administrative Practices (3)  
Prerequisite: Lower division requirements or consent of instructor. Concepts and techniques of supervision and administration in recreation agencies; emphasis on recruitment, assignment, evaluation and in-service training of recreation personnel.
- \*423. Facility Design and Operations (3)  
Prerequisites: REC 100, 211, 241, 300, 325, or consent of instructor. Theories and practical experience in the design, development, operation, maintenance and administration of various recreational facilities. Traditional grading only.
- \*425. Financing Leisure Services (3)  
Prerequisites or corequisites: REC 100, 211, 241, 300, 325, or consent of instructor. Financing and budgeting in public and private sector leisure service agencies; management by objectives as related to fiscal elements.
- 427./527. Legal Aspects of Leisure Services (3)  
Prerequisites: Upper Division Standing. Political, policy making, and legal aspects underlying the establishment, operation, and termination of public and private leisure services. Traditional grading only. (Discussion, 3 hours.)
- 428./528. Management of Volunteer Programs (3)  
Prerequisites: REC 100, 211, 241, 300, 325. Designed to develop an understanding of volunteer services and their value to agencies; to provide knowledge of the structure and function of social agencies, and to acquire administrative skills which will enable supervisors to provide meaningful roles for volunteers.
- \*430. Recreation in the Ocean Environment (3)  
Study of the skills and techniques of administration of an ocean-oriented recreational resource, including management and trip planning. Course content will be supplemented with a week long field trip to Santa Barbara Island. Additional fee required.
- \*431. Recreation Resource Management (3)  
Prerequisites: REC 100, 211, 241, 300, or consent of instructor. Review of the techniques of recreation resource management; the role of citizens, government and private agencies in acquisition and development of these resources; development of resource management policies.
- \*433. Management of Organized Camps (3)  
Prerequisites: REC 100, 211, 241, 300, or consent of instructor. Management of the organized camps, with particular emphasis on the role and responsibility of the on-site director; practical experience in all phases of camping. Topics covered include camp philosophies, job responsibilities and staffing, staff dynamics, campers characteristics and needs, camp program development and camp facility management.
441. Evaluation and Research in Leisure Services (3)  
Prerequisites: REC 100, 211, 241, 300, 325, or consent of instructor. Foundations of current methods and practices of evaluation and research about leisure and leisure services. Includes the critical need for evaluation and research in leisure services; research and evaluation concepts, types, and designs; sampling; and information/data collection, analysis, interpretation, and presentation. Traditional grading only.
448. Leisure and Wellness (3)  
Prerequisites: REC 100, 211, 241, 300 or consent of instructor. An overview of the role of leisure in wellness and wellness programs. Examination of stress and stress management, and an in-depth analysis of leisure education as a major component of wellness programs. Includes assessment of leisure functioning and development, and implementation of leisure education programs. Traditional grading only.
- \*451. Management of Therapeutic Recreation Services (3)  
Prerequisites: REC 100, 211, 241, 300, 325, 351, or consent of instructor. Corequisite: REC 452. Comprehensive therapeutic recreation program development, operation, and management. Advanced principles, issues, and trends in therapeutic recreation. (Discussion, 3 hours.)

\*452. Therapeutic Recreation Treatment/Program Planning (3)  
Prerequisites: REC 100, 211, 241, 300, 325, 351, or consent of instructor. Corequisite: REC 451. Development of individual treatment/program plans in therapeutic recreation. Includes assessment of leisure and social functioning, problem identification, development of measurable objectives, determination of plan content and methods, and evaluation of the client's progress. (Lecture-activity, 2 hours; Clinical processes, 1 hour.)

454./554. Leisure Counseling (3)  
Prerequisites: REC 100, 211, 241, 300, 325, or consent of instructor. Current processes and procedures in leisure counseling. Includes techniques of leisure needs assessment, development of leisure resource files and leisure values orientation. (Lecture-Activity, 3 hrs.)

\*462. Travel, Tourism, and Resort Recreation Management (3)  
Prerequisites: REC 100, 211, 241, 300, 325, or consent of instructor. Current procedures and processes in managing travel, tourism and resort recreation organizations. Discussion includes the organization and management of human resources in the marketing of travel, tourism and resort recreation enterprises.

\*468. Tourism Planning and Development (3)  
Prerequisites: REC 100, 211, 241, 300, 325, 462, or consent of instructor. Analysis of elements which are included in a community development plan. Assessment of the touristic potential of a region or site, enabling legislation, organization, and administration of a tourism development plan, identification of sources of resistance and support.

473./573. Aging and Leisure (3)  
Prerequisites: REC 211, 241, 100/300, 325, or consent of instructor. Theories, concepts and influences on satisfaction with retirement focusing on leisure-related issues. Overview of the continuum of services, emphasizing leisure services available to older people.

480. Philosophy of Recreation and Leisure (3)  
Prerequisites: REC 325 and one of the following: REC 421, 425, 427, and consent of instructor. Open to recreation majors only. Exploration of the philosophical and ethical basis for current practices in recreation and leisure service organizations. (Discussion, 3 hours.)

\*481. Internship in Administration of Travel and Tourism (3)  
Prerequisite: REC 484 or 1,500 hours of paid or volunteer experience in recognized travel/tourism or related agencies (prerequisites for REC 484 are listed in the Catalog). A minimum of 120 hours of supervised work experience in an approved agency, jointly supervised by agency supervisor and a University faculty member. May be a paid or voluntary capacity.

483. Professionalism in Leisure Services (1)  
Corequisites: REC 498. Synthesis of experience gained from internship placement with theoretical and applied concepts learned in the academic setting. Preparation for the transition from academic to professional life. Traditional grading only. (Sem, 1 hr.)

484. Field Work I (3)  
Prerequisites: Consent of instructor, REC 211, 241, 300, 321, senior standing; plus a minimum of 1,000 hours of verified paid or volunteer leadership experience, approved by faculty advisor. An intensive leadership experience in an approved agency jointly supervised by university and agency personnel. Credit/no credit grading only.

485. Field Work II (3)  
Prerequisites: Consent of instructor, REC 211, 241, 300, 321, 484, senior standing; plus a minimum of 1,000 hours of verified paid or volunteer leadership experience, approved by faculty advisor. Supervised experience in recreation leadership, supervision or administration in an approved agency other than the one to which the student was assigned in REC 484. Credit/No Credit grading only.

486. Field Work in Recreation Settings (3)  
Prerequisites: Consent of instructor, REC 211, 241, 300, 321, senior standing, and a minimum of 1000 hours of paid or volunteer leadership experience approved by faculty advisor or consent of instructor. Supervised leadership in one of the following specialized recreation settings:

- A. Field Work: Outdoor Recreation
- B. Field Work: Therapeutic Recreation
- C. Field Work: Administration of Volunteers
- D. Field Work: Travel and Tourism
- E. Field Work: Recreation Setting (Summer)

\*488. Internship in Management of Volunteer Services (3)  
Prerequisites: 1,500 hours of paid or unpaid experience in a recognized volunteer program or REC 484. A minimum of 120 hours of supervised work experience in a specific agency, either public or private, jointly supervised by a coordinator of volunteer services and a University faculty member. May be in a paid or volunteer capacity. Does not substitute for REC 484, 485. Traditional grading only.

\*489. Internship in Administration of Outdoor Recreation Resources (3)  
Prerequisites: REC 484 or 1,500 hours of paid or volunteer experience in a recognized outdoor recreation agency. A minimum of 120 hours of supervised work experience in an approved outdoor recreation agency, jointly supervised by the agency supervisor and a University faculty member. May be in a paid or volunteer capacity. Note: Does not substitute for REC 484, 485, 486. Traditional grading only.

\*490. Special Studies in Recreation (1-3)  
Identification and critical analysis of current problems in selected areas of recreation. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units of credit with change of topic.

\*498. Internship in Leisure Services (6-9)  
Prerequisites: Completion of all major requirements except REC 483, 1,000 hours of verified paid or volunteer leadership experience approved by faculty advisor, and consent of internship coordinator. Corequisites: REC 483. This internship will involve 400 hours of supervised experience in an approved leisure service agency jointly supervised by university and agency personnel.

499. Independent Study (1-3)  
Prerequisites: Consent of dept. and approval by department chairperson. Individual projects in areas of special interest. Independent study under the direct supervision of a faculty member. May be repeated for a maximum of 6 units of credit with consent of instructor.

## Graduate Division

500./400. Policy-Making Boards (1)  
Study of policy-making structures within private and public organizations with special attention to volunteers working in the administrative area.

501. Readings in Recreation and Leisure Studies (3)  
Critical analysis and synthesis by comparative review of professional literature in the field of Recreation and Leisure Services.

503. Leisure Counseling Practicum (2)  
Corequisite: REC 554/454. Clinical observations of Leisure Counseling sessions in approved training sites. Lecture/discussion of significance of assessment and evaluation in Leisure Counseling. Discussion and evaluation of observational techniques.

521. Recreation Administration (3)  
Organizational theory; planning, staffing and budgeting of recreation programs in governmental and voluntary agencies.

527./427. Legal Aspects of Leisure Services (3)  
Prerequisites: Upper Division Standing. Political, policy making, and legal aspects underlying the establishment, operation, and termination of public and private leisure services. Traditional grading only. (Discussion, 3 hours.)

528./428. Management of Volunteer Programs (3)

Prerequisites: REC 211, 241, 100/300, 325. Designed to develop an understanding of volunteer services and their value to agencies; to provide knowledge of the structure and function of social agencies, and to acquire administrative skills which will enable supervisors to provide meaningful roles for volunteers.

554./454. Leisure Counseling (3)

Prerequisites: REC 211, 241, 100/300, 325, or consent of instructor. Current processes and procedures in leisure counseling. Includes techniques of leisure needs assessment, development of leisure resource files and leisure values orientation. (Lecture-Activity, 3 hrs.)

571. Philosophy, Issues and Trends (3)

Current philosophy, trends and issues in the field of recreation.

573./473. Aging and Leisure (3)

Prerequisites: REC 211, 241, 100/300, 325, or consent of instructor. Theories, concepts and influences on satisfaction with retirement focusing on leisure-related issues. Overview of the continuum of services, emphasizing leisure services available to older people.

586. Internship in Therapeutic Recreation (3)

Prerequisites: B.A. degree in Recreation plus REC 351, 451, 484 or 485, plus nine units of course work from related allied health departments. Students are required to complete 480 hours within a maximum of 6 months at an agency certified by the California Board of Park and Recreation Personnel. Not open to students with credit in REC 487.

587. Field Work in Recreation Administration or Supervision (3)

Prerequisite: Full-time recreation leadership experience - minimum of 80 hours of supervised leadership in recreation administration or supervision in an approved public or private agency. Limited to students who expect to work in recreation administration or supervision.

588. Internship in Leisure Counseling (3)

Prerequisites: REC 503, 554, 590; EDP 430, 510, 536; Electives 3 units approved by advisor. A minimum of 150 hours training in a clinical or community setting approved by the course coordinator and jointly supervised by the agency supervisor, and a university faculty member. May be in a paid or volunteer capacity.

590. Special Topics in Recreation (1-3)

Prerequisite: Consent of instructor. In-depth investigation of topics of current interest and concern to students experienced in recreation. May be repeated for a maximum of six units with different topics. Topics to be announced in the Schedule of Classes.

591. Research Proposal Writing (1)

Prerequisite: REC 696. Course is concerned with variations in research design and methodology. Completion of a thesis proposal is a requirement of this course.

595. Management Studies (3)

Administrative studies and surveys; procedures for conducting appraisals of recreation programs and facilities.

599. Independent Study (1-3)

Prerequisites: Consent of Graduate Advisor and department Chair. Independent research under the supervision of a Recreation and Leisure Faculty member. May be repeated up to a maximum of six units. Traditional grading only.

696. Research Methodology (3)

Research methodology in recreation. To be completed within the first 12 units of the 500/600 series of courses.

697. Directed Studies (1-3)

Prerequisites: REC 698, advancement to candidacy. Independent investigation of field research problems in recreation.

698. Thesis (1-4)

Prerequisites: REC 591, 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

# ROMANCE, GERMAN, RUSSIAN LANGUAGES AND LITERATURES

*College of Liberal Arts*

Department Chair

Clorinda Donato

Program Directors

Clorinda Donato (French and Italian)

Harold K. Schefski (German and Russian)

Claire E. Martin (Spanish)

Department Office

McIntosh Humanities Building, Rm 820

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Faculty

## FRENCH AND ITALIAN

Professors

Clorinda Donato

Irene Marchegiani Jones

Assistant Professor

Stephen Fleck

## GERMAN AND RUSSIAN

Professors

Jutta Birmele

Wilm A. Pelters

Harold K. Schefski

## SPANISH

Professors

Harold L. Cannon

Shirley Mangini

Claire E. Martin

Grinor Rojo

Assistant Professors

Maria Carreira

Department Secretary

Cindy McCarty

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Undergraduate Advisor, Graduate Advisor.

## THE FRENCH AND ITALIAN PROGRAM

Program Director

Clorinda Donato

A degree in French places the world of international communication and culture at your fingertips. As one of the foremost languages of global diplomacy, relations, and scholarship, a degree in French makes careers in arts management, art history, international business, international relations, teaching, and travel possible. It is also a preferred language for academic pursuit in the social sciences and critical studies. The Francophone world only begins in France, stretching far beyond the Champs-Élysées into Africa, Quebec, the Caribbean, and Tahiti. Additionally, a double major or a minor in French enhances any other degree program, making the student doubly marketable upon graduation. Graduate study leading to the Master of Arts degree comprises another feature of the program. Students who complete the Master of Arts degree in French perfect their knowledge of the Francophone world. They pursue or continue professions in teaching, business, travel, and diplomacy, to name only a few, or proceed to doctoral programs at Ph.D. granting institutions. Teaching Assistantships are available.

The minor in Italian opens the door to the continuing legacy of culture, taste, and civilization that are the hallmarks of Italy past and present. Italian language and literature furnish the student with a solid liberal arts foundation, ideal for the liberal studies major seeking a humanities-based concentration. The Italian minor can be taken in conjunction with any other major, and is an excellent choice for students majoring in another Romance language, or in Art, Art History, Business, Comparative Literature, Dance, English, History, Music, or the Social Sciences. The Italian program at CSULB is strong and growing, with course offerings ranging from basic and advanced level language courses to literature, civilization, and film.

Learning either French or Italian makes you eligible for study and travel abroad in the International Programs of the California State University System. We are happy to assist you in including a year abroad into your program of language and literary study. Students are encouraged to participate in work/study abroad options. A summer work/study program in Belgium, France, or Switzerland is available to students through the Foothill College International Education Program.

## Bachelor of Arts in French (code 2-6812) (124 units)

The major in French consists of 30 upper-division units in the 300- and 400-level courses indicated below. The number of lower-division units will depend on the amount of French studied previously in high school or college, since students with prior study of French may enter at advanced standing (usually second or third year). The major program satisfies the requirements for the Single-Subject teaching credential in French, but credential candidates must take FREN 414 (Phonetics). Major students should be mindful of the Department's second language requirement: two college years or equivalent

of a second foreign language, not English. The Department also recommends inclusion of specified History courses in the program of study. These courses provide additional enrichment to the cultural component of the student's course of study.

### Requirements

Lower Division: FREN 214. Students who have completed sufficient high school French may take upper-division courses as soon as lower-division requirements have been met.

Upper Division: A minimum of 30 units of upper-division courses which must include FREN 312A, 312B, 314, 335, 336, 411, 440 and three of the following courses: 414, 456, 470, 471, 472, 474, 477, 479, 490. Candidates for the teaching credential must take FREN 414.

Departmental Requirement: Two years of a second foreign language at the college level or equivalent is required of all majors.

Departmental Recommendation: Students specializing in French should include the following courses in their program of study: HIST 131, 132, and one or more of the following: HIST 335, 336, 337. A selection from the following courses would also be appropriate: HIST 332, 333.

### Minor in French (code 0-6812)

A minimum of 20 units which must include: FREN 312A, 312B, 314, 411 and at least one other upper-division course in French to make a minimum total of 15 upper-division units.

### Master of Arts in French (code 5-6812)

#### Prerequisites

1. A bachelor of arts degree in French, or:
2. A bachelor's degree with a minimum of 24 upper-division units in French, comparable to those required of a major in French at this University. Deficiencies will be determined by the advisor after consultation with the student and study of transcript records.

#### Advancement to Candidacy

1. Approval of the graduate program by the graduate advisor, the faculty advisor and/or departmental committee, and the College of Liberal Arts Associate Dean of Graduate Studies.
2. The candidate should file for advancement upon completion of 6 units and preferably no more than 9 units on the program. A 3.0 GPA is required.
3. Successful completion of the University Writing Proficiency Examination.

#### Requirements

1. Completion of a minimum of 30 units of approved graduate-credit courses with at least 24 units in French distributed as follows:
  - a. 15 units of 600 series courses which must include FREN 696.
  - b. 9 units of 500 or 600 series courses in French.
  - c. 6 units of other acceptable graduate-credit courses. (NOTE: Courses taken outside the Department are subject to departmental approval.)

2. Two years of college-level study, or equivalent, of another language (e.g., German, Italian, Latin, Russian, or Spanish) with a minimum average grade of "B" or better. This requirement may also be met by passing the Graduate Studies Foreign Language Test (G.S.F.L.T.) in another language with a score of 500 or better. This requirement must be completed before taking the comprehensive examination. Students whose native language is not French or English may meet this second-language requirement by completing ENGL 300 (Advanced Composition) with a minimum grade of "B" or better.
3. A comprehensive examination.

### Single Subject Teaching Credential, French

#### Requirements

Same as for the major in French with French Phonetics, FREN 414, as one of the 400-level courses.

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### Courses (FREN)

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#### Lower Division

##### 101A-B. Fundamentals of French (4,4)

Fundamental skills of speaking, comprehending, reading and writing. 101A: For those who are beginning the study of French or who have had one year of high school French or equivalent. (CAN FREN 2) 101B: Prerequisite: FREN 101A or two years of high school French or equivalent. Continuation of FREN 101A. (CAN FREN 4)

##### 201A-B. Intermediate French (4,4)

Continued work in speaking, pronunciation, comprehension and writing with some reading of modern writers in the second semester. 201A: Prerequisite: FREN 101A-B or three years of high school French or equivalent. 201B: Prerequisite: FREN 201A or four years of high school French or equivalent. Credit for these courses may be obtained at a specified French university with which CSULB has an exchange agreement. They will be taught by instructors from CSULB.

##### 214. Intermediate Conversation (3)

Prerequisite: FREN 101B. Should be taken concurrently with FREN 201A or 201B. Designed to develop basic conversational skills and to prepare for more advanced work in FREN 314. Traditional grading only.

#### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

##### 312A. Advanced French I (3)

Prerequisite: Upper division standing in French or equivalent. Review of grammatical principles with regular exercises and composition work for the development of increased mastery of the written language.

##### 312B. Advanced French II (3)

Prerequisite: Upper division standing in French or equivalent. Review of grammatical principles with regular exercises and composition work for the development of increased mastery of the written language.

##### 314. Advanced Conversation (3)

Prerequisite: FREN 214 or consent of instructor. Continuation of FREN 214. Traditional grading only.

##### 335. Survey of French Literature I (3)

Prerequisite: Upper division standing in French. From the Middle Ages through the Seventeenth Century.

336. Survey of French Literature II (3)

Prerequisite: Upper division standing in French. Eighteenth to Twentieth Century.

411. Advanced French Syntax and Composition (3)

Prerequisites: FREN 312A-B or equivalent. Special emphasis on the writing of short compositions and developing an awareness of French style.

\*414. French Phonetics (3)

Prerequisites: FREN 312 A-B or consent of instructor. General concepts of linguistic science. Linguistics applied to the study and teaching of the French language. Articulatory phonetics as a means to form native French pronunciation habits with emphasis upon the difficulties encountered by speakers of American English.

440. French Civilization (3)

Prerequisite: FREN 312A,B (may be taken concurrently with FREN 335 or 336 or with consent of instructor). Significant aspects of French art, culture and social institutions. Credit for these courses may be obtained at a specified French university with which CSULB has an exchange agreement. They will be taught by instructors from CSULB.

456. French Cinema (3)

Prerequisite: Senior standing or consent of instructor. Acquaint students with the art of the medium, particularly as it is realized through the work of the artist most responsible for its success or failure, in this case the director. Traditional grading only for majors/minors. Same course as FEA 456.

470./570. French Literature of the Middle Ages (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the period. Texts in modern French.

471./571. French Literature of the Renaissance (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the 16th Century.

472./572. French Literature of the Seventeenth Century (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the century.

474./574. The Age of Enlightenment (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers and thinkers of the century. Drama, poetry and prose.

477./577. French Literature of the Nineteenth Century (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

479./579. French Literature of the Twentieth Century (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

\*490. Special Topics in French (3)

Study of a particular topic in French literature, language or culture. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics for up to 12 units.

494. Internship in French (1-3)

Prerequisites: Consent of instructor and department chair. Field work in French, supplemented by readings and tutorials under the direction of a faculty member. Internships, small group discussion/teaching, and other assignments directed by a supervising faculty member. Course may be repeated for a maximum of 6 units. No more than 3 units may be applied to the major in French.

499. Directed Studies (1-3)

Prerequisites: Consent of instructor and department chair. Independent study undertaken under the supervision of a faculty member. May be repeated for three units provided the material is not the same. Additional credit beyond three units is available only under exceptional circumstances and with prior approval of the department, but under no circumstances may the total exceed six units.

## Graduate Division

570./470. French Literature of the Middle Ages (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the period. Texts in modern French.

571./471. French Literature of the Renaissance (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the 16th Century.

572./472. French Literature of the Seventeenth Century (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the century.

574./474. The Age of Enlightenment (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers and thinkers of the century. Drama, poetry and prose.

577./477. French Literature of the Nineteenth Century (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

579./479. French Literature of the Twentieth Century (3)

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

599. Directed Studies (1-3)

Graduate standing with baccalaureate degree or equivalent. Graduate-level in-depth study on selected topics under the supervision of a graduate faculty member. May be repeated for a maximum of 3 units. Topic and study outline of work undertaken to be on file in Department. Enrollment contingent upon approval of Department Chair and faculty member.

604. Seminar in a Century of French Literature (3)

Prerequisite: Corresponding 400/500 level century survey course or consent of instructor. Intensive studies in one of the following: (c) 17th Century, (d) 18th Century, (g) 19th Century, (h) 20th Century. Courses may be taken concurrently or repeated if century studied is different. Each seminar gives three units of credit for a total of 18. Traditional grading only.

688. Seminar in French Literature or Culture (3)

Prerequisite: Graduate standing in French. Intensive study of a specific aspect of French literature or culture. Subjects to be announced in the Schedule of Classes. May be repeated for credit on different subjects.

696. Bibliographical Methods of Research (3)

Prerequisite: Graduate standing in French. Introduction to methods of research, scholarly writing. Required of all candidates for the M.A. in French. Same course as SPAN 696.

697. Directed Research (1-3)

Prerequisite: Consent of department chair. Individual study under the guidance of a faculty member. May be taken for a maximum of three units.

698. Thesis (2-6)

Planning, preparation, and completion of thesis in French for the master's degree. Optional.

## Minor in Italian (code 0-6814)

The Minor in Italian provides academic recognition to students who have completed a basic course of studies and have achieved competence in the Italian language.

### Prerequisite

ITAL 101A-B

### Requirements

A minimum of twenty units must include:

Lower Division: ITAL 201A-B, and 214.

Upper Division: ITAL 312A, 312B, and 314.

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## Courses (ITAL)

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### Lower Division

#### 101A,B. Fundamentals of Italian (4,4)

Practice in grammar, reading, pronunciation, writing and conversation.

101A. For those who are beginning the study of Italian or who have had one year of high school Italian.

101B. Prerequisite: ITAL 101A or two years of high school Italian. Continuation of ITAL 101A.

#### 201A,B. Intermediate Italian (4,4)

Readings of representative writers with oral and written practice.

201A. Prerequisite: ITAL 101A-B or three years of high school Italian or equivalent.

201B. Prerequisite: ITAL 201A or four years of high school Italian or equivalent.

#### 214. Intermediate Conversation (3)

Prerequisite: ITAL 101B. Should be taken concurrently with ITAL 201A or 201B. Designed to develop basic conversational skills and to prepare for more advanced work in ITAL 314.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 312A. Advanced Italian I (3)

Prerequisite: Upper division standing in Italian or equivalent. Review of grammatical principles with regular exercises and composition work for the development in increased mastery of the written language.

#### 312B. Advanced Italian II (3)

Prerequisite: Upper division standing in Italian or equivalent. Review of grammatical principles with regular exercises and composition work for the development of increased mastery of the written language.

#### 314. Advanced Conversation (3)

Prerequisite: ITAL 214 or consent of the instructor. Continuation of ITAL 214. More advanced use of spoken Italian to establish strong basis for correct and fluent proficiency in oral idiom.

#### 454. Italian Cinema (3)

Prerequisite: Senior standing or consent of instructor. Acquaint students with the art of the medium, particularly as it is realized through the work of the artist most responsible for its success or failure, in this case the director. Traditional grading only for majors/minors. Same course as FEA 454.

#### 490. Special Topics in Italian (3)

Prerequisite: Upper division standing in Italian or consent of instructor. Study of a particular topic or aspect of Italian literature, language or culture. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 12 units.

#### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor and department chair. Independent study under the supervision of a faculty member. May be repeated to a maximum of six units.

## THE GERMAN AND RUSSIAN STUDIES PROGRAM

Program Director

Harold K. Schefski

The German and Russian programs develop the student's language skills and cultural literacy, which are indispensable for foreign study and employment, business, government service, and careers in teaching, among others. In cooperation with the College of Engineering, the German Program promotes a double major of German and Engineering. German Studies maintains exchange programs with the Universities of Bielefeld, Essen, and Oldenburg. A summer work/study program in German-speaking countries is offered through the International Education Program (Foothill College) for which credit is available. Overseas internships are considered an important training component in preparing for an international career.

### Bachelor of Arts in German (code 2-6813) (124 units)

The German Studies Program promotes competency in the use of language and understanding of contemporary society in German-speaking countries. It is designed to meet the needs of students seeking a liberal-arts education with an emphasis on German language and culture; those intending to teach at the elementary, secondary, or the college level; and of those planning to use German in professional careers or in pursuit of graduate studies. Efforts are made to accommodate the special needs of students who simultaneously pursue a major in Business or Engineering.

#### Requirements

**Lower Division:** One year of intermediate German or equivalent. Students who have completed sufficient high-school German may take upper-division courses as soon as lower-division requirements have been met. Native speakers of German may not enroll for credit in 101A/B or 201A/B.

**Upper Division:** A minimum of 30 units of upper-division courses in German, which must include GERM 301, 302, 315, 316, six units of 401, and six units of 400-level literature and culture courses.

**Recommendations:** Courses should be selected in consultation with the major advisor. The department strongly recommends studies or an internship in a German-speaking country and will assist in such plans.

### Single Subject Teaching Credential, German

#### Requirements

The same as for the B.A. plus German 303 and 410:

### Minor in German (code 0-6813)

A minimum of 20 upper division units, which must include: GERM 301, 302, 315, 316, and 401.

### Minor in Russian (code 0-6818)

The purpose of the Minor in Russian is to provide interested students with a focused program of studies in the Russian language.



## Requirements

Prerequisites: RUSS 101A(4), 101B (4)

Twenty additional units, of which 12 units must be taken in upper-division course work: RUSS 201A (4), 201B (4), 310 (3), 312 (3), 314 (3), 410 (3).

## Master of Arts in German (code 5-6813)

### Prerequisites

1. A bachelor of arts degree in German or:
2. A bachelor's degree with a minimum of 24 units of upper-division courses in German. These courses must be comparable to those required of a major in German at the University. Deficiencies will be determined by the department.

### Advancement to Candidacy

Advancement to Candidacy should take place upon completion of at least six units, preferably no more than nine units applicable to the program, with at least a 3.0 GPA.

The candidate may file for advancement to candidacy only after she/he has filed a transcript of credits or a change-of-objective form, completed the prerequisites, and successfully completed the Writing Proficiency Examination (WPE).

The student graduate program must be approved by the graduate advisor, departmental committee, and the College of Liberal Arts Associate Dean of Graduate Studies. For graduate students interested in multimedia teaching technology, the program provides special projects and practical opportunities.

Teaching Assistantships are available.

### Requirements

1. Completion of a minimum of 30 units of approved upper-division and graduate courses with 24 units in German;
2. A minimum of 18 units in the 500 and 600 series in German which must include GERM 510.
3. A reading knowledge of French, Italian, Latin, Russian, or Spanish. Another language may be substituted only under special circumstance;
4. A comprehensive examination, unless department permission is granted to substitute a thesis.

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## German Courses (GERM)

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### Lower Division

#### 101A-B. Fundamentals of German (4,4)

101A: For those who are beginning the study of German. 101B: Prerequisite: GERM 101A or one year of high-school German or equivalent. Continuation of GERM 101A.

#### 201A-B. Intermediate German (4,4)

German grammar review with further development of reading, writing, and conversational skills. 201A: Prerequisites: GERM 101A-B or two years of high-school German or equivalent. 201B: Prerequisite: GERM 201A.

#### 204. German for Reading Knowledge (3)

Prerequisites: GERM 101A,B or equivalent or consent of instructor. Concentrates on essentials for translation and is designed chiefly for students in any field who are preparing for reading exams in German.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 301. Advanced German I (4)

Prerequisite: GERM 201B or equivalent. Intensive practice and the consolidation of the basic language skills: reading comprehension, composition, and conversation. Emphasis on reading, comprehension, vocabulary building, and idiomatic usage.

#### 302. Advanced German II (4)

Prerequisite: GERM 201B or equivalent. Intensive practice and the consolidation of basic skills: reading, comprehension, composition, and conversation. Emphasis on composition, oral reports, and discussion.

#### 303. German Phonetics (3)

Prerequisite: Upper-division standing in German or consent of instructor. General concepts of linguistic science. Linguistics applied to the study and teaching of the German language. Articulatory phonetics as a means to form native German pronunciation habits with emphasis upon the difficulties encountered by speakers of American English.

#### 305. German Conversation (3)

Prerequisite: Upper-division standing in German. Intensive practice of spoken German with stress on vocabulary building, pronunciation, intonation, and oral comprehension. Credit/No Credit grading only. May be repeated once for credit.

#### 306. Translating German to English (3)

Prerequisite: Upper-division standing in German or consent of instructor. The preparation of translations from German texts of wide-ranging subject matter.

#### 309. Business German (3)

Prerequisites: GERM 101A,B or equivalent or consent of instructor. Advanced language course to acquaint students with the terminology of German business. Conversational and written approaches to business correspondence, forms of business and corporate organizations, transportation, banking, management, protection, marketing. (Not open to students with credit in GERM 307 or 308.)

#### 315. Survey of German Literature and Culture I (3)

Prerequisite: Upper-division standing in German. German literature from the Middle Ages to the time of Goethe as related to the other arts, to philosophy, and to the social and political institutions of the time.

#### 316. Survey of German Literature and Culture II (3)

Prerequisite: Upper division standing in German. German literature from Romanticism to the present as related to the other arts, to philosophy, and to the social and political institutions of the time.

#### 380I. Contemporary Germany, Society, and Culture (3)

Prerequisites: ENGL 100, upper-division standing or consent of instructor. After the peaceful revolution of 1989/90, the united Germany today presents a different picture than at any time in its turbulent history. An important trading partner of the United States and close ally, it owes much of its democratic framework to U.S. influence during the immediate post-war period. The course examines the cultural heritage, the political and social reality, and the economic system through fictional and factual texts. Taught in English. Traditional grading only.

#### 398. Topics in German (3)

Prerequisite: Upper division standing in German or consent of instructor. Exploration of topics in language, culture, and literature. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

#### 401. Advanced German Syntax and Composition (3)

Prerequisites: GERM 301, 302. Practice in developing a style and vocabulary suitable for the writing of reports and essays on cultural and literary topics. May be repeated to a maximum of six units.

410. German Civilization (3)  
Prerequisite: Upper-division standing in German. Historical development of important German institutions, customs and thought.

430./530. German Poetry (3)  
Prerequisite: Upper-division standing in German. German poetry from the Baroque to the present.

441./541. German Novella (3)  
Prerequisite: Upper-division standing in German. The German Novella as a separate literary genre, represented by Goethe, Tieck, Kleist, Keller, Meyer, Storm, Spielhagen, Hesse, Kafka, Thomas Mann, and others.

454./554. German Literature of the 18th Century (3)  
Prerequisite: Upper-division standing in German. Literary trends of the 18th century with emphasis on Lessing, Wieland, Klopstock, Herder, Goethe, Schiller, and the authors of the "Sturm und Drang."

458./558. Nineteenth Century Literature (3)  
Prerequisite: Upper-division standing in German. Representative literary works of the "Biedermeier," "Junges Deutschland" and "Poetischer Realismus" against the background of the historical, philosophical, and cultural movements of the times.

459A./559A. German Literature from 1890-1945 (3)  
Prerequisite: Upper-division standing in German. Major German prose, drama, and poetry from Naturalism to the end of World War II.

459B./559B. German Literature from 1945 to Present (3)  
Prerequisite: Upper-division standing in German. Significant contemporary German writers of prose, drama, and poetry.

470. German Literature in English (3)  
Study of significant German writers, German literary movements, or a specific literary genre in English translation.

480. German Cinema (3)  
Acquaint students with the art of the medium, particularly as it is realized through the work of the artist most responsible for its success or failure, in this case the director. Traditional grading only for majors/minors.

494. Internship in German (1-3)  
Prerequisites: Consent of instructor and department chair. Field work in German, supplemented by readings and tutorials under the direction of a faculty member. Internships, small group discussion/teaching, and other assignments directed by a supervising faculty member. Course may be repeated for a maximum of 6 units. No more than 3 units may be applied to the major in German.

\*498. Topics in German (3)  
Prerequisite: Senior standing in German or consent of instructor. Exploration of topics in language, culture, and literature. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

499. Directed Studies (1-6)  
Prerequisite: Consent of instructor. Independent study undertaken under the supervision of a faculty member.

#### Graduate Division

510. The Faces of United Germany: Past, Present, and Future (3)  
Prerequisite: Admission to the Graduate Program in German or permission of Graduate Advisor in the German Studies. The course locates the present concentration of international research in the discipline and requires individual research, presentation of findings, and a substantive paper. Traditional grading only.

511. Selected Topics in German Culture and Civilization (3)  
Prerequisite: B.A. in German or equivalent. Intensive studies in special topics of the artistic, intellectual, social, religious, economic, and political development of the German-speaking countries, as announced in the Schedule of Classes. May be repeated for a maximum of 9 units with different topics.

530./430. German Poetry (3)  
Prerequisite: Graduate standing in German. German poetry from the Baroque to the present.

541./441. German Novella (3)  
Prerequisite: Graduate standing in German. The German Novella as a separate literary genre, represented by Goethe, Tieck, Kleist, Keller, Meyer, Storm, Spielhagen, Hesse, Kafka, Thomas Mann, and others.

554./454. German Literature of the 18th Century (3)  
Prerequisite: Upper-division standing in German. Literary trends of the 18th century with emphasis on Lessing, Wieland, Klopstock, Herder, Goethe, Schiller, and the authors of the "Sturm und Drang."

558./458. Nineteenth Century Literature (3)  
Prerequisite: Graduate standing in German. Representative literary works of the "Biedermeier," "Junges Deutschland" and "Poetischer Realismus" against the background of the historical, philosophical, and cultural movements of the times.

559A./459A. German Literature from 1890-1945 (3)  
Prerequisite: Graduate standing in German. Major German prose, drama, and poetry from Naturalism to the end of World War II.

559B./459B. German Literature from 1945 to Present (3)  
Prerequisite: Graduate standing in German. Significant contemporary German writers of prose, drama, and poetry.

590. Approaches to the Study of German Literature (3)  
Prerequisite: B.A. in German or equivalent. Evaluation of various methods in interpreting a literary work of art; different levels of interpretation; concepts of literary movements; complexity of structure related to content; literary appreciation; introduction to bibliographical aids. May be repeated with different topics to a max. of 9 units.

599. Directed Studies (1-3)  
Prerequisites: Graduate standing. Consent of instructor and chairperson or graduate advisor. Selected topics in German to be pursued in depth. May be repeated for a maximum of 6 units provided subject matter is distinct for each enrollment.

653. Seminar in a Century of German Literature (3)  
Prerequisite: Corresponding 400/500-level century course or consent of graduate advisor. Traditional grading only. Topics dealing with literary trends, literary genres, or individual authors. Intensive studies in:

- A. Century of German Literature
- B. 17th Century Baroque
- C. 18th Century Classicism
- F. 20th Century German Literature

697. Directed Research (1-3)  
Prerequisite: Consent of graduate advisor. Required of all candidates for the master of arts in German who do not choose to write a thesis.

698. Thesis (1-4)  
Prerequisite: Consent of graduate advisor. Planning, preparation, and completion of a thesis. Does not count toward 30 units required for the M.A. degree.

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#### Russian Courses (RUSS)

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##### Lower Division

101A-B. Fundamentals of Russian (4,4)  
Practice in grammar, reading, pronunciation, writing, and conversation. 101A: For those who are beginning the study of Russian. (CAN RUSS 2.)101B: Prerequisite: RUSS 101A or one year of high school Russian. Continuation of RUSS 101A. (CAN RUSS 4)

201A-B. Intermediate Russian (4,4)  
Oral and written practice with grammar review. 201A: Prerequisites: RUSS 101A-B or two years of high-school Russian or equivalent. 201B: Prerequisite: RUSS 201A or three years of high school Russian or equivalent.

## Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

### 310. Russian Literature in English (3)

Prerequisites: ENGL 100 or equivalent and/or any course in literature or European history. Taught in English, this course examines the major themes of Russian life as seen through the literature of the nineteenth and twentieth centuries.

### 312. Advanced Russian (3)

Required background or experience. Ability to read general material in Russian and to translate non-technical material into the language. Extensive reading of Russian writings, review of grammatical principles, and a general consolidation of the four language skills: reading, oral comprehension, composition, and conversation.

### 314. Russian Conversation (3)

Prerequisite: Upper-division standing in Russian or consent of instructor. Intended to meet specific, everyday situations and to provide help to those who intend to use Russian for travel, work, or classroom instruction.

### 399. Directed Studies in Russian Language (1-3)

A Directed Studies course designed to meet the individual needs of students.

### 410I. Introduction to Russian Civilization (3)

Prerequisites: ENGL 100, upper-division standing or consent of instructor. An examination of the characteristic features of Russian culture with special attention to the study of art, architecture, folklore, music, poetry and religion.

### 428. Russian Cinema (3)

Prerequisite: Upper division standing. This course will focus on the Socio-political and aesthetic aspects of Russian Cinema, delineating the following periods: Soviet Silent Cinema, Stalinist Cinema, Cinema under the Thaw, Cinema under Brezhnev, and Contemporary Cinema.

### 499. Directed Studies in Russian (1-3)

Prerequisites: Senior standing, consent of instructor. Readings in areas of mutual interest to student and instructor that are not a part of any regular course. A written report or project may be required.

## THE SPANISH PROGRAM

Program Director

Claire E. Martin

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Graduate Advisor, Undergraduate Advisor.

A major in Spanish is a treasured possession. A second major or a minor in Spanish opens many doors, but no matter what field a student plans to enter, be it health services, business, teaching, government, law, medicine, transportation, translation, engineering, or entertainment, a familiarity with Spanish will be invaluable. Bilingualism is almost an imperative in Southern California as well as in many other parts of our country.

In addition, the program provides preparation for those who plan to pursue doctoral work at other institutions. It also provides a liberal education for those who wish to expand their knowledge of the communication process and of Hispanic literature and cultures. The Spanish Program offers courses in language, linguistics, literature, culture and translation leading to the following degrees and certificates: Bachelor

of Arts and Master of Arts degrees in Spanish, Single Subject Teaching Credential in Spanish. Concentration in Spanish for the Bachelor of Arts in Liberal Studies, minor in Spanish, Bilingual Concentration for B.A. in Liberal Studies, B.A. in Special Major and the M.A. in Interdisciplinary Studies.

All students are urged to consult the Departmental Student Handbook, in addition to this Catalog, for further information regarding the curriculum, programs, requirements and faculty.

## Bachelor of Arts in Spanish

To prepare for a program of courses for the major in Spanish, the student is advised to keep in mind the upper-division options noted below as well as the Basic Core and Prerequisites for courses. The Spanish Program consists of a Basic Core (21 upper-division units) and an Option (9 upper-division units). Please note that all options will satisfy the single-subject credential requirements. However, the Linguistics/Language Acquisition Option is strongly recommended for students interested in the Single Subject Credential Program. For all options, at least one year of a second foreign language at the University level is required.

### Prerequisites

One year of intermediate Spanish at the university level, or equivalent. Students who have completed sufficient high school Spanish or equivalent may take upper division courses as soon as proficiency requirements have been met. Native speakers of Spanish who have never formally studied the language are urged to take SPAN 250.

### Requirements

Students are required to take a minimum of 30 units of upper-division Spanish coursework, which must include: the Basic Core of 21 units as follows: SPAN 312 and 313, 410, 330, 341, 423, and either 430 or 445. In addition to the Basic Core, the student must complete one of the following options:

### Option in General Spanish (code 2-6816) (124 units)

The option in General Spanish requires 9 upper division units in addition to the Basic Core. The undergraduate advisor should be consulted to ascertain the appropriate courses for this option.

### Option in Linguistics and Language Acquisition (code 2-6801) (124 units)

The option in Linguistics and Language Acquisition is especially designed for students who are interested in teaching at the secondary or post-secondary levels or who plan to continue graduate study in Linguistics. 9 upper-division units are required from the following courses: SPAN 322, 426, 427, 424 and 494.

### Option in Literature and Cultural Studies (code 2-6802) (124 units)

The option in Literature and Cultural Studies is designed for students who desire a thorough grounding in the literature and cultures of Spain and Latin America, particularly those students who are planning on graduate study in Spanish. 9 upper-division units are required from the following courses: SPAN 430, 445, 428, 429, 439, 441, 443, 446, 490, 492, 493, and 494.

## Option in Translation (code 2-6804) (124 units)

The Translation Option introduces students to the challenges of translation per se and provides a practical grounding in various types of translation which are to be found in any work setting. In addition, it will be of value to students planning graduate work in many fields, including comparative literature and translation itself. 9 units are required, selected from the following courses: SPAN 412, 413, 414, 415, 416 and 494.

Additional Requirements: A minimum of one year of a second foreign language at the university level is required of all majors.

N.B.: No course being used to satisfy any requirement for the B.A. or minor in Spanish may be taken on a Credit/No Credit basis.

## Minor in Spanish (code 0-6816)

### Requirements

A minimum of 18 units in Spanish, at least 15 of which must be upper division and must include SPAN 312, 313, and demonstration of oral fluency or 314. Students must file a Declaration of Minor and receive counseling from the undergraduate advisor.

## Single-Subject Teaching Credential, Spanish

### Requirements

The same as for B.A. in Spanish.

## Master of Arts in Spanish (code 5-6816)

### Prerequisites

1. A Bachelor of Arts degree in Spanish; or
2. A Bachelor's degree with a minimum of 18 upper division units in Spanish equivalent to the Basic Core of the B.A. in Spanish at this University, with at least a "B" (3.0) average. Deficiencies will be determined by the Master's Degree Committee after consultation with the student and study of transcript records.

### Advancement to Candidacy

1. Approval of a graduate program by the Graduate Advisor, the Department Chair, and the College Associate Dean of Graduate Studies;
2. Requirements: All deficiencies have been removed; the student has passed the Writing Proficiency Examination; the student has maintained at least a "B" (3.0) GPA in all work undertaken as a graduate student;
3. The candidate may file for advancement to Candidacy after filing an Individualized Course Planner, completing prerequisites, and completing at least 6 units (preferably no more than nine units) on the M.A. program. The candidate must file not later than one semester or summer session prior to completion of course requirements.

### Requirements

1. Completion of a minimum of 30 units of approved upper division and graduate courses, with a minimum of 30 units in Spanish of which at least 18 units must be in the 500 and 600 series in Spanish;
2. Specifically required courses include: SPAN 524, 696, and 650;

3. The student must take two years of one of the following languages: Italian, French, or German, or pass an examination at the intermediate level in one of those languages. A major or minor in a second foreign language may be used to fulfill this requirement, upon approval by the Department. Consult the Graduate Advisor;
4. The student must maintain a GPA of at least "B" (3.0);
5. All students must pass three-hour examinations on the Graduate Reading List in each of two areas to be selected by the student from the following: Spanish Literature, Spanish American Literature, Linguistics. (See the Graduate Advisor for the Graduate Reading List and to set up administration of the examinations. Students may take the examinations (both areas) in either April or November.)
6. The student must complete one of the following M.A. plans:  
Plan 1: Comprehensive examinations plus 30 units.  
Plan 2: Thesis plus 30 units and oral defense of the Thesis. See the Graduate Advisor.
7. No more than nine units of transfer graduate credit are allowed, subject to approval by the Graduate Advisor. No more than nine units of International Programs course-work may be credited toward the 24-unit Spanish requirement for the M.A. at this University. International Programs units will be counted at the 400-level.

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## Courses (SPAN)

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### Lower Division

#### 101A-B. Fundamentals of Spanish (4,4)

Concentration on oral comprehension and speaking.

101A. For those who are beginning the study of Spanish or who have had less than two years of high school Spanish or equivalent. (CAN SPAN 2.) 101B. Prerequisite: SPAN 101A or two years of high school Spanish or equivalent. Continuation of SPAN 101A. (CAN SPAN 4)

#### 201A-B. Intermediate Spanish (4,4)

Continued development of audio-lingual skills, reading and writing.

201A. Prerequisites: SPAN 101A-B or three years of high school Spanish or equivalent. (CAN SPAN 8.) 201B. Prerequisite: SPAN 201A or four years of high school Spanish or equivalent. (CAN SPAN10)

#### 250. Spanish for Bilinguals (6)

Prerequisites: Bilingual proficiency and permission of instructor. This course has been designed to address the particular needs of the bilingual student population. Its emphasis is on the acquisition of a solid grammatical base along with the development of writing and reading skills. Traditional grading only.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 312. Advanced Spanish I (3)

Prerequisite: SPAN 201B or equivalent. Extensive reading of Spanish writings, review of grammatical principles and a general consolidation of the four language skills: reading, comprehension, composition and conversation.

#### 313. Advanced Spanish II (3)

Prerequisite: Spanish 312 or equivalent. Sequel to SPAN 312, with continuing emphasis on extensive reading of Spanish texts and periodicals, regular composition work based on these readings, and the development of increased mastery of the spoken language through student discussion of the readings.

314. Oral Communication (3)  
Prerequisite: Upper division standing in Spanish, permission of instructor. Emphasis will be placed on small-group discussion to improve communication skills in Spanish. Intended for non-native speakers.
322. Bilingual Teacher (3)  
Prerequisites: SPAN 313 or consent of instructor. Development and application of vocabulary for teaching elementary/ secondary school subject matter in Spanish; application in actual teaching situations.
330. Literary Masterpieces: Spain (3)  
Critical analysis of masterworks of Spanish literature. (Lecture 3 hours.)
341. Literary Masterpieces: Spanish America (3)  
Critical analysis of masterworks of Spanish American literature. (Lecture 3 hours)
410. Introduction to Literary Analysis (3)  
Prerequisite: One 300-level course in Spanish or consent of instructor. Discovery of literature as a work of art. Different levels of interpretation; complexity of structure related to content; literary appreciation.
412. Art of Translation (3)  
Prerequisite: SPAN 313 with a grade of "B" or better, consent of instructor. Seminar in lexical, syntactical, stylistic, cultural problems of translation, Spanish to English, English to Spanish. Analysis of selected translated texts. Practice in effective translating.
413. Seminar: Literary Translation (3)  
Prerequisite: SPAN 412. Seminar in the semantic and cultural problems of literary translation (Spanish to English, English to Spanish). Comparative analysis of literary translations. Practice in effective translation.
414. Seminar: Medical/Scientific Translation (3)  
Prerequisite: SPAN 412. Concerted team effort in accurate translation of medical and scientific documents. (Spanish to English, English to Spanish.)
415. Seminar: Business/Legal Translation (3)  
Prerequisite: SPAN 412. Seminar designed to develop marketable translation skills for business correspondence and contracts, legal documents, from English to Spanish and vice-versa.
416. Translation Technology (3)  
Prerequisite: SPAN 412. This course has been designed to introduce students to Machine Translation and current technology of translation. Spanish Word Processors, specialized keyboard settings, computer bilingual dictionaries, and automatic translation programs will be used in a workshop setting. Traditional grading only.
- 423./523. Introduction to Spanish Linguistics (3)  
Prerequisites: SPAN 312 and 313 or consent of instructor. The course presents an overview of the main issues in Spanish Linguistics. Selected topics from the following areas will be the focus of study: the history of Spanish language, the grammatical systems of Spanish (Phonology, Morphology, Syntax), the sociolinguistics status of Spanish in the U.S. and the teaching of Spanish as a second language. Undergraduates register for 423; graduates register for 523. (Seminar 3 hours) Traditional grading only.
- 424./524. Second Language Acquisition: Theory and Practice (3)  
Prerequisites: Ability to understand spoken and written Spanish. Study of the history of second language learning/teaching. Overview of current research in second language acquisition, with emphasis on its implications for teaching Spanish. Evaluation and development of methods, materials, and tests. Traditional grading only. Undergraduates register in SPAN 424; graduates register in SPAN 524. (Seminar)
- 426./526. Spanish Morphology and Syntax (3)  
Prerequisite: Consent of instructor. Morphemic and syntagmatics analysis of Spanish; introduction to transformational grammar. (Lecture 3 hours)
- 427./527. Contrastive Analysis of Spanish and English (3)  
Prerequisite: Consent of instructor. Study of the known points of similarity and differences between the two languages.
428. Spanish Cinema (3)  
Prerequisite: Upper-division standing. This course will focus on the socio-political and aesthetic aspects of Spanish Cinema, concentrating on the following periods: Early Francoism, Neo-Realism, The Barcelona School, the Transition Period, Post Franco Years, and new trends in Spanish Cinema. Taught in English. (Seminar 3 hours) Traditional grading only.
- 429./529. Studies in 19th and 20th Century Spanish Poetry (3)  
Prerequisite: SPAN 330. The course will examine the salient poets from the last two centuries, including Rosalía de Castro, Gustavo Adolfo Bécquer, Antonio Machado, Juan Ramón Jiménez, Vicente Aleixandre, Federico García Lorca, Gloria Fuertes, Jaime Gil de Biedma, and other more contemporary figures. (Undergraduates register in SPAN 429; graduates register in SPAN 529.) Traditional grading only. (Seminar 3 hours)
430. Spanish Civilization (3)  
Prerequisites: Upper division standing in Spanish or consent of instructor. Characteristic features of Spanish culture with special attention to the various institutions, economic, social and cultural configurations, and the ways of thinking.
- 439./539. Modern Spanish Narrative (3)  
Prerequisite: SPAN 330 or permission of instructor. Representative 19th and 20th century novelists. Undergraduates register in SPAN 439, graduates register in SPAN 539. (Seminar)
- 441./541. Studies in Nineteenth and Twentieth Century Spanish American Narrative (3)  
Prerequisite: SPAN 341 or permission of instructor. Critical analysis of 19th and 20th century Spanish American prose fiction. Undergraduates register in SPAN 441, graduates register in SPAN 541. (Seminar 3 hours).
- 443./543. Studies in Nineteenth and Twentieth Century Spanish American Poetry (3)  
Prerequisite: SPAN 341 or permission of instructor. Study of representative 19th and 20th century Spanish American poets. Undergraduates register in SPAN 443, graduates register in SPAN 543. Traditional grading only. (Seminar)
445. Latin American Civilization (3)  
Prerequisite: Upper division standing in Spanish or consent of instructor. Analysis of main currents in Latin American civilization.
- 446./546. Studies in Spanish Culture (3)  
Prerequisite: SPAN 330. This course deals with some aspect of Spanish culture in an interdisciplinary fashion during a given period. Topics could include social, political, theoretical, and/or historical perspectives on the arts. Undergraduates register in SPAN 446; graduates register in SPAN 546. Seminar 3 hours. Course may be repeated for a maximum of 6 units. (Seminar 3 hours)
490. Special Topics (3)  
Study of a particular aspect of Spanish literature, language or culture. See Schedule of Classes for specific topics. May be repeated for a maximum of nine units as long as topics are different each time. Traditional grading only.
- A. Modern Hispanic Thought  
B. Spanish Civil War
- 491./591. Nobel Poets and Others (3)  
Prerequisites: SPAN 330, 341, or permission of instructor. Critical analysis of representative works of Nobel Poets (Aleixandre, Jiménez, Mistral, Neruda and Paz) and other significant poets (Albertik, Bécquer, Darío, García Lorca, Garcilaso, Góngora, Guillén, Vallejo, etc.) Undergraduates register in SPAN 491, graduates register in SPAN 591. (Seminar 3 hours).
- 492./592. Studies in Hispanic Theater (3)  
Prerequisites: SPAN 330 or 341, or permission of instructor. Representative Spanish and Spanish American plays. Undergraduates register in SPAN 492; graduates register in SPAN 592.

493./593. Special Topics (3)  
Study of a particular aspect of Spanish literature, language or culture. See Schedule of Classes for specific topics. May be repeated for a maximum of nine units as long as topics are different each time. Traditional grading only. Undergraduates register in 493; graduates register for 593. (Lecture)

A. Women and War: Voices of Resistance

An interdisciplinary course which studies the autobiographical testimonies of women who have experienced war and its aftermath and how their voices have been interpreted in recent years. Included are literary, historical, sociological and psychoanalytical considerations of the impact of war on women during World War I and II, the Spanish Civil War, and confrontations in Central and Latin America. Same topic as HIST 490F, W/ST 490K. (Lecture)

494. Internship in Spanish (1-3)

Prerequisites: Consent of instructor and department chair. Field work in Spanish, supplemented by readings and tutorials under the direction of a faculty member. Internships, small group discussion/teaching, and other assignments directed by a supervising faculty member. Course may be repeated for a maximum of 6 units. No more than 3 units may be applied to the major in Spanish.

499. Independent Study (1-3)

Prerequisites: Consent of instructor and department chair. Individual projects or directed readings with a professor of the student's choice. May be repeated to a maximum of six units. (Requires tutorial meetings and demonstrations of progress as defined in a written proposal.)

## Graduate Division

523./423. Introduction to Spanish Linguistics (3)

Prerequisites: SPAN 312 and 313 or consent of instructor. The course presents an overview of the main issues in Spanish Linguistics. Selected topics from the following areas will be the focus of study: the history of Spanish language, the grammatical systems of Spanish (Phonology, Morphology, Syntax), the sociolinguistics status of Spanish in the U.S. and the teaching of Spanish as a second language. Undergraduates register for 423; graduates register for 523. (Seminar 3 hours.) Traditional grading only.

524./424. Second Language Acquisition: Theory and Practice (3)

Prerequisites: Ability to understand spoken and written Spanish. Study of the history of second language learning/teaching. Overview of current research in second language acquisition, with emphasis on its implications for teaching Spanish. Evaluation and development of methods, materials, and tests. Traditional grading only. Undergraduates register in SPAN 424; graduates register in SPAN 524.

525. History of the Spanish Language (3)

Prerequisites: One course in Spanish linguistics or consent of instructor. Analysis of written and spoken Spanish from its inception through its current use in the Hispanic world.

526./426. Spanish Morphology and Syntax (3)

Prerequisite: Consent of instructor. Morphemic and syntagmatics analysis of Spanish; introduction to transformational grammar. (Lecture 3 hours)

527./427. Contrastive Analysis of Spanish and English (3)

Prerequisite: Consent of instructor. Study of the known points of similarity and differences between the two languages.

528. Romance Linguistics (3)

Prerequisites: SPAN 525 or equivalent. Methods used in Romance philology and linguistics; origin and evolution of Romance languages, comparative characteristics of Romance languages.

529./429. Studies in 19th and 20th Century Spanish Poetry (3)

Prerequisite: SPAN 330. The course will examine the salient poets from the last two centuries, including Rosalía de Castro, Gustavo Adolfo Bécquer, Antonio Machado, Juan Ramón Jiménez, Vicente Aleixandre, Federico García Lorca, Gloria Fuertes, Jaime Gil de Biedma, and other more contemporary figures. Undergraduates

register in SPAN 429; graduates register in SPAN 529. Traditional grading only. (Seminar 3 hours.)

530. Studies in Nineteenth and Twentieth Century Spanish Poetry (3)

Prerequisites: SPAN 330, 410 or permission of instructor. Study of Nineteenth and Twentieth Century Spanish Poets. (No credit for students with credit in SPAN 585). (Seminar 3 hours).

538. Studies in Golden Age Literature (3)

Prerequisite: SPAN 330 or permission of instructor. Study of Sixteenth and Seventeenth Century narrative, poetry and theater. Special emphasis on Cervantes, Garcilaso, Quevedo, Góngora, Lope de Vega.

539./439. Modern Spanish Narrative (3)

Prerequisite: SPAN 330 or permission of instructor. Representative 19th and 20th century novelists. Undergraduates register in SPAN 439, graduates register in SPAN 539. (Seminar)

540. Modernismo in Spanish American Literature (3)

Prerequisites: SPAN 341. Origin and development of the Modernista movement in poetry and prose during the period from 1880 to 1920.

541./441. Studies in Nineteenth and Twentieth Century Spanish American Narrative (3)

Prerequisite: SPAN 341 or permission of instructor. Critical analysis of 19th and 20th century Spanish American prose fiction. Undergraduates register in SPAN 441, graduates register in SPAN 541. (Seminar 3 hours).

543./443. Studies in Nineteenth and Twentieth Century Spanish American Poetry (3)

Prerequisite: SPAN 341 or permission of instructor. Study of representative 19th and 20th century Spanish American poets. Undergraduates register in SPAN 443, graduates register in SPAN 543. Traditional grading only. (Seminar)

546./446. Studies in Spanish Culture (3)

Prerequisite: SPAN 330. This course deals with some aspect of Spanish culture in an interdisciplinary fashion during a given period. Topics could include social, political, theoretical, and/or historical perspectives on the arts. Undergraduates register in SPAN 446; graduates register in SPAN 546. Seminar 3 hours. Course may be repeated for a maximum of 6 units. (Seminar 3 hours)

550. Studies in Colonial Spanish American Literature (3)

Prerequisite: SPAN 341 or permission of instructor. Study of Colonial Spanish American Literature from 1492-1820. Traditional grading only. (Seminar 3 hours).

560. Studies in Spanish American Culture (3)

Prerequisite: SPAN 341. In-depth study of some of the essays which have dealt with the problem of what the Spanish American nations are, and what they should be during the republican era. The course includes authors from both the nineteenth and twentieth centuries. (Seminar 3 hours.)

590. Special Topics (3)

Study of a particular aspect of Spanish literature, language or culture. See Schedule of Classes for specific topic. May be repeated for a maximum of nine units as long as topic is different each time. Traditional grading only.

A. Cuentista Borges

B. Spanish Civil War

591./491. Nobel Poets and Others (3)

Prerequisites: SPAN 330, 341, or permission of instructor. Critical analysis of representative works of Nobel Poets (Aleixandre, Jiménez, Mistral, Neruda and Paz) and other significant poets (Albertik, Bécquer, Darío, García Lorca, Garcilaso, Góngora, Guillén, Vallejo, etc.) Undergraduates register in SPAN 491, graduates register in SPAN 591. (Seminar 3 hours).

592./492. Studies in Hispanic Theater (3)

Prerequisite: SPAN 330 or 341, or permission of instructor. Representative Spanish and Spanish American plays. Undergraduates register in SPAN 492; graduates register in SPAN 592.

593./493. Special Topics (3)

Study of a particular aspect of Spanish literature, language or culture. See Schedule of Classes for specific topics. May be repeated for a maximum of nine units as long as topics are different each time. Traditional grading only. Undergraduates register in 493; graduates register for 593. (Seminar).

A. Women and War: Voices of Resistance

An interdisciplinary course which studies the autobiographical testimonies of women who have experienced war and its aftermath and how their voices have been interpreted in recent years. Included are literary, historical, sociological and psychoanalytical considerations of the impact of war on women during World War I and II, the Spanish Civil War, and confrontations in Central and Latin America. (Lecture)

599. Directed Studies (1-3)

Prerequisites: Graduate standing, advanced to candidacy, consent of the instructor and Chair or Graduate Advisor. Selected topics on Hispanic Studies to be pursued in-depth. May be repeated for a maximum of 6 units, provided subject matter is distinct for each enrollment. (Approval of Graduate Advisor and Department Chair required.)

640. Seminar in Spanish American Literature (3)

Prerequisite: SPAN 341 or permission of instructor. Study of particular period, genre or author. See Schedule of Classes for specific topic. (Seminar 3 hours.)

650. Critical Theory (3)

Prerequisite: SPAN 410. This course is not an introduction to literary theory, but an introduction to critical theory, i.e., the discipline which in Western countries has replaced the previous one during the past twenty or more years. We will focus on some of its major developments, and also devote a few classes to the demonstration of the practical uses of the models of reading under consideration. (Seminar 3 hours). Traditional grading only.

691. Seminar in Spanish Literature-The Spanish Civil War and Its Artistic Repercussions (3)

Prerequisite: SPAN 330, 341 or permission of instructor. The course will examine creative literature written during and after the Spanish Civil War (1936-39) that deals with the war theme. It will include both Spanish and some non-Spanish writers, including Arturo Barea, Constanca de la Mora, Cesar Vallejo, Pablo Neruda, Dolores Ibárruri ("La Pasionaria"), Ernest Hemingway, Juan Goytisolo, George Orwell, and Ana María Matute. The course will also include a discussion of the historical background of the war, and some of the art and films inspired by the war. (Seminar 3 hours) Course may be repeated for a maximum of 6 units. Traditional grading only.

696. Bibliographical Methods of Research (3)

Introduction to methods of research, scholarly writing. Same course as FREN 696.

698. Thesis (2-4)

Prerequisites: SPAN 696, consent of Graduate Committee and department chair. Planning, preparation and completion of thesis in Spanish for the master's degree. Does not count toward 30 units required for the M.A. degree.

# RELIGIOUS STUDIES

*College of Liberal Arts*

Department Chair

Jeffrey L. Broughton

Department Office

McIntosh Humanities Building (MHB), Room 619

Telephone

(562) 985-5341

FAX

(562) 985-5540

Faculty

Professors

Anthony Battaglia

Jeffrey L. Broughton

Robert H. Eisenman

Peter M. Lowentrout

Associate Professors

Edward J. Hughes

F. Stanley Jones

Carlos R. Piar

## Bachelor of Arts in Religious Studies (code 2-6011) (124 units)

The department of Religious Studies educates students in the scholarly interpretation of religion. Students develop a critical and appreciative understanding of the complexity of religions and their importance in human life; the academic study of religion thus makes an invaluable contribution to historical and cultural literacy. The elements and forms of religion – texts and institutions, stories, moral values, symbols, ritual, doctrine, etc. – are studied in their cultural and historical contexts with sensitivity and intellectual precision. Students are introduced to the major religious traditions and to religion in the modern world. Religious Studies is interdisciplinary, relating world religions and the religious dimension of human life to both the humanities and the social sciences. Students interested in a degree program should apply to the department chair, MHB 619.

### Requirements

A minimum of 36 units is required, distributed in the following way:

Core Courses: 15 units selected from the following: R/ST 100, 103, 202, 210, 301, 322, 331I, 425I, 482I, or PHIL 330.

Area courses: Fifteen additional upper division units from three of the following five categories:

1. Jewish Studies: R/ST 311, 312I, 314, 315I, 316, 375, 376I, 490\*, 495\*;
2. Christian Studies: R/ST 312I, 322, 324, 375, 376I, 383I, 471I, 472I, 490\*, 494\*, 495\*;
3. Asian Studies: R/ST 341I, 343, 344, 351, 353I, 490\*, 494\*, 495\*.
4. Biblical Studies: R/ST 311, 312I, 322, 375, 376I, 490\*, 495\*;
5. Contemporary Religious Studies:  
R/ST 302I, 362I, 383I, 391I, 396\*, 425I, 485, 490\*, 494\*, 495\*.

\*When subject matter of special topics course is applicable, the course may be used.

Six additional units are to be selected from either religious studies courses, or AIS 335, C/LT 342, PHIL 306, 307. Six to eight units of Hebrew, Greek or Sanskrit may be substituted.

## Minor in Religious Studies (code 0-6011)

A minimum of 21 units in religious studies courses or courses from other departments approved by the Religious Studies Department.

Lower Division: A minimum of six units selected from R/ST 100, 102, 103, 202, 210, or the equivalent.

Upper Division: A minimum of 15 units including three units from each of the following groups: (a) Western Religious Thought: R/ST 311, 312I, 314, 315I, 316, 322, 324, 331I, 375, 376I, 425I, 471I, 472I; (b) Asian Religious Thought: R/ST 341I, 343, 344, 351, 353I. Remaining units are to be selected from Religious Studies courses and the following electives: AIS 335, ANTH 406, AIS 380, B/ST 353, C/LT 342, HIST 333, PHIL 330.



## Certificate in Religious Studies (code 1-6011)

### Requirements

A bachelor's degree with a major in a traditional discipline.

\*A minimum of 30 units in religious studies or courses offered in other departments approved by the Religious Studies Department.

Lower Division: A minimum of nine units selected from R/ST 100, 102, 103, 202 or 210.

Upper Division: A minimum of 21 units including one course from each of the following: (a) Biblical Studies: R/ST 311, 312I, 322, 375, 376I; (b) Western Religious Thought: R/ST 314, 315I, 316, 331I, 471I, 472I, 485; (c) Asian Religious Thought: R/ST 341I, 343, 344, 351, 353I. A minimum of twelve upper division units from the preceding courses and the following electives: R/ST 302I, 353I, 362I, 383I, 482I, 490, 494, 499; AIS 335; ANTH 406; ASAM 380; B/ST 353; C/LT 342; HIST 333; PHIL 330.

### Courses (R/ST)

#### Lower Division

#### 100. Introduction to Religion (3)

Origin, nature, and function of religion in the individual and culture with emphasis upon and reference to outstanding personalities, sacred writings, and basic features of the world's leading religions.

102. Introduction to World Religions I (Early & Western) (3)  
A survey of representative figures, themes, the schools in Western religious thought, including Judaism, Christianity and Islam.

103. Introduction to World Religions II (Eastern) (3)  
A survey of Indian, Chinese and Japanese religious thought. Emphasis will be on original texts in translations.

#### 120A. Biblical Aramaic I (3)

Alphabets and grammar of Aramaic, the language of Jesus, will be taught. Exercises will be offered in the proper employment of dictionaries and reference tools. Readings will include: Aramaic sections of the Bible, Dead Sea Scrolls, ancient Aramaic versions of the Bible, reconstructions of the Aramaic sayings of Jesus (e.g. the Lord's Prayer), and early Christian Aramaic writings. Cultural excursions survey history and development of the ancient international language Aramaic, the varieties of Aramaic script, the discovery of ancient Aramaic inscriptions and manuscripts, and modern studies of Aramaic and its role in understanding Jesus and the Judaism of his time. This unique course-offering is highly recommended for all students of the Bible, ancient Judaism, and early Christianity.

#### 120B. Biblical Aramaic II (3)

Prerequisites: Biblical Aramaic I or consent of instructor for students with prior training in Semitic languages. Advanced grammar and readings in Aramaic, the language of Jesus and the international language of the Near East prior to the importation of Greek. Readings from the Aramaic portions of the Bible and related Old Aramaic documents, Dead Sea Scrolls, ancient Aramaic versions of the Bible (Targumin), reconstructions of the Aramaic sayings of Jesus, rabbinic writings, and early Christian Aramaic. Select cultural excursions into the historical impact of Aramaic and special study of unpublished manuscripts.

#### 202. Religion and Society (3)

Religious and secular views of the relation of persons and society with emphasis upon contemporary problems of personal and social ethics, political responsibility and social structure.

#### 210. Introduction to the Bible (3)

An overview of the Sacred texts of Jews and Christians. Inspiration, Creation, Salvation, and other Biblical themes will be discussed, as well as key persons and events, such as Moses, Jesus, etc. Not available to students with credit in R/ST 101A.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 301. Approaching Religion (3)

Study of the methods of religious studies, including the history of religions, comparative and phenomenological study of religions, textual criticism, exegesis, research methods and techniques.

#### 302I. Religious and Social Ethical Dimensions of American Diversity (3)

Prerequisites: ENGL 100 and upper division status. This course examines the religious and social ethical aspects of the adaptation of various American subcultures to the polyglot mainstreams of American culture.

#### 311. Old Testament (3)

The Old Testament as a religious, historical and literary document with emphasis on the religion and culture of the early Hebrews. Selected books will be read each term, but prime emphasis will be put on Genesis, Exodus, the early prophets, Isaiah. The period of the conquest and the divided monarchies will be studied.

#### 312I. Intertestament Literature, Palestine History, and Early Christianity (Dead Sea Scrolls) (3)

Prerequisites: ENGL 100 and upper division status. Historical development of Jewish religion and culture in the Second Temple period from the rise of the Maccabees to the beginnings of Christianity with emphasis on the rise of the Jewish State, the coming of the Romans and the beginnings of primitive Christianity (Essenism, Phariseism and Sadduceism).

#### 314. History of the Jewish Religion (3)

From the end of the Second Temple period to the close of the Middle Ages. Development from Hellenistic Judaism to Rabbinic Judaism to philosophical theology will be gone into in some detail. Readings from Saadya, Halevi and Maimonides, etc.

#### 315I. Modern Jewish Thought/ Zionism (3)

Prerequisites: ENGL 100 and upper division status. Will deal with the development of Jewish thought from the enlightenment and emancipation from ghettos, through attempts at assimilation, the Holocaust and the birth of the Jewish State. The development of conservative, reform and orthodox Judaism will also be discussed.

#### 316. Jewish History (3)

Survey of Jewish history from early times to the present. Subjects such as the Babylonian Captivity, the fall of the Temple, the rise of Rabbinic Judaism, the Dispersion, impact of anti-Semitism, Jewish community and intellectual life in the Middle Ages, Emancipation from the Ghetto, political movements, the Holocaust, Israel.

#### 318. Biblical Hebrew I (3)

Biblical Hebrew I imparts the basic grammatical inflections, conjugations, and structures of elementary biblical Hebrew and starts the student on the path of mastering the specific vocabulary of biblical Hebrew. It introduces the history and particularity of this language as well as the standard reference tools employed in reading biblical Hebrew.

#### 319. Biblical Hebrew II (3)

Prerequisite: R/ST 318. Biblical Hebrew II completes the instruction in the grammar of biblical Hebrew and introduces the student to the major syntactical constructions of this language. It further increases the student's biblical Hebrew vocabulary, hones skills in the use of reference books for biblical Hebrew, and allows an initial confrontation with selections from the Hebrew Old Testament itself.

#### 322. New Testament (3)

The emergent Christian community, seen through the missionary and pastoral letters, the synoptic gospels, the radical theologies of Paul and John and the dramatic visions of the Apocalypse.

#### 324. Christianity (3)

Introduction to the common doctrines of Christianity, with special attention to the causes of the division of Christianity into many churches. Similarities and dissimilarities in the doctrine and practice will be discussed in terms of present day Christianity.

3311. Islamic Religion and Culture (3)

Prerequisites: ENGL 100 and upper division status. The Koran, Muhammad and the rise of Islam as a cosmopolitan faith. The development of Muslim civilization, including literature, theology, philosophy and Sufism (mysticism).

3411. Buddhism (3)

Prerequisites: ENGL 100 and upper division status. The Buddha; early Buddhism; the great vehicle; and the vehicle of incantations. The transmission of Buddhism to China, Korea, Japan, Southeast Asia and Tibet. Emphasis on original texts in translations.

343. Religions of China (3)

Ancient Chinese religious thought: the penetration of Indian Buddhism and Ch'an (Zen); popular religion and the religion of the scholar-official. Emphasis on original texts in translations.

344. Religions of Japan (3)

The transmission of continental civilization to Japan; shinto, Buddhism and Tokugawa Neo-Confucianism; Genroku culture; and the New Religions. Emphasis on original texts in translations.

351. Religions of India and South Asia (3)

A survey of Indian religions to the present. Emphasis will be on the ways that religions of historic India have developed and interacted.

3531. Religions of Southeast Asia (3)

Prerequisites: ENGL 100 and upper division status. An introduction to the religions of Southeast Asia, with an emphasis on Cambodia and Vietnam. Ancient religion, historical transmission and adaptation of Hindu and Buddhist traditions, and more recent arrivals such as Christianity will be discussed. Some attention will be given to other countries and traditions in the area. (Lecture 3 hours)

3621. Religion and Psychology (3)

Prerequisites: ENGL 100 and upper division status. This course examines the religious and psychological interpretation of both individual and community religious activity and experience. (Lecture 3 hours)

375. The Historical Jesus (3)

Historical reconstruction of the life and thought of the "Founder" of Christianity through examination of the preserved sources. Standard historical and religious-historical methods are introduced, practiced in exercises, and integrated into the reconstruction; generally applicable historical and analytical skills are learned. Tendencies of the ancient traditions are studied in the effort to establish what can be known historically about Jesus in his contemporary cultural and political environment.

3761. Christian Origins (3)

Prerequisites: ENGL 100 and upper division status. Consideration of Christian origins in the first century and afterwards. In particular, consideration of the two factions in the early Church in Palestine, one following the Apostle to the Gentiles' and the other following the family line of Jesus in a native Palestinian messianic way. Faith vs works. Readings from primary sources like Book of Acts, Paul's letters, Eusebius, and apocryphal literature, and other new discoveries.

3831. Christianity and Marxism (3)

Prerequisites: ENGL 100 and upper division status. An examination of the encounter between Christianity and Marxism, both in the past and in the present. The similarities and differences between the two, their evaluations of one another and of the modern world, and their understandings of appropriate human action will be compared and contrasted.

3911. Religion and Science (3)

Prerequisites: ENGL 100 and upper division status. This course examines the occasionally harmonious, often acrimonious relationship between religion and science. Using the methods of the history and phenomenology of religion and the history and philosophy of science, students examine, beyond the particulars of the course, the fundamental insights and claims of both religion and science, moving beyond the frequently sharp prejudices they initially bring to their study, to a more reasoned understanding of each alone and in relation to each other.

396. Religion and Humanities (3)

Examination of the religious dimensions of man's existence as these are expressed in the humanities, including literature, music and the fine arts. May be repeated up to a maximum of six units. Topics will vary.

4251. Religion and Modern Literature (3)

Prerequisites: ENGL 100 and upper division status. The role of the writer and poet in the secular modern world as religious thinker. The themes of alienation, anguish, absurdity, evil, hope, despair, mystic vision, and salvation will be among those treated. (Not open to students with credit in R/ST 396.)

4711. Early Christianity and Society (3)

Prerequisites: ENGL 100 and upper division status. Development of Christianity from the New Testament period to the Renaissance with emphases on the growth of doctrine, church institutions and the role of Christianity in ancient and medieval society. Same course as HIST 4111.

4721. Formation of Modern Christianity (3)

Prerequisites: ENGL 100 and upper division status. Restructuring and renewal of Christianity, from the Reformation through the dawn of modern consciousness to the challenge of 20th century secular life.

4821. American Religious Experience (3)

Prerequisites: ENGL 100 and upper division status. Survey of major themes in the unique American religious experience. Topics of significance will include the adaptation of European Christianity to novel American circumstances, the proliferation of denominations and the varied religious response to a dynamic American society.

485. Contemporary Religious Thought (3)

Critical examination of the current trends in religious understanding against a background of rapid social change. New movements and issues on the religious scene will be considered and a variety of authors representing both East and West will be studied in order to reveal the emerging patterns of religious thought.

490. Special Topics in Religious Studies (1-3)

Topics of current interest in religious studies selected for intensive development. A maximum of nine units with different topics may be used in the major. Topics will be announced in the Schedule of Classes.

494. Religious Classics (3)

Examination of selected religious classics including an analysis of religious themes in significant works of world literature. Specific works will vary. The course may be repeated for credit up to nine units with different topics.

A. Greek Religion

The history of Greek religion in texts from Homer, through the city-states, to the individualized religion of the Hellenistic period. Special attention is paid to the origin and expressions of humanistic philosophical religion and the mystery religions.

495. The Religious Personality (3)

Prerequisites: Three units of religious studies of consent of instructor. Study of the cultural influence and personal characteristics of religious men as reflected in their writings. Selection of personalities will vary. May be repeated for credit up to nine units with different topics.

499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special research interest. May be repeated up to a total of six units.

# RUSSIAN AND EAST EUROPEAN STUDIES

*College of Liberal Arts*

Director  
Harold Schefski (German and Russian)

Department Office  
McIntosh Humanities Building (MHB),  
Rm 810

Telephone  
(562) 985-8525 or (562) 985-4317

Students desiring information should contact the department office for referral to one of the faculty advisors.

## Certificate in Russian and East European Studies (code 1-6040)

Russian and East European Studies has an interdisciplinary program which offers students interested in this field the opportunity to pursue courses leading to a Certificate in Russian and East European Studies. Courses used to meet this certificate requirement may be counted also, where applicable toward the General Education requirement and the major and teaching minor requirements of the cooperating departments.

Interdisciplinary in concept, it covers the fields of anthropology, economics, geography, history, comparative literature, philosophy, political science and the Russian language.

The expanding opportunities for careers and public service in foreign policy administration, international organization, international business activities, education and information for intercultural understanding, make it useful to organize studies leading to a certificate in this ever important part of the world. This will tend to enhance the student's possibility for a career in business, education or government, and broaden the scope of understanding.

Interested students should apply to the Director, Russian and East European Studies, Dr. Harold Schefski, Department of Romance, German and Russian.

### Requirements

1. A bachelor's degree with an approved major;
2. A minimum of two semesters of a Slavic language;
3. 18 units selected from four of the disciplines listed below chosen in consultation with the student's advisor.

No more than six units of any one discipline shall apply toward the certificate;

ANTH 331, 490\*; C/LT 349, 428, 449; ECON 368, 490\*;  
GEOG 318; HIST 341A, 341B, 441, 490\*, 495\*; PHIL 490\*;  
POSC 306, 356, 357, 484, 497; RUSS 101A-B, 201A,  
201B, 310, 312, 314, 410;

4. Cumulative GPA of 2.75 in all courses in the student's approved certificate program.

\*May be taken only when course work is applicable to Russian and East European Studies. Consultation with director of the center is required.

# SPORTS, ATHLETICS AND RECREATION

## University Programs

Director  
Bill Shumard  
Telephone  
(562) 985-4655

The University sponsors a complete athletic program. The Department of Sports, Athletics, and Recreation is the administrative unit responsible for the supervision of intercollegiate athletic programs, the intramural program, the sport clubs, recreation clubs, and recreational fitness for students, faculty and staff.

The department sponsors a diverse program of intercollegiate athletics for men and women. Both programs compete under the rules of the National Collegiate Athletic Association and the Big West Conference, maintaining membership in both organizations. Women's varsity sports are basketball, golf, cross country, soccer, tennis, track and field, volleyball, water polo and softball. Men's varsity sports are basketball, baseball, track and field, cross country, water polo, volleyball, and golf. Students enrolling in intercollegiate athletic programs must meet all NCAA eligibility requirements.

The intramural program offers all students the opportunity to play in a wide range of sports and activities. The program includes 25 different activities. To receive credit for this program students may enroll in SAR 200. Students must participate in a minimum of three (3) different intramural tournaments or leagues per semester. As an alternative to direct participation, students can earn class credit by officiating 15 intramural games per semester. Team activities are scheduled at varied times. League competition is available in 16 of the activities for men, women and co-educational participation. Students enrolled in the class must contact the Recreation Sports office to sign up for their activities. Upon completion of each activity, the student must notify the Recreation Sports office of their participation.

Students may participate in any of the club sports activities which are partially funded by the Associated Students, Inc., and administered through the SAR Department. These sports are crew, men's rugby, archery, badminton, sailing, Judo, soccer, ski and snowboarding, ice hockey, water skiing, Aikido, cycling, Tae Kwon Do, Shotokan, Karate, Kung Fu, outdoor adventures, Kali/JKD and Karate. Students registering for SAR 210 must attend regular practices and competitions, assist the club with fund raisers and adhere to the rules and regulations. In addition to participation in club sport activities, students may also receive credit for leadership training and service performed with any university sponsored program in which club sports is promoted.

Students may apply no more than four (4) semester units of lower-division SAR courses toward the baccalaureate degree within the 20-unit maximum on activity units generally, except

that the combined total of lower-division SAR and PE activity units must not exceed 12 units. Upper-division SAR courses may be taken one time only and not in conjunction with the lower division SAR courses.

## Courses (SAR)

200. Intramural Activities (1)

210. Sport Clubs/Leadership (1)

Participation or competition in sport clubs as conducted under the respective club/team policy or leadership opportunities as outlined by the Recreation Director. Enrollment subject to approval by the coach of the sport or the Recreation Director. Athletes enrolled who fail to qualify for the squad must withdraw from the course. These courses may be repeated for credit to a maximum of four (4) units. Credit/No Credit grading only.

- A. Archery
- B. Crew
- C. Cycling
- D. Ice Hockey
- E. Martial Arts
- F. Rugby
- G. Sailing
- H. Ski and Snowboard
- I. Soccer
- J. Water Ski
- L. Leadership

260-299. Intercollegiate Sports (1)

Competition in NCAA-regulated major and minor sports. Enrollment subject to approval of the coach of the sport. Athletes enrolled who fail to qualify for the squad must withdraw from the course. These courses may be repeated for credit to a maximum of four (4) units. Credit/No Credit grading only.

- 261. Women's Softball (1)
- 262. Men's Baseball (1)
- 263. Women's Basketball (1)
- 264. Men's Basketball (1)
- 265. Women's Track and Field (1)
- 266. Men's Track and Field (1)
- 269. Women's Volleyball (1)
- 270. Women's Water Polo (1)
- 271. Men's Water Polo (1)
- 272. Men's Volleyball (1)
- 275. Women's Golf (1)
- 276. Men's Golf (1)
- 277. Women's Tennis (1)
- 281. Women's Cross-Country (1)
- 284. Women's Soccer (1)
- 282. Men's Cross-Country (1)
- 319. Theory and Practice of Minor Intercollegiate Sports (2)
- 320. Theory and Practice of Major Intercollegiate Sports (2)

The California State University is committed to providing equal opportunities to men and women CSU students in all campus programs, including intercollegiate athletics.

# SCIENCE EDUCATION

*College of Natural Sciences and Mathematics*

Department Chair

William C. Ritz

Department Office

FO-5, Room 118

Telephone/FAX

(562) 985-4801/985-7164

Faculty

Professors

Patrick F. Kenealy

William C. Ritz

Assistant Professors

Alan Colburn

Single Subject Science

Credential Advisor

William C. Ritz

Department Secretary

Delia Flores

The Department of Science Education is strongly committed to the improvement of teaching and learning in science at all levels, Kindergarten — University. The activities of the department are highly diversified, ranging from its roots in teacher preparation through science education projects of national significance. Faculty of the Department of Science Education play an important role in preparing and credentialing elementary and secondary school teachers for science teaching. Significant emphasis is also placed on providing experienced teachers with continuing opportunities to refine and raise the effectiveness of their science teaching. In addition, through such projects as its "Scientist to Science Teacher" project, the Science Education Department serves scientists, engineers, and others who wish to pursue second-career opportunities in science teaching. In all its endeavors, the department maintains close ties with the teachers and schools of the greater Long Beach area.

The Department also undertakes projects aimed at pre-college students. A "Young Scholar's Ocean Science Institute," offered for several years with the support of a grant from the National Science Foundation, offered selected high school students an opportunity to learn and explore scientific research prior to their college years. The "Head Start on Science" project, one of only two such projects supported by the

US Department of Health and Human Services, is developing a "sense of wonder" science component for 4-year old "Head Start" youngsters, their teachers and parents. Other recent projects of the Department have included: The Project to Improve Methods Courses in Elementary Science and the Minority Opportunities in Science Teaching Project (Project MOST). To complement their teaching activities, Science Education faculty members maintain an active program of research and are involved in a variety of local state, and University Organizations and projects to improve science and environmental education.

The Department also maintains an extensive Science and Environmental Education Curriculum and Materials Resources Center which includes science teaching guides, textbooks, professional journals, audio-visual materials, and computer software. Students and local teachers are welcome to explore these resources during campus daytime hours.

## Courses (SCED)

### 302. Elementary School Science Workshop (3)

Prerequisites: BIOL 301, NSCI 301, or SCED 401. A practicum on the development and use of "hands-on" elementary school science teaching/learning activities, units and learning centers. Not open to students with credit in BIOL 302 or NSCI 302. (Lecture 2 hrs., workshop 2 hrs.) A course fee may be required.

### 305. Workshop in Environmental Education (3)

An interdisciplinary workshop/seminar course for teachers of all grade levels or subject specialties K-12. Current environmental issues, field excursions, involvement with innovative curricular materials, and development of teaching/learning units for class use. Not open to students with credit in BIOL 305 or NSCI 305. (Lecture 2 hrs., workshop 2 hrs.) A course fee may be required.

### 401. A Process Approach to Science (3)

Prerequisites: BIOL 200; PHSC 112; GEOL 102 and 104; all with a "C" or better grade. The processes of science as they relate to the life, earth, and physical sciences. Practical approaches to understanding how science works will be modeled and integrated throughout. Not open to students with credit in BIOL 301, NSCI 301, or NSCI 401. (Lecture 2 hrs., laboratory 3 hrs.) A course fee may be required.

### 403. Seminar in Integrated Science (2)

Prerequisites: Completion of all credential breadth requirements for Single Subject Teaching Credential in Science, three-fourth of the credential specialization courses, and consent of instructor. Enrollment limited to students who intend to pursue a Single Subject Credential in Science. Requires presentations, discussions, and critical evaluations by students on selected interdisciplinary topics in the sciences. Occasional field trips may be required.

### 490. Special Topics in Science Education (1-3)

Prerequisites: Consent of instructor. Selected topics in science education. Course content will vary from section to section. May be repeated with different topics with the consent of the instructor.

### 493. Research in Integrated Science (3)

Prerequisites: NSCI 403 or SCED 403 and consent of instructor. Requires collaborative work to design and conduct experiments of an interdisciplinary scientific nature. Studies will be designed for presentation at selected scientific or educational meetings. (Lecture 1 hr., laboratory 6 hrs., field trips). Course fee may be required.

### 496. Directed Studies in Science Education (1-3)

Prerequisites: Consent of instructor. Supervised study of current topics in science education. Course fee may be required.

# SINGLE SUBJECT TEACHER EDUCATION PROGRAM

*College of Education*

University Coordinator (Interim)

Jean Conroy

Office

ED 1, Room 54

Telephone

(562) 985-5325

Assistant

Pat Everett

A teacher with a Single Subject Credential is authorized to teach the specific subjects named on the credential in departmentalized schools. This is commonly done in California high schools and in most California junior high and middle schools. The Single Subject Credential Program (SSCP) prepares university students to be credentialed in California for single subject instruction. At CSULB the program includes courses in the students' teaching subject area, in Secondary Education (EDSE), and in Single Subject Education (EDSS).

Students are able to receive information brochures by calling the Single Subject Teacher Education Program office at (562) 985-5325. Information brochures will be mailed to these students.

All professional coursework for the credential must be completed within seven years of the semester when the first course is completed.

## Admission

Before beginning the Single Subject Credential Program, students should be admitted to the University. Apply for admission if you are (a) a graduating senior at CSULB, (b) transferring from another institution, or (c) returning to the University after an absence of one or more semesters. Students may begin taking the prerequisite courses needed for admission to the SSCP as a junior with a minimum of sixty units. Admission to the University, however, does not constitute admission or acceptance to the SSCP. A separate application must be submitted to the SSCP Office in order to be considered for acceptance into the SSCP.

## Requirements

1. Complete the prerequisite course, EDSS 300, in the appropriate subject field.
2. Satisfy the GPA of 2.75 or meet the minimum requirements of the CSU system for the degree major, whichever is higher. The GPA requirements are as follows: 2.84-Foreign Language; 2.82-English; 2.81-Art, Music; 2.80-Home Economics; 2.75-Health Science, History, Mathematics, Physical Education, Science, Social Science. Consult your advisor if your degree is not from CSULB. GPA requirements are recalculated approximately every three years.
3. Achieve satisfactory performance as a teacher's aide (minimum of 30 hours);
4. Complete personal interview by credential major faculty;
5. Submit two letters of recommendation;
6. Submit an application for Certificate of Clearance to the California Commission on Teacher Credentialing (CTC);
7. Submit a tuberculosis skin test or chest X-ray taken within the last three years;
8. Pass CBEST and satisfy the CSULB speech requirement. Students who do not pass CBEST may satisfy the fundamental skills by attaining a minimum of 37 in the appropriate section of CBEST (123 total required for passing) or by the following:

Written English – Pass the CSULB Writing Proficiency Examination;  
 Reading – Complete the literature or philosophy general education requirement with a minimum grade of "C";  
 Mathematics – Complete the mathematics general education requirement with a minimum grade of "C";  
 Note: CBEST must be passed in order to obtain an application for student teaching;

9. Submit a written statement of professional goals or philosophy;
10. Submit a completed program application to EDSS 300 instructor;
11. Complete all single subject area requirements for admission. Contact the Credential Coordinator for details.

## 5-Year Preliminary Credential

### Requirements

1. Hold a bachelor's degree;
2. Satisfy the U.S. Constitution requirement (POSC 100 or 391 or exam);
3. Complete the requirements for a Single Subject Credential Major;
4. Attain a GPA of 3.0 or above for all professional education course work, with a minimum grade of "C" in all professional education courses;
5. Complete the following courses: EDSS 450, EDSE 435, 436, 457, and H SC 411B;
6. Pass CBEST;
7. Be admitted to and complete student teaching (EDSS 472A,B,C).

### CLAD (Crosscultural Language and Academic Development) Emphasis Preliminary Credential

CSULB has a new program, the CLAD (Crosscultural Language and Academic Development) - Emphasis Single Subject Preliminary Credential Program. The approved program is as follows:

1. Complete all the requirements for the Preliminary Single Subject Credential.
2. Complete six (6) units of college-level foreign language, or equivalent experience.
3. Complete successfully with a grade of "C" or higher the following:
  - a. EDP 302 or PSY 361;
  - b. EDSE 339 or CD/LING 329 or EDP 454 ;
  - c. EDP/LING 485 .

NOTE: The courses listed in (3) above may be taken concurrently with EDSS 300, before EDSS 300, or after EDSS 300, but they must be taken before Student Teaching.

### Student Teaching

Admission to Student Teaching is based upon a second thorough assessment of the candidate's qualifications. The process involves an evaluation of the applicant's file and an interview with faculty in the Single Subject Program. The criteria for admission are as follows:

1. An apparent potential for success in teaching, as indicated by successful leadership, teaching experience, or work experience. Updated information regarding the candidate's

most recent experience, including the work in EDSS 450, forms the basis of this assessment. Candidates are urged to submit letters of recommendation which reflect activities undertaken since their admission to the credential program;

2. Continuing motivation for and enthusiasm toward teaching, together with those personality traits believed essential for successful teaching. New evidence includes a strong recommendation from the instructor of the EDSS 450 class and further recommendations from faculty who have worked with or have interviewed the student since the time of admission to the credential program;
3. Academic competence, overall and in the teaching major. The level of scholarly achievement of candidates is expected to be above average. Candidates need to consult with their credential advisor regarding the GPA required.

### Admission Requirements

1. Admission to the Single Subject Teacher Education Program;
2. A GPA of 2.75 or the minimum requirement of the CSU System for the degree major, whichever is higher;
3. A minimum grade of "C" in each course in the professional education program and completion of the four education courses with a GPA of at least 3.0;
4. TB clearance (clearance must be within one year prior to start of student teaching);
5. By October 1 or March 1 of the semester prior to Student Teaching, file a student teaching application;
6. Pass the California Basic Educational Skills Test (CBEST) prior to the student teaching application deadline;
7. Satisfy subject matter mastery evaluation.

### Student Teaching Application Process

1. Transfer graduate students should recognize that completion of the credential program may take three or more semesters. The major department may require a minimum of six units in the major at CSULB prior to student teaching;
2. The application for Student Teaching is reviewed by the student's Single Subject major area(s). The Credential Processing Center (CPC) evaluates the transcripts. The department then makes a recommendation to the University Single Subject Teacher Education Committee which takes final action. When approved by this committee, the student registers for EDSS 472A,B,C. A priority system is used if sufficient funding is not available to allow all qualified applicants to enroll in student teaching;
3. A Certificate of Clearance must be on file in the Single Subject Office prior to the beginning of Student Teaching.

Student teaching is full day, full semester, following the school district calendar. The students teach three classes which represent different aspects or levels of the single subject major. The other two periods are for preparation and observation. For at least two weeks, the student teacher shall have full teaching responsibility for the total class all day. Student teachers attend student teaching seminars. Student teaching is cross-cultural. The University determines the specific student teaching assignment.

### Professional Clear Credential

#### Requirements

1. Requirements for the Preliminary Credential (see above);

2. A minimum of thirty (30) postbaccalaureate semester units. Note that these units must be taken after the baccalaureate degree is awarded. The only exception is for second semester seniors who successfully petition in advance of obtaining the baccalaureate to count a maximum of twelve (12) units taken in the senior year toward a postbaccalaureate credential;
3. ED P 350 (mainstreaming);
4. Computer education - see your credential advisor or the Credential Processing Center for courses and options for meeting this requirement.

## Petitioning Process

Students may appeal a decision to deny admission to the program or to student teaching, a negative recommendation for the credential, or any other program decision, by filing a written appeal to the University Single Subject Petitioning Committee. The Petitioning Committee reviews the written statements and supporting evidence and interviews the candidates, if necessary. After the review, the Committee renders its final decision. Students follow University policy to appeal a course final grade.

## Single Subject Credential Major Programs

Candidates for the Single Subject Credential must complete one of the credential major programs which have been approved by the CTC. Please consult the following list for the programs available at CSULB. Students should contact a Single Subject Advisor for complete details on each of these programs.

### Art

Programs in Art are in the process of being approved to reflect new state standards. Students may not enroll in the previously approved program after September 1, 1996. Consult the credential advisor for information on the programs. Students who are not in an approved program may have to meet subject matter mastery by passing Commission-approved examinations.

### English

Students must complete the following core of thirty-five (35) units for all emphases: ENGL 184, 310, 327, 363, 375, 410, 482, LING 329; select 1 course from ENGL 250A, 250B; select 1 course from ENGL 370A, 370B.

Please note that these emphases vary in the number of units they require to provide breadth and perspective.

#### Black Studies Emphasis

Students are required to complete the core of thirty-five (35) units and eighteen (18) units to provide breadth and perspective.

Breadth and Perspective (18 units): B/ST 140, 343, 415, 499; select three units from B/ST 155, 201, 370; select three units from B/ST 180, 240, 340, 346.

#### Comparative Literature Emphasis

Students are required to complete the core of thirty-five (35) units and fifteen (15) units to provide breadth and perspective.

Breadth and Perspective (15 units): select one course from C/LT 261, 361; select three units from C/LT 230, 330A, 330B; select three units from C/LT 250, 251, 410, 412I, 451I, 461; select three units from C/LT 234, 235, 236, 403, 415I, 440; select three units from C/LT 310I, 312I, 414I, 421I, 422I, 431, 432, 438.

#### Creative Writing Emphasis

Students are required to complete the core of thirty-five (35) units and eighteen (18) units to provide breadth and perspective.

Breadth and Perspective (18 units): select nine units from ENGL 405, 406, 407, 499; select nine units from ENGL 385, 386, 459, 463, 467A, 467B, 474, 475, 476, 477A, 477B, 478.

#### Journalism Emphasis

Students are required to complete the core of thirty-five (35) units and a minimum of twenty-one (21) units to provide breadth and perspective.

Breadth and Perspective (21 units minimum): JOUR 110, 120, 319, 320, 331, 430; select a minimum of three units from JOUR 280, 312, 323, 370, 422, 431, 490, 499.

#### Language and Linguistics Emphasis

Students are required to complete the core of thirty-five (35) units and eighteen (18) units to provide breadth and perspective.

Breadth and Perspective (18 units): select six units from LING 420, 421, 433; select six units from LING 435, 485 (or ED P 485), 486; select three units from ANTH 421 or LING 472; select three units from ENGL 435, LING 460, 475.

In addition, this emphasis requires 12 units or equivalent of a foreign language.

#### Literacy and Composition Emphasis

Students are required to complete the core of thirty-five (35) units and a minimum of fifteen (15) units to provide breadth and perspective.

Breadth and Perspective (15 units minimum): ENGL 435, 436; select a minimum of six units from ENGL 309, 496, 497, LING 435, 460; select three units from ENGL 300, 317, 405, 406, 407, 417, 418.

#### Literature Emphasis

Students are required to complete the core of thirty-five (35) units and a minimum of fifteen (15) units to provide breadth and perspective.

Breadth and Perspective (15 units minimum): ENGL 384; select three units from ENGL 451, 452, 453, 455, 456, 458, 459; select a minimum of three units from ENGL 474, 475, 476, 477A-B, 478, 479; select three units from ENGL 318I (or FEA 318I), 385, 386, 398; select three units from C/LT 230 or any upper division English course.

#### Speech Communication Emphasis

Students are required to complete the core of thirty-five (35) units and twenty-one (21) units to provide breadth and perspective.

Breadth and Perspective (21 units): select six units from COMM 130, 210 and 210W, 271; select six units from COMM 331, 333, 335; select 9 units from COMM 306, 309, 355, 410, 411, 451.



## Theatre Arts Emphasis

Students are required to complete the core of thirty-five (35) units and twenty-two (22) units to provide breadth and perspective.

Breadth and Perspective (22 units): THEA 101, 114A, 142, 148, 346, 374, 476; select one unit from THEA 310A or 340A.

Emphases in American Studies, Dance, and Radio/TV/Film have been discontinued. Students expecting to complete them must do so by the end of December 1997.

## Foreign Language

Programs in Foreign Language are in the process of being approved to reflect new state standards. Students may not enroll in the previously approved program after September 1, 1996. Consult the credential advisor for information on the programs. Students who are not in an approved program may have to meet subject matter mastery by passing Commission-approved examinations.

## Health Science

Complete the requirements for the B.S. in Health Science with an option in School Health.

## Home Economics

Complete the requirements for the B.A. in Family and Consumer Sciences with an option in Family and Consumer Communication.

## Mathematics

The requirements listed below reflect new state standards. Advising sheets are available in the Mathematics Department for the revised program (listed below) and for the previously approved program, which must be completed by January 1, 1998. If you have questions about which program you should follow, consult the credential advisor.

Students are required to complete the following program of twenty-one (21) lower division units and thirty (30) upper division units.

Prerequisites: Precalculus mathematics (MATH 117) or four years of high school mathematics including two years of algebra, one year of geometry, 1/2 year of trigonometry, and an additional senior-level course.

Lower Division: MATH 122-123-224 Calculus I-II-III; MATH 233; 247; Select one course from CECS 174, 242, MATH 278\*.

Upper Division: MATH 310, 341, 355, 361A\* or 364A, 380, 381, 410, 411, 444; Upper division Mathematics elective (3 semester hours).

\* Preferred course

## Music

Programs in Music are in the process of being approved to meet new state standards. Students should consult with the credential advisor for information on the programs.

## Physical Education

Complete the requirements for the Bachelor of Arts in Kinesiology with an Option in Adapted Physical Education, Elementary School Physical Education, or Secondary School Physical Education.

## Science Teaching Credentials

The requirements listed below have been approved by the California Commission on Teacher Credentialing. California Single Subject credentials in science now require background in all the sciences, as well as more specialized study in one discipline. For this reason, students are required to complete both Breadth and Specialization courses as outlined below.

### Breadth Requirements

Required of all credential specializations: ASTR 100, BIOL 211A-B, CHEM 111A-B, GEOL 102, 104, and 160, SCED 403, and PHYS 400I. In addition, students specializing in Geosciences or Physics are required to complete PHYS 151 and 152 and MATH 122. Those specializing in either Biological Sciences or Chemistry are required to complete either PHYS 100A-B or PHYS 151 and 152, and either MATH 119A or MATH122. It is further recommended that candidates also complete GEOL 240.

### Specialization Requirements

In addition to completing the breadth requirements, students also select one of the following four science specializations: Biological Sciences, Chemistry, Geosciences, or Physics. Requirements for each of these are outlined below.

#### Biological Sciences

A/P 340, CHEM 327, BIOL 260, 312, 340, 350, and 370; and either BIOL 439, 447, or 328; and either MICR 300I, 302I, or BIOL 303I. It is further recommended that candidates also complete either BIOL 313, 324, or 332.

#### Chemistry

CHEM 251, 320A-B, 441A, 496, 451, 385 and MATH 123; and either CHEM 431 or 441B. It is further recommended that candidates also complete one of the following Physical Chemistry sequences: either CHEM 377A-B or CHEM 371A-B.

#### Geosciences

GEOL 273, 324, 341, 343, 428, 433, 450, and MATH 123; It is further recommended that candidates also complete GEOL 429 and either GEOL 460, 461, or 462.

#### Physics

MATH 123, 224; PHYS 154, 155, 310, and 340A; and either PHYS 330 or 475-476; and either PHYS 370 or 422, and either PHYS 380 or 496; and either MATH 370A or 364A.

#### Social Science

Candidates must complete the 45 units in core requirements listed below. To add breadth and perspective to the basic core, each student must complete 15 additional units in the breadth area listed on the attached pages.

Core Requirements (45 units):

Capstone: CLA 495

#### History Emphasis

HIST 111, 112, 172, 173, 396, 473

Choose one of the following courses: HIST 469 or 485A/B or 486

#### Geography Emphasis

GEOG 100, 306

### Political Science Emphasis

POSC 100 or 391; POSC 215

### Behavioral Science Emphasis

PSY 100 or SOC100 or ANTH 120

### Economics Emphasis

ECON 300

Breadth Requirements:

Candidates must choose 15 units from any two of the fields listed below. These include:

1. World Perspectives
2. National Perspectives
3. State Perspectives
4. Citizenship Perspectives
5. Ethical Perspectives
6. Diversity and Equity

Candidates must choose nine units from one field listed above, and six units from a second field listed above.

1. World Perspectives  
HIST 317, 335, 337, 339, 364, 382B, 383B, 385, 386, 431, 451, 483, 491; GEOG 308I, 309I, 312I, 316, 318, 320I, 326; ANTH 307I, 323, 324, 331, 332, 333, 335, 336; POSC 353, 354, 356, 357, 358, 359, 362, 364, 366, 367; ECON361I, 363, 365, 368, 369, 370
2. National Perspectives  
HIST 373, 375, 376, 378, 379, 380, 478; POSC 308, 420, 423, 424; ECON 360I; AMST 477A/B
3. State Perspectives  
ANTH 321, 322, 329, 350IC; GEOG 303; 304; HIST 468/568; POSC 326
4. Citizenship Perspectives  
HIST 480, 489; POSC 210, 312, 412, 428
5. Ethical Perspectives  
HIST 482I; PHIL 160, 203, 204, 306, 307; R/ST 111, 152, 291, 482I
6. Diversity and Equity  
AIS 100, 101; AMST 485A, 485B; ASAM 102, 200, 220; B/ST 120, 121, 210; CHLS 100, 101, 300, 352; HIST 469, 470, 485A\*, 485B\*, 486; POSC 323; SOC 341 (same as CHLS 352); W/ST 102, 315, 320, 370, 485A\* (same as AMST 490 and HIST 485A), 485B\* (same as AMST 490 and HIST 485B)

\*Cannot be used as part of the breadth requirement if this course is chosen as part of the core requirement.

### Single Subject Teacher Internship Credential

In cooperation with approved school districts, the College of Education offers a Single Subject Teacher Internship Credential Program. This program is limited to outstanding candidates who have exceptional skills for classroom teaching.

#### Admission Criteria

Students submit completed applications for the Internship Program for review and action by the University Single Subject Teacher Education Committee and the Internship Admissions Committee. Upon acceptance of the applicants into the Intern-

ship Credential Program, students must submit the State application for an Internship Credential with supporting documents and fees to the CTC through the CSULB Credential Processing Center (CPC). Students must hold an Internship Credential prior to Internship teaching.

#### Requirements

1. Complete the baccalaureate degree, complete or be very nearly complete with the single subject major (or equivalent);
2. Pass the California Basic Educational Skills Test (CBEST);
3. Apply for the Internship Credential Program in the CSULB Single Subject Credential Office;
4. Have and maintain an overall GPA of 3.0 and a GPA of 3.0 in all upper division and graduate courses in the single subject major and in the professional education courses;
5. Provide verified evidence of a minimum of 40 hours experience with pupils in a school situation, such as serving as a teacher's aide (this may be accomplished in EDSS 300);
6. Have clearance on the CSULB speech assessment;
7. Have health clearance prior to field experience;
8. Have an offer of employment on an Internship Credential Program from a participating school district.

#### Academic Program

The Internship Credential Program is the Single Subject Teacher Education Program with Internship Teaching of One Year Substituted for Student Teaching

Prerequisite to Internship Teaching: EDSS 300, 450; EDSE 435, 436, and 457; To be taken during Internship Teaching: EDSS 572 A-B (8 units each per semester); To be taken before, during or after Internship Teaching: H SC 411B, ED P 350, Computer Education.

#### Professional Responsibilities of the Single Subject Intern

Most Single Subject Interns will be assigned to teach full-time in a shortage field. Conditions of employment are governed by the Master Agreement, school district board policies and regulations. For the purpose of employment, interns are employed under the temporary provisions of the California Education Code (EC44920).

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#### Courses (EDSS)

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##### 300A-S. Preliminary Field Experiences (3)

Prerequisite: Advanced sophomore or junior standing. Directed field experience as a teacher aide. Evaluation of students for admission to the Single Subject Teacher Education Program. Required as the first course in the professional education sequence for the Single Subject Credential and recommended to be taken in the junior year (Lecture 2 hours, laboratory/field 3 hours). Credit/No Credit grading only, with "A" or "B" required for credit.

- A. Art (Fall)
- C. Science
- D. Health Science (Spring)
- F. Foreign Languages: French, German, Japanese, Spanish (Fall)
- G. English
- H. Home Economics
- M. Mathematics
- N. Music (Spring)
- P. Physical Education
- S. Social Science

\*450A. Curriculum and Methods of Art Education (3) S  
Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, materials and procedures in art education. Includes a survey of historical and current practices in art teaching with emphasis on the relationship of art to the total school program. Must be completed prior to student teaching. Traditional grading only. Course fee: \$40.

\*450C. Curriculum and Methods in Teaching Science (3)  
Prerequisite: Admission to the Single Subject Credential program. Objectives, curriculum, materials and procedures used in teaching science. Should be taken the semester prior to student teaching. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

\*450D. Curriculum and Methods in Teaching Health Science (3) F  
Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, methods and materials used in teaching health education in secondary schools. Must be taken in the semester prior to student teaching. (Seminar) Traditional grading only.

\*450F. Methods of Teaching Foreign Languages (3) S  
Prerequisite: Admission to the Single Subject Credential Program. Procedures for teaching French, German, Japanese, or Spanish; includes supervision of cocurricular foreign language activities. Should be taken the semester prior to student teaching. Traditional grading only.

\*450G. Curriculum and Methods in Teaching English (3)  
Prerequisite: Admission to the Single Subject Credential program. Methods of teaching language, literature and composition in middle school and senior high school. Includes instruction in techniques of teaching. Must be completed before student teaching. Traditional grading only.

\*450H. Methods and Curriculum in Home Economics Education (3)  
Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, methods and materials used in teaching home economics in secondary schools. Traditional grading only.

\*450M. Curriculum and Methods in Teaching Mathematics (3)  
Prerequisite: Admission to the Single Subject Credential program. Objectives, curriculum, methods and materials used in the secondary schools. Should be taken the semester immediately prior to student teaching. Traditional grading only.

\*450N. Curriculum and Methods in Teaching Music (3) F  
Prerequisites: Admission to the Single Subject Credential program, major or minor in music. Philosophy, objectives, curriculum, materials, procedures and current practices in teaching music in schools. Classroom music, instrumental and vocal music methods are presented. Should be taken the semester prior to student teaching. Traditional grading only.

\*450P. Curriculum and Methods in Teaching Physical Education (3)  
Prerequisites: Current standard first aid/CPR certification, admission to the Single Subject Credential Program and completion of ALL skill performance proficiencies with an overall average score of 3.5. Limited to students qualified to enroll in student teaching the following semester. Traditional grading only.

\*450S. Curriculum and Methods of Teaching Social Science (3)  
Prerequisite: Admission to the Single Subject Credential Program. Objectives, methods and materials for teaching social science in junior and senior high school. Must be taken prior to student teaching. Traditional grading only.

472A,B,C. Student Teaching (5,5,5)  
Prerequisite: Approval by the Single Subject Program Faculty. Student teachers are assigned a minimum of five periods daily. They teach three classes representing at least two different aspects or levels of the Single Subject major. Two additional periods are for observation, preparation, and consultation with the school and university supervisors. Student teachers follow the school district calendar. Seminars are held by each single subject program area. Credit/No Credit grading only ("A" or "B" required for credit.)

\*490. Curriculum Topics in Selected Academic Subjects (1-3)  
Prerequisite: Consent of instructor. A study of curriculum taught in the secondary schools. Academic subject to be covered will be announced in the Schedule Of Classes. May be repeated under different topics but only six units with traditional grading may be applied toward advanced degrees.

497. Independent Study (1-3)  
Prerequisites: Consent of instructor and single subject coordinator. Independent study undertaken under the supervision of a faculty member. May be repeated to a maximum of three units.

## Graduate Division

572A-B. Single Subject Internship (8-8)  
Prerequisite: Admission to the Single Subject Internship program. Supervised teaching experience in grades seven through twelve. Participants teach on salary in an approved school district while enrolled in eight units per semester for one year. Teaching will be evaluated by the participating school district and university supervisor. Credit/No Credit grading only. (Students are not allowed to enroll in both A and B in the same semester.)

# SOCIOLOGY

*College of Liberal Arts*

Department Chair  
Norma Stoltz Chinchilla

Department Office  
Social Science Public Affairs (SS/PA), Room 258

Telephone  
(562) 985-4602

## Faculty

### Professors

Norma Stoltz Chinchilla  
Barry M. Dank  
Gail C. Farmer  
Michael Halliwell  
Marsha S. Harman  
Harold G. Hubbard  
Douglas A. Parker  
Carl Slawski  
Theresa G. Turk (Emeritus, 1995)  
Paul S. Ullman (Emeritus, 1994)

### Associate Professors

Carole Campbell  
J. William Gibson

### Assistant Professors

Jeffrey Davis

Department Secretary  
Lily Monji

Students desiring information should contact the department office for referral to the faculty advisor:

Undergraduate Advisor  
Norma Stoltz Chinchilla

The major in sociology is intended to serve as preparation for careers in teaching, delivery and administration of social and health services, urban and environmental studies, law, government service at local, state and federal levels and related occupations. The major also provides training for advanced graduate work in sociology, social work and other social sciences. Sociology is also recommended as a second major or minor for students of all other social sciences; for business; for the humanities; especially literature and theatre arts; for ethnic and area studies; for journalism and other various applied arts and sciences.

Students interested in sociology may also wish to consider the liberal studies major with a concentration in sociology. The Liberal Studies program is discussed elsewhere in this Catalog. Detailed information about the concentration may be obtained from the Sociology Department Office.

Sociology courses are suitable for fulfilling general education or elective requirements for students of other majors. However, lower division courses selected to fulfill the requirements of the major may not also be used to fulfill the requirements of any General Education category.

## Bachelor of Arts in Sociology (code 2-8560) (124 units)

### Requirements

**Lower Division:** Twelve units of lower division are required. Students must have credit for SOC 100, 142, 200 (or C/ST 200), and 250 or 255. C/ST 210 may be substituted for SOC 255. It is recommended that students take courses in cultural anthropology such as ANTH 120 as electives.

**Upper Division:** All majors are required to have a minimum of 31 upper division units in sociology. This must include (1) at least 16 units in core courses: 420 or 427, 335I or 454, 356, 455, 456; and (2) nine units in one concentration and six units of electives from other upper division courses in sociology. Total credit for courses numbered 490 through 499 may not exceed six units. Completion of at least 51 semester units of college work is required before students will be accepted into upper division courses.

### Concentrations

#### Deviance and Social Control

SOC 345, 423, 440, 441I, 448, 454\*, 463, 491, 495

#### Interaction and Group Relations

SOC 320, 325 (or W/ST 325), 335I\*, 336, 340 (or CHLS 350), 341 (or CHLS 352), 346, 423, 426, 454\*, 464 (or GERN 464), 485I, 492, W/ST 401I.

#### Medical Sociology

SOC 350, 423, 454\*, 461I, 462, 463, 464 (or GERN 464) 466, 493, 495, H/SC 400.

#### Research

Concentration suspended until further notice.

## Social Change and Global Issues

SOC 350, 372I, 410I, 420\*, 427\*, 449I, 450, 454\*, 494, I/ST 317I or I/ST 318I, GEOG or ANTH or HIST 307I.

\*If not taken as one of the core courses.

## Minor in Sociology (code 0-8560)

A minimum of 24 units which must include:

Lower Division: SOC 100, 142

Upper Division: SOC 335I and a minimum of 15 units selected from other upper division courses in sociology. Total credit for courses numbered 490 through 499 may not exceed 3 units.

## Courses (SOC)

### Lower Division

#### 100. Principles of Sociology (3)

Introduction to basic concepts of sociology and sociological analysis, emphasis upon group, status, role, personality, socialization, social processes, institutions, social organization and sociocultural change. (CAN SOC 2)

#### 142. Social Trends and Problems (3)

Sociological principles applied to contemporary social trends and problems. Typical areas will vary from year to year but may include: Aging, Birth Control, Crime, Discrimination, Drug Abuse, the Nature of the Economy, Environmental Issues, Future Trends, Health Care, International Relations, Law, Mental Health, Pollution, Poverty, Sexism, Unemployment, War, and Welfare. Students are encouraged to view social problems in a larger socio-cultural historical context. They are encouraged to think objectively and critically about the relevance of these problems to their own lives and the lives of their children. Open to non-majors for General Education credit in Category D.2.B. (CAN SOC 4)

#### 200. Introduction to Data Analysis (3)

A beginning course in the use of computers for accessing and analyzing data. Topics covered include principles of scientific research, data coding, entry, editing, and analysis. Students will use the Statistical Package for the Social Sciences to analyze data, and such software programs as WordPerfect to prepare research documents, and Netscape Navigator to explore the resources available on the Internet. Traditional grading only.

#### 250. Elementary Statistics (4)

(Not open to students with credit in HDEV 250, C/LA 250, ANTH 302, C/ST 210, SOC 210, MATH 180, PSY 210, or SOC 255.) Prerequisite: Knowledge of mathematical procedures usually covered in elementary high school algebra as demonstrated on a screening examination, and SOC 200. Introduction to descriptive and inferential statistics and their applications in social and behavioral science research; performance of statistical exercises by interactive computer. Emphasis upon knowledge of which statistical tests to use and how to interpret their results. (Discussion, Lab)

#### 255. Elementary Statistics (3)

Not open to students with credit in C/ST 210, HDEV 250, PSY 210, C/LA 250 or MATH 180. Prerequisites: Knowledge of mathematical procedures usually covered in elementary high school algebra and SOC 200. Concepts and techniques of descriptive and inferential statistics. Statistical reasoning applied to social research. Focus on the understanding of statistical measures and the assumptions underlying them. Includes use of interactive computers.

#### 256. Elementary Statistics Laboratory (1)

Prerequisites: SOC 200 and prior or concurrent enrollment in SOC 255. Performance of statistical exercises by interactive computer. Two hours laboratory per week. Not open to students with credit for SOC 250, C/ST 210, HDEV 250, PSY 210, C/LA 250 or MATH 180.

#### 290. Special Topics in Sociology (1-3)

Topics of special interest in sociology selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

#### 291. Special Topics in Sociology (3)

Topics of special interest in sociology selected for intensive study. Topics will be announced in the Schedule of Classes.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 320. The Family (3)

Prerequisite: SOC 100 or consent of instructor. Family as a social institution in various cultures with stress on the American family systems. Analysis of forces producing change, organization and disorganization of family systems.

#### 325. Sociology of Women (3)

Socio-cultural position of women; a brief history of women's role and status; societal attitudes toward women's place in society. Open to both men and women. Same course as W/ST 325.

#### 335I. Social Psychology (3)

Prerequisites: ENGL 100 and upper division status; SOC 100 or PSY 100. Examines social processes in personality development and the socialization process whereby the individual is integrated into social groups. Includes social influence of family, peers, reference groups and subcultures. Examines the impact of primary groups, social organizations and mass media on attitudes and behavior. Not available to students with credit in PSY 351.

#### 336. Sociology of Small Groups (3)

Prerequisite: SOC 100. Designed to give theoretical and practical understanding of sociological concepts and principles found in the dynamics of small groups, research and theory, the individual in a social situation, the group as a system of social interaction, leadership, methodology, and the small group approach to a problem.

#### 340. The Latino Population in the United States (3)

Survey of the most recent socio-economic information on "Hispanics", issues of immigration and settlement patterns, employment and income, family, language and culture will be examined. Particular attention will be paid to the changing points at which racism has intersected with factors of class and gender. This is a comparative course designed to highlight heterogeneity of the larger Latino aggregate population. Same course at CHLS 350.

#### 341. Central American and Caribbean Peoples in California (3)

Survey of the socioeconomic conditions and cultural life of the Central American and Spanish-speaking Caribbean communities of California: Salvadorans, Guatemalans, Puerto Ricans, Cubans, etc. Not all groups will necessarily be dealt with each time the course is offered. Similarities with and differences from the Mexican-American community will be examined. Same course as CHLS 352.

#### 345. Juvenile Delinquency (3)

Juvenile delinquency as a recent social "invention;" extent and distribution; major explanatory theories ranging from classical to radical views; societal reaction; the juvenile justice system with emphasis on the contemporary trend toward diversion programs.

#### 346. Race, Gender and Class (3)

This course examines the experiences of gender, race and class in diverse groups and populations. An assessment is conducted of the institutionalized systems of sexism, racism and classism and of the economic and political structures and social processes which maintain these systems.

#### 350. International Population Problems (3)

Presents the basic demographic variables (fertility, mortality and migration) and methods (vital statistics and census). Historical and current trends and problems in world population composition, growth and movement are examined with particular attention to social processes.

### 356. Development of Sociological Theory (3)

Prerequisite: SOC 100. Social thought and historical forces leading to the emergence of sociology; and an exploration of classical sociological theories up to the early twentieth century including such thinkers as Comte, Spencer, Marx, Durkheim and Weber.

### 372I. Living in Space (3)

Prerequisites: ENGL 100 and upper division status. Human physical and social adaptations to living in space habitats in Low-Earth Orbit or at key transfer points (such as L5) elsewhere in the solar system. Analysis of psychological reactions to weightlessness and disruption of normal daily cycles and resulting changes in patterns of activities and communication. Effects of changing reference group identification from a nationality or ethnic group to humanity as a whole. The essentials of life support including the production of consumables and protection from space hazards are delineated. Also discussed are recruitment, management of space missions, and political organization of permanent space facilities. A special focus is given to cultural changes associated with spending all of one's time with the same people, such as more symbiotic and less exploitative patterns of interaction and enhanced gender and age equality.

### 374I. Solar System Habitation and Development (3)

Prerequisites: ENGL 100 and upper division status. Dynamics of settlements on the Moon, on Mars, in the asteroid belt, and on the largest satellites of Jupiter and Saturn. Expanding the resource base for humanity allows economy-of-scale sharing to supersede zero-sum economic competition. Discussion of the implications of the common-heritage-of-mankind principle embodied in space treaties and the declining significance of nation states for space settlers. Analysis of available propulsion systems and mission trajectories to determine probable structure of transportation vessels and limitations this imposes on initial settlements on various new worlds. Special attention to the enhanced feasibility of space missions utilizing lunar resources, the terraforming potential of Mars, and the type of society which may develop in these locations.

### 376I. Interstellar Migration (3)

Prerequisites: ENGL 100 and upper division status. Habitation potential of the nearest Sun-like stars and feasibility of reaching them by means of multigenerational space arks. Analysis of basic evolutionary processes favoring humane characteristics in any species capable of a technological civilization: Mate selection (among those where language has endowed culture with an overriding significance for survival) will reinforce humane traits which make it possible to get along with a spouse during the long childhood that any culture-dependent species must have. Implications of assured survival for humanity and possibility of contacting alien civilizations. Special emphasis on extrapolating the development of human society in the context of our expansion into the Alpha Centauri system and beyond.

### 410I. Social Ecology (3)

Prerequisites: ENGL 100 and upper division status, SOC 100. Analysis of interdependencies of elements of populations, environment, technology and social organization. Examines socio-ecological relationships currently and in historical perspective, in simple and complex societies. Presentation and analysis of world and U.S. problems in social ecology. A field research project will be required.

### 420. Social Stratification (3)

Prerequisite: SOC 100. Characteristics and functions of social stratification especially in the United States. Different theoretical perspectives, how social class affects the opportunity structures, for income, upward mobility and various measures of "the good life" in America today.

### 423. Child Abuse and Prevention (3)

This course will examine child abuse as a social problem; its history and causal factors, including social change and changing family patterns. Intervention practices, including identification and investigation, social services and court intervention will be reviewed, especially the roles of health professionals, criminal justice and corrections personnel, social workers and educators.

Finally, policy implications will be examined, including the role of concerned citizens and child advocates. (Discussion/Seminar) Same course as SW 423.

### 426. Sociology Sex Behavior (3)

The social context of human sexuality effects of socialization, social class, occupation and religion on sexual attitudes and behavior.

### 427. Social Order and Social Change (3)

Prerequisite: SOC 100 and upper division status. Introduction to classical and recent analysis of social order and social change. Study of institutions and organizational structure of social systems in the past and present and their effects on human life.

### 440. Sociology of Deviance (3)

Sociological approaches to the study of deviance; a varied look at behaviors, beliefs, physical appearance, emotion, and medical, legal, media influences in defining deviance; central questions include: How do definitions of deviance change? What processes are involved in a person defining him/herself as a deviant? What role do the central institutions of society play in the perception and definition of deviance? (Lecture 3 hours.)

### 441I. Criminology (3)

Prerequisites: ENGL 100 and upper division status; SOC 100 or 142, or PSY 100, or CRIM 101 or 404, or consent of instructor. Study of the major theoretical approaches to crime, e.g., sociological, psychological, psychiatric, biological. Emerging interdisciplinary approaches to crime. Responses to crime and criminals, e.g., prisons, jails, death penalty, self-help, psychotherapy, social reform, media. Types of criminal behavior. Victims of crime. (Lecture/Discussion.)

### 448. Impersonality, Violence and Survival: An Analysis Through Film (3)

Exploration through film of the societal conditions that facilitate impersonality, and alienation and ultimately violence in modern society. The study of the struggle of the individual to survive, both physically and psychologically, in modern society. Focus on attempts of individuals to transcend social barriers. Course does not include exploitation films but rather films that provide a serious commentary on the nature of modern society. Not open to students with credit in this subject under SOC 490. (Discussion)

### 449I. Sociology of Political Rights (3)

Prerequisites: ENGL 100, at least two courses in the social sciences and upper division standing. Examination of the nexus between the political process and legal institutions with a focus on how the sociology of law provides a different perspective than the legal doctrines set forth in published judicial opinions. Emphasizes the development of analytical abilities which are useful to students anticipating a career in the law or other policy-making fields.

### 450. Marxist Sociology (3)

Analysis of human behavior, society and social change from a Marxist perspective.

### 454. Qualitative Methods of Social Research (4)

Prerequisites: SOC 100, SOC 250 or 255, or C/ST 210, and one upper division course in sociology. Review and critique of principles and essential features of classical and contemporary qualitative studies. Examination of the influence of symbolic interactionism and its derivatives. Topics covered: research design, including use of unobtrusive measures; modes of participant observation; interviewing techniques; limitations of "snowball" and other convenience sampling techniques; analysis and interpretation of qualitative data. Field assignments and an individual student research project are required. (Lecture 3 hours, laboratory 2 hours.)

### 455. Methods of Social Research (4)

Prerequisites: SOC 100, 200, 250 (or 255 and 256), or C/ST 210 and one upper division course in Sociology. Topics that will be covered are: research design, including operationalization, measurement, scaling, reliability, validity and sampling; techniques of data collection and analysis; and report writing. Use of the computer and an individual student research project are required. (Lecture 3 hours, laboratory 2 hours.)

#### 456. Contemporary Sociological Theory (3)

Prerequisites: SOC 100, 356 and one other upper division course in sociology. Recommended: courses in the philosophy of science and research methods. A critical review of schools of sociological thought from the 1930's to the present. A minimum of three major schools such as functionalism, interactionism (dramaturgy, ethnomethodology, humanistic post-structuralism), conflict, exchange, and system theory will be covered in depth and considered in relation to the nature of theory construction. Intended primarily for majors in this field. Traditional grading only.

#### 4611. Alcohol and Society (3)

Prerequisites: ENGL 100 and upper division standing, SOC 100 or PSY 100. Recommended: an elementary statistics course. Epidemiological and sociological approaches to the study of alcohol use and abuse; sociocultural correlates of alcohol use as disclosed by national and regional surveys; effects of alcohol use on physical and mental health; the role of government and other organizations in the prevention and treatment of alcohol abuse.

#### 462. Medical Sociology (3)

Epidemiological and sociological approaches to the study of health and illness; patterns of physical and mental disease; patient and physician perspectives on the development of disease; causes of stress and coping repertoires; types of adaptation of the chronically ill; health care delivery and utilization, particularly in the United States; and interaction of physician, nurse, therapist, health administrator, social worker, patient, and family members.

#### 463. Mental Illness and Society (3)

No prerequisites. Epidemiological and sociological approaches to the study of mental health and illness; prevalence and incidence of mental disorders as disclosed by community and national surveys; effects of family history, work experience and life-change events on various facets of intellectual and affective functioning; the social and legal status of the mental patient; the role of government and other organizations in the prevention and treatment of mental illness.

#### 464. Sociology of Aging (3)

Prerequisites: SOC 100 and completion of at least one upper-division course is recommended prior to enrollment in this course. Sociological perspective on the aging process from the middle years through old age. Survey of theoretical perspectives, issues, institutions and research findings on aging. Focus on role and status changes with aging in U.S. Cross-cultural and ethnic differences will be explored. Social analysis of age-related policies and exploration of alternatives. Not open to students with credit in this subject under SOC 490.

#### 466. AIDS and Society (3)

Prerequisites: SOC 100 or 142 or PSY 100. Recommended: BIOL 100 or 200 or MICR 100 or 101. Places the contemporary disease, acquired immuno-deficiency syndrome (AIDS) in sociological perspective. Covers history, etiology and epidemiology of AIDS. Includes biomedical and sociological research on AIDS. Focuses on behavioral aspects and societal impact of the AIDS epidemic. Traditional grading only.

#### 4851. Sociology of Language (3)

Prerequisites: ENGL 100 and upper division status. Structure and use of language varieties in relation to social interaction, social inequality, social change and nationalism.

#### 490. Special Topics in Sociology (1-3)

Topics of special interest in sociology selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 6 units.

#### 491. Special Topics in Deviance and Social Control (3)

Topics of special interest in Deviance and Social Control selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 6 units (Discussion.) Traditional grading only.

#### 492. Special Topics in Interaction and Group Relations (3)

Topics of special interest in Interaction and Group Relations selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 6 units (Discussion.) Traditional grading only.

#### 493. Special Topics in Medical Sociology (3)

Topics of special interest in Medical Sociology selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 6 units (Discussion.) Traditional grading only.

#### 494. Special Topics in Social Change and Global Issues (3)

Topics of special interest in Social Change and Global Issues selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 6 units (Discussion.) Traditional grading only.

#### A. Sociology of Migration and Immigration

#### 495. Internship (1-4)

Prerequisites: SOC 100, 142, 335I, junior or senior standing, consent of instructor. Supervised field experience in public and private agencies, relating sociological principles to community situations. Designed to provide career-related work experience in both research and applied fields. Students may enroll for 1-4 units depending on field assignment and time required. May be repeated for a maximum of six units. (6-10 hours per week field experience.)

#### 496. Field Practicum (1-3)

Prerequisites: SOC 495. This course is a continuation of the Internship course (SOC 495.) Students who continue working at an agency in the community will conduct one or more special projects for that agency. Students in the practicum will meet as a group to discuss the progress of their projects and will submit papers which summarize their experiences in carrying out these projects. Students may enroll for 1-3 units depending on field assignment and time required. May be repeated for a maximum of four units.

#### 499. Directed Studies (1-3)

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member. May be repeated to a maximum of 4 units. In exceptional cases, may be repeated to a maximum of six units when approved by the department.





# STUDENT SERVICES AND CAMPUS LIFE

## Academic Advising Center

The Academic Advising Center, located in Library East Room 125, serves students who seek information and advice concerning General Education requirements, electives, University rules and regulations, graduation requirements, academic probation, and disqualification and academic appeals. The Academic Advising Center is the "home base" for all undeclared students, including signature authority on all university-related documents.

Students are seen on an appointment basis. Service is provided by staff and well trained upper-division and graduate student peer advisors.

The Academic Advising Center is located in Library East, room 125. The telephone number is (562) 985-4837. The Center is open for advising Monday - Thursday from 9:00 a.m. - noon and 1:00 p.m. - 5:00 p.m., and Friday from 9:00 a.m. - noon. Call for evening appointment availability. Hours may vary during the holidays and summer.

## Career Development Center

The Career Development Center provides a continuum of services that culminates with preparing and assisting students and alumni in their transition from the University to professional careers commensurate with their interests, abilities, aspirations and educational attainment.

Career Planning facilitates a student's definition of his/her personal career goals and objectives based on an understanding of one's self and the world of work. The program attempts to provide students the most current career data and information delivery systems in career exploration and decision making processes.

### Career Placement

Experienced counselors assist students in developing effective job seeking skills through one-to-one counseling and workshops in the areas of resume writing, interviewing techniques and job search techniques. Counselors also provide assistance with other facets of the job search process including such topics as networking, accepting or rejecting a job offer, and negotiating a salary.

The Career Development Center receives over 15,000 job listings every year for positions in the areas of business, industry, government, health and human services. Current listings are maintained for student use in the Career Resource Center.

The Center also offers an On-Campus Interview Program for graduating seniors and graduate students. Through this program more than 140 employers visit the campus each year to conduct interviews. The employment opportunities in this program are generally in the areas of accounting, banking, computer science, engineering, finance, government, general management training, insurance, retail management, sales and marketing.

Various campus-wide special events take place every year which offer an opportunity for students to meet employ-

ers on a face-to-face basis. Contact the Career Development Center for specific information on annual events such as Career Day, Accounting Recruiting Day, and Job Faire.

A 24 hour automated telephone Jobline, as well as listings through the Internet, provides students with access to all of the part-time and full-time job vacancies received by the Center. Visit the Career Development Center for instructions and the current password.

The Center is open Monday through Thursday 8:00 a.m. to 8:00 p.m. and Friday 8:00 a.m. to 1:00 p.m. The Center is located in SS/AD 250, (562) 985-4151.

Teacher and school administration candidates receive assistance through the Educational Career Services Office in the College of Education. Call (562) 985-5772 for information on the services offered.

### Cooperative Education (Co-Op)

Cooperative Education internships offer students paid work experience in business, industry, government and the non-profit sector. This practical and professional work experience is directly related to a student's academic major or career goal. Students may alternate full-time work periods with full-time academic periods or they may work part-time while simultaneously attending the University. Upper-division Co-Op courses are available for up to 6 units of elective academic credit.

### Educational Participation in Communities (EPIC)

The Educational Participation in Communities (EPIC) program provides volunteer internship opportunities for students who wish to participate in career-related field experiences that complement their classroom study. EPIC internships are available with organizations and agencies in the not-for-profit sector. Upper-division Co-Op courses are available for up to 6 units of elective academic credit.

## Counseling and Psychological Services

Counseling and Psychological Services (CAPS) offers a strong array of services in direct support of helping students achieve a satisfactory and meaningful academic experience. Staff members of CAPS are trained in applied psychology and student development services delivery at the doctoral level. Staff members are skilled in assisting students to translate their individual personal development, career development, and previous educational experience into optimal academic achievement and collegiate life experience.

Students are seen at CAPS by an intake counselor. Psychologists are assigned to students based on the type of problem expressed and/or identified in the initial review. Most individual counseling is short-term and lasts three to five sessions. The staff is also trained to address complex types of career and personal problems that may require more extensive counseling. Crisis intervention services are available on an immediate basis.

In addition to one-to-one counseling across all areas of personal development and problems in living, individual counseling is provided to students needing intensive career exploration and educational counseling (not formal academic advising). The Center has a range of interest, ability, and personality-style psychological tests to augment the self-exploration process. An extensive group counseling program exists for specific kinds of counseling issues such as shyness or interpersonal skill development. The mini-workshops offered on campus acquaint students with our focus on enhancing various life skills such as assertiveness and time management. The Center is especially dedicated to working with students from highly diverse backgrounds.

CAPS is open from 8:00 a.m. to 5:00 p.m. Monday through Friday. The telephone number is (562) 985-4001.

### Disabled Student Services

Information regarding special facilities and services available to students with disabilities may be obtained from Disabled Student Services, SSA 270, (562) 985-5401.

The Disabled Student Services Office provides support services for students with physical and learning disabilities. Disabled Student Services provides registration assistance, note takers, interpreter services, readers, test proctoring, academic counseling and information on scholarships and careers. Other services include referral to the High Tech (Computer) Center for the Disabled, and testing for learning disabilities at the Stephen Benson Learning Disability Program. Other Disabled Student Services programs include the following: Roger Greaves Adapted Fitness and Wellness Program and Workability IV. Clients of the Department of Rehabilitation can call to verify the receipt of authorization for fee payment at this office. For students with severe mobility impairments, Disabled Student Services can assist with disabled parking. Call Disabled Student Services at (562) 985-5401 for more information.

### Educational Equity Services

The Office of Educational Equity Services (EES) assists in the admission and retention of first generation college students and academically and economically disadvantaged students who might not otherwise be enrolled in the University. Programs currently under EES include the Educational Opportunity Program, Summer Bridge Program, and the federally sponsored TRIO programs, Educational Information Services/Talent Search, Student Support Services Program, McNair Scholars Program and Upward Bound.

#### Educational Information Services/Talent Search

Educational Information Services/Talent Search is a federally funded program housed at California State University, Long Beach. The purpose is to identify, select, and assist low-income, first generational individuals between the ages of 12 to 27 to continue in and graduate from secondary school and enroll in a postsecondary educational program. Services offered include postsecondary admission and application assistance, financial aid information and application assistance, academic advising, and career exploration and planning.

### Educational Opportunity Program (EOP)

The Educational Opportunity Program identifies potential candidates, guides them through the admissions and financial aid process, and provides academic and personal support. EOP provides orientation, academic and personal advisement, and study skills instruction to all students admitted into the program to insure the maximum opportunity for success in the University.

All freshman EOP participants are expected to enroll in EOP 100 during their first semester of enrollment.

### Student Support Services Program

The Student Support Services Program provides academic and personal counseling and tutorial assistance to low income, first-generation college students. Academic support is provided in the areas of Language Skills, Reading Development, Mathematics, Sciences, and Social Sciences. In addition, staff assist in the testing and orientation of incoming students and conduct a summer instructional program in basic academic skills.

### McNAIR Scholars Program

The McNAIR Scholars Program provides academic support services, research opportunities and involvement in scholarly activities for 30 low-income, first-generation college students to increase their likelihood of enrollment and success in doctoral programs. The program consists of the Summer Research Internship, which concentrates on a research project to be conducted by the McNAIR Scholar with the guidance of his/her faculty mentor, and the Academic Year Scholarly Experience to provide continuation of the summer research project, academic support and assistance in seeking admission to graduate programs and assistance in obtaining graduate financial aid. The Scholars' papers are collected in a publication, the CSULB McNAIR Journal.

### Summer Bridge Program

The Summer Bridge Program provides an intensive five-week summer experience for entering University students. The program provides English and mathematics instruction, tutoring, orientation, study skills workshops, and enrichment activities for eligible students. The Summer Bridge Program is both for residential and commuter students.

### Upward Bound Program

The Upward Bound Program is a federally funded college preparatory program designed to assist first generation, low-income high school students who have the potential to pursue postsecondary education. The goal is to assist participants in their efforts to successfully complete high school and obtain a college education.

The program provides summer and weekend academic instruction, tutoring, academic, personal and career counseling, cultural activities and college application and admissions assistance.



## Housing and Residential Life

### University Residence Halls

The campus residence hall complex consists of 18 halls and accommodates 1,844 residents, including an International House complex which houses 86 students. With the exception of one building, all halls are coeducational and the majority of rooms are intended for double occupancy.

Residents may apply to reside in two-story halls utilizing suite designs or more traditional halls which have double rooms on either side of a long corridor. Halls are available with Regular Quiet Hours or Very Quiet Hours and residents may select 12 or 19 meals per week. A limited number of Regular Single rooms and Super Single rooms are available. The room and board rate is approximately \$4,990-\$5,800 depending on the accommodations and meal plans selected.

Resident hall application forms are sent to all persons applying to the university. Applications for the academic year are accepted after January 1 of the same year. Additional information may be obtained from the Housing Office. The phone number is (562) 985-4187.

In order to obtain preference in hall placement, students are urged to apply early for on-campus housing. It is best to apply for housing even before being notified about admission to the university.

### Residential College

Residential College, a program for a select group of first-time freshmen living on campus, was developed to improve freshmen retention and timely graduation rates. Participants in Residential College are provided enhanced opportunities for interaction with faculty, and many campus programs are brought to Residential College. Students participating in the Residential College make a two-year commitment to live in the residence halls, agree to participate in three Residential College Programs each semester and serve as mentors during their second year of participation.

### Community Housing

Students, faculty and staff seeking housing in the off campus community may utilize the telephone listing services operated by Housing and Residential Life. The telephone listing service allows property managers to call a 900 number to list available property listings and then allows those seeking housing to call a local (toll free) number to access the listing.

## Isabel Patterson Child Development Center

In January of 1975, the University and the Associated Students opened the Isabel Patterson Child Development Center to provide quality child care services to the University and community. The facility was made possible by the generous donation of Isabel Patterson, CSULB alumna. The services provided enable a student parent to attend classes at the University. The children of University staff, faculty, administration, alumni and then community are offered these services as space allows, following the registration of children of student parents.

Child Care Services are available for children six months to 2 1/2 years in the Infant/Toddler Program; 2 1/2 to five years in the Pre-school Program; and Kindergarten through second grade in the Schoolage Program.

The environment of the Center allows children to move freely and choose activities that fit their needs. Activities include reading, music, water and sand play, art, science, cognitive games and dramatic play. Some of the program's goals are to help children be responsible and able to solve their problems, to be inner-directed, to be aware of alternatives and able to make choices, and to be free from sex role and other stereotyping. The program includes a family-style breakfast, lunch and afternoon snack.

The Center employs professional early childhood education staff members. The part-time teaching staff is composed of CSULB students who are required to participate in the Center's comprehensive training program.

The Center is located on campus at 5700 Atherton Avenue. For information call (562) 985-5333 between 8:00 a.m. and 5:00 p.m.

## Learning Assistance Center

Located in Library East-12, the Learning Assistance Center is an all-university academic support service that helps individuals identify and develop effective and efficient learning strategies. Services are available in the following categories:

1. Learning Skills Services
2. Supplemental Instruction
3. Tutorial Services
4. International Students' Conversation Lab

### Learning Skills Services

Learning Skills Services address those areas typically identified as study skills. The Learning Assistance Center offers individual sessions (personal as well as media) and regularly scheduled workshops covering such topics as Reading Textbooks Critically, Listening and Notetaking Skills, Time Management, Test-Taking Strategies, Memory Techniques, Learning Styles, Preparing Research/Term Papers, and Preparing for Final Exams. These topics can be tailored to individual courses and presented in class at faculty request. Workshops are also scheduled by student organizations and other groups. At various times, staff offer workshops on special topics like word processing. Software is available to students who want to prepare for such standardized tests as the GMAT, GRE, LSAT, and MCAT.



Additionally, Learning Skills staff maintain a collection of instructional materials in some of the more highly demanded areas. Faculty in the sciences, in business, and in math, for example, recommend that students use course-related materials housed in the LAC.

### Supplemental Instruction

Supplemental Instruction (S/I) 060 provides a one-unit non-baccalaureate adjunct to select general education courses found to be high risk (i.e., particularly difficult for students to complete successfully). Each section of SI 060 uses the content of the corresponding GE course for students to develop critical thinking and learning skills; the skills emphasized are specifically applicable to this course and transferable to other university courses. Sections are taught by advanced students who know the discipline well and have mastered the associated skills needed for success; participants in S/I typically perform significantly better in the GE course than peers who attempt the course independently.

### Tutorial Services

Tutorial Services offers free weekly group sessions led by a trained tutor for several of the more highly requested general education courses. Offerings are based on student requests. Individual tutoring is available to all students on an hourly fee-support basis. Access to drop-in tutoring involves a modest fee for unlimited use. Tutoring schedules are available at the Learning Assistance reception desk each semester. Students in academic support programs such as EOP, SSSP, and MEP should contact program advisors regarding other tutoring resources.

### Conversation Lab

For students whose primary language is not English, the International Students' Conversation Lab provides extensive opportunities to develop fluency in spoken English and to discuss the cultural differences they experience living in this part of the United States.

### Getting Started

Students who want to improve their skills may make appointments with the Learning Assistance Center receptionist (985-5350) for a particular service or with a staff professional who can help them identify the activities that would benefit them most. Further information can also be obtained in person on the first floor of Library East.

## Multicultural Center

The mission of the Multicultural Center is to contribute to the creation of a campus environment which respects and supports cultural, ethnic, and racial diversity. We are an educational resource center which serves as a vehicle for the expression of the needs and concerns of CSULB's increasingly diverse campus community.

The objectives and activities of the Center include: diversity workshops, lectures, and forums; an extensive up-to-date library of journals, magazines, books, video and audio tapes; "The Rainbow Voices," the Center's nationally recognized student performance troupe; a Standing Art Gallery featuring the works of well known artists celebrating our theme of cultural diversity; and student internship opportuni-

ties. The Center's resources are available for students, faculty, staff, and community members. The Center is open from 9:00 - 12:00 noon and 1:00 - 5:00 p.m. Monday through Friday. For further information, stop by the Multicultural Center in the FO3 Building, Room 3 or call (562) 985-8150.

## Student Health Service

The Student Health Service (562) 985-4771, located on State University Drive near the residence halls, provides outpatient care for acute illness or injury. This basic medical service is provided for all enrolled students without charge. Appointments are encouraged. The Health Service is open from 8:00 a.m. to 6:00 p.m. Monday, Tuesday and Thursday; Friday 8:00 to 12:00 noon and Wednesday 10:00 to 7:00 p.m. (6:00 to 7:00 p.m. is reserved for those students attending evening classes). Medical emergencies arising on campus are directed to the Department of Public Safety – dial 911.

The Student Health Service pharmacy provides prescriptions at cost and also offers certain over-the-counter medications without a physician's prescription at low cost. Prescriptions for long-term or costly medications must be filled at outside pharmacies.

Other medical services provided by the Student Health Service include public health programs, health counseling, laboratory tests, x-rays, family planning, and measles and rubella clearance. Provision is made for outside referrals to medical specialties.

Health education programs designed to promote good health practices, disease prevention, proper nutrition and appropriate self-care of illnesses are provided on a regular basis. Discussion groups will be scheduled to discuss any health topics of concern to a group of students.

University medical services are not provided for major, chronic, complicated or severe illness or injury, except on an urgent acute basis. Associated Students, Inc. sponsors an individual health and accident and insurance policy, available to all currently enrolled students on a semesterly or annual basis, with cost to be borne by the student. The plan requires that students utilize the Student Health Service when feasible for minor illnesses and injuries. In addition the Associated Students, Inc. sponsors a fee for service dental plan. Information brochures and application forms for both plans may be obtained from the Associated Students Business Office, University Student Union, Room 220. For further information contact the A.S. Student Health Advocate (562) 985-8311.

## Student Life and Development

The Office of Student Life and Development (SLD) provides a wide range of opportunities for students to develop leadership skills and social connections through involvement in a variety of clubs and organizations. This variety includes ASI student government, academic organizations, sororities and fraternities, cultural groups, honorary and professional societies, religious groups, service organizations, and other special interest groups.

Professional staff work with the academic student organizations within their assigned colleges, as well as with special interest clubs and organizations and Associated Students Commissions. General responsibilities of SLD Directors and

Coordinators are: advising of student organizations for program planning, development, implementation; monitoring and authorization of ASI budget expenditures; interpretation of campus regulations; and approval of University forms required for programs. Other duties include referring students, faculty, staff and the public to appropriate campus resources and interpreting campus regulations. SLD staff also coordinate the transmittal of emergency messages (serious illness or death in the family) to students and involve the University Counseling Center as deemed appropriate on a case-by-case basis.

## Programs and Activities

### College Organizations

Each academic department has a student departmental association composed of students in that discipline. In addition, there are other academically related organizations and discipline-based honorary societies. Representatives from each departmental association and, depending upon constitutional provisions, other academically related organizations work together on a college student council. The organizations promote interaction between faculty and students, sponsoring speakers, seminars, social gatherings and other activities related to their disciplines. Students also have the opportunity to provide input regarding their educational experiences to their faculty and department chairs, as well as to their deans via departmental associations and student councils, respectively. SLD staff play a key role in coordinating major events such as design student annual senior shows, Engineering Day, Health Yourself, Awareness Festival, Liberal Arts Weeks, Meet the Industries Night, and the Nobel Laureate Lecture.



### Greek Life

Students have the opportunity to join national and local organizations with founding values based on community service, scholarship, campus involvement and an active social life. There are more than 30 fraternities and sororities which reflect a broad range of interests and historical traditions. There are groups with predominantly African-American, Asian-American and Latino membership, as well as houses with no ethnocultural affiliation.

In addition to their social and cultural programs, sororities and fraternities sponsor national and/or local philanthropies and engage in community service projects. Examples of such projects are providing tutorial assistance and positive role models for children in local schools, initiating food and clothing drives for those in need, raising money for scholarships, etc.

Most national Greek organization chapters are members of one of these coordinating councils: National Pan-Hellenic Council (historically African-American sororities and fraternities), Inter-Fraternity Council (fraternities), and Panhellenic Association (sororities).

## Leadership Connection

Through the CSULB Leadership Connection, SLD works with several other University departments and the Associated Students, Inc. (ASI) to develop students as effective leaders for social change. An advisory board of civic, community and corporate leaders provides guidance and support for the activities sponsored by the Leadership Connection. These activities teach students community building, leadership and communication skills, clarification of personal values, citizenship and how to handle controversy with civility.

The Leadership Connection offers a variety of events each year ranging from workshops to full-scale retreats. An annual highlight is the mid-October Teamwork retreat which is held at a camp in the nearby mountains. The program focuses on personal leadership development through team building experiences and simulations. It offers an excellent opportunity to make new friends and to network with experienced and emerging student leaders. The Leadership Connection designs and implements other specialized training for targeted student organizations. SLD also assists in the planning and implementation of ASI student government orientations and retreats.

SLD requires training for all student event planners which introduces them to the process of scheduling events and orients them to key campus resources which support student activities.

The Leadership Connection programs are housed in the Leadership Resource Center on the third floor of the University Student Union. The center offers multi-media leadership resources and advice to student leaders and organizations as they practice effective leadership.

## American Indian Student Services

American Indian Student Services is devoted to the recruitment, retention and graduation of the indigenous peoples of North America. The Coordinator of Student Life and Development/American Indian Student Services provides admissions, academic and personal advising, and counseling support for American Indian students enrolled in the University; serves as the student life and development advisor to the American Indian Student Council; plans and implements outreach activities that assist in the identification and admission of prospective American Indian students; monitors and assists in the processing of financial aid and Bureau of Indian Affairs grants for eligible Indian students; and serves as a liaison on American Indian concerns with campus offices. The Coordinator also collaborates with Educational Equity Services. For further information about American Indian Student Services, call (562) 985-8528.

## Student Transition and Retention Services (SOAR/STARS)

The educational experience presents students with myriad pressures and challenges. The mission of the Student Transition and Retention Services (STARS) department is to assist new students with their transition to campus and to extend the orientation experience through the first year. This is accom-

plished through the sponsorship and co-sponsorship of a variety of transition and retention services.

**Transition Services** - Through the Student Orientation, Advising and Registration (SOAR) program, undergraduate students receive their initial academic advising, assistance with registration and orientation to campus life. Graduate students are also introduced to the campus community and its resources through the Graduate Orientation Program. The goal of these programs is to facilitate a smooth transition for newly admitted students and to encourage them to connect with the comprehensive services available on campus.

A Parents' Orientation Program (POP) also is available in conjunction with SOAR. POP is designed to inform parents about baccalaureate requirements, safety, financial aid, housing and other important University issues so they may better assist their children to success at CSULB. The program concludes with an optional campus tour. POP is coordinated by the Academic Advising Center. The telephone number for POP information is 562/985-4837.

**Retention Services** - STARS promotes the successful assimilation and retention of students through the co-sponsorship of "Student Success Week" (activities and programs which encourage students to examine their academic goals and progress) and the use of a mobile information cart (located at various campus sites) which provides accurate information and referrals to campus offices and services.

The STARS office is located in the Foundation building, room 160. The telephone number is 562/985-5515.

## Testing and Evaluation Services

Information regarding admissions placement and certification examinations may be obtained from the office of Testing and Evaluation Services. Test programs currently offered include the SAT and Achievement Tests, ACT, EPT/ELM, WPE, and NTE (PRAXIS). Students are advised to refer to testing requirements described elsewhere in the Catalog, and in particular, the EPT, ELM, and WPE programs. Additional placement or admission examinations may be offered to meet the needs of academic department's requirements. Registration Bulletins for the above mentioned exams as well as the MCAT and LSAT exams are available at the information rack immediately in front of the office.

The Testing Office also provides services to faculty, staff and administrators regarding research design, questionnaire construction and data analysis. The office is located in SSA 216; the phone number is (562)985-4007 or send FAXES to (562) 985-2415.

## University Interfaith Center

The University Interfaith Center is an association serving the educational community of CSULB. It represents individual faiths while respecting the diversity of religious traditions and the pluralistic nature of the university. Center personnel actively participate in the university to enhance the educational

experience, and to encourage students, faculty and staff in their pursuit of spiritual growth, community building, faith development and personal values. Membership is extended to those who choose to work cooperatively, respecting the integrity of one another's religious tradition. The Center is located in the University Student Union, Room 116. The telephone number is (562) 985-7587.

## University Outreach and School Relations



The Office of University Outreach and School Relations (UOSR) is the primary student recruitment and guest relations office for the University. The Office disseminates information on CSU and CSULB admissions and financial aid policies and procedures, on CSULB's academic programs, and on student services to prospective students and counselors in the CSULB service area and surrounding communities. A major focus of UOSR is the implementation of outreach and recruitment programs and services to reach a talented and diverse pool of students.

UOSR offers guided campus tours by appointment. Those interested should call (562) 985-5358. Specialized campus visits for K - 12 students, counselors, and other interested groups may also be arranged.

Educational awareness and academic enrichment efforts which target elementary and middle school students are also offered in an effort to increase the pool of students from diverse backgrounds eligible to matriculate to the University upon high school graduation.

Admissions workshops for adult re-entry students are also offered by the UOSR office.

## Veterans' Services

The Veterans' Services office coordinates all veterans' financial benefits including initiation of federal and state benefits, maintenance of veterans' status with the Veterans' Administration and continuation of benefits through enrollment certification. In the past, federal grants funded full-time veterans' services at the university. At the present time, minimal federal funding has eliminated specialized veterans' services at many universities; despite the lack of federal funding, a half-time veterans' office is maintained at CSULB. The office is supervised by Counseling and Psychological Services and is located in SSA 220.

## Women's Resource Center

The mission of the Women's Resource Center (WRC) is to facilitate the educational, professional and personal growth of women on campus. The WRC houses a library of material on women's issues, offers women's support groups, and peer counseling. It provides referrals to campus and community services, scholarship information, and is a clearinghouse for current events of interest to women. The WRC also provides a comfortable lounge where students can study, chat with friends, or hold meetings.

In addition, the Women's Resource Center sponsors educational events throughout the school year and networks extensively with other academic and student services programs. The seminars, workshops and/or conferences range from the more current theoretical women's issues to practical concerns of university women. The WRC is open from 9:00 a.m. to 5:00 p.m. Monday through Friday and two evenings until 6:30 p.m. The Women's Resource Center services are free and available to women and men, campus and community. The WRC is located in LA3-105. For further information, please call (562) 985-8687/8576.

### Writer's Resource Lab

The primary goal of the Writer's Resource Lab is to help CSULB students develop as writers by providing personalized writing tutorial services. Students do not need to be taking a writing course to use the Lab's services; they are available to any currently enrolled CSULB student.

At the Writer's Resource Lab, students may consult with friendly and knowledgeable tutors (all of whom are CSULB undergraduate or graduate students) in order to become more comfortable and confident with any aspect of the process of writing. Students are welcome to drop by and use the Lab's library of writing reference materials. Other services include group tutorial sessions and workshops on various writing issues.

For more information or to make a tutoring appointment, stop by the Lab in LAB-212 or call (562) 985-4329.

## CAMPUS LIFE

### Academic College Organizations

#### College of the Arts

American Society of Interior Design, Art Student League, Art Education In Our University, Bachelors of Fine Arts Club, Ceramics Guild, College of the Arts Student Council, CSULB Composers' Guild, Design Student Association, Metal Arts Guild, Music Student Association, Off 7th Street Dancers, Sigma Alpha Iota (Music), University Players, Visual Communication Design Workshop.

#### College of Business Administration

Accounting Society, AIESEC, American Marketing Association, Beta Alpha Psi (Accounting), Associated Business Students Organization Council (ABSOC), Beta Gamma Sigma (Business Administration), Black Business Student Association, Delta Sigma Pi (Business Administration), Financial Management Association, Hispanic Students Business Association, Human Resource Management Association, Information Systems Student Association, International Association of Business Communication, Lambda Alpha International, MBA Association, Operations Management Association, Pacific Rim Association, Professional Women in Business Administration.

#### College of Education

Black Student Educators Association, Phi Delta Kappa (Professional Education), Pi Lambda Theta (Education), Student Association of APPLES, Student California Teachers Association.

### College of Engineering

American Indian Science and Engineering Society, American Institute of Chemical Engineers, American Society for Quality Control, American Society of Civil Engineers, American Society of Mechanical Engineers, Associated Builders and Contractors, Associated Engineering Student Body (AESB), Associated General Contractors of America, Association of Computing Machinery, Association of Engineering Technologists, Biomedical Engineering Society, Chi Epsilon (Civil Engineering), Construction Management Association of America, Eta Kappa Nu (Electrical Engineering), Instrument Society of America, Institute of Electrical & Electronics Engineers, Institute of Industrial Engineers, Institute of Transportation Engineers, International Microelectronics And Packaging Society (IMAPS), Mexican American Engineering & Scientists, Micromouse, National Association of Women in Construction, National Society of Black Engineers, Pi Tau Epsilon (Engineering), Pi Tau Sigma (Mechanical Engineering), Society of Automotive Engineers, Society of Hispanic Professional Engineers, Society of Manufacturing Engineers, Society of Petroleum Engineers, Society of Women Engineers, Structural Engineers Association of Southern California, Tau Beta Pi (Engineering), Upsilon Pi Epsilon (Engineering).

### College of Health and Human Services

Alpha Phi Sigma (Criminal Justice), American Association of Family and Consumer Sciences, California Nursing Students Association, Child and Family Associated Students, College of Health and Human Services Student Council, Criminal



Justice Student Association, Eta Sigma Gamma (Health Science), Health Care Administration Forum, Health Science Student Association, International Food Service Executives Association, Kappa Omicron Nu (Home Economics), Dr. Jack Rose Kinesiology & Physical Education Majors Club, National Student Speech, Hearing & Language Association,

Physical Therapy Student Association, Phi Epsilon Kappa (Kinesiology & Physical Education), Pi Alpha Alpha (Public Affairs & Administration), Recreation Society, Society of Consumer Affairs Professionals in Business, Sports Medicine Club, Student Affiliates of the American Kinesiotherapy Association, Student Association of Family and Consumer Sciences, Student Dietetic Association, Student Food Science Society, Students in Fashion.

### College of Liberal Arts

American Indian Student Council, Anthropology Student Association, Asian American Psychology Association Student Chapter, Asian American Student Association, Associated Students of Comparative Literature, Associated Students of Social Work, Black Psychology Students Association, Black Studies Student Association, Chicano/Latino Studies Student Association, Club Italia, Economics Student Association,

College of Liberal Arts Student Council, English Students Association, French Club, Geography Student Association, German Society, Graduate Speech Communication Association, History Students Association, Human Development Student Association, International Studies Student Society, Latino Psychology Student Association, Pi Sigma Alpha (Political Science), Political Science Student Association, Psi Chi (Psychology), Psychology Student Association, Public Relations Student Society of America, Religious Studies Student Association, Russian Club, Society of Professional Journalists, Sociology Student Association, Spanish/Portuguese Student Association, Student Alumni Scholars Association, Student Philosophy Association, Student Speech Communication Association, University Scholars Program Student Association, Women's Studies Student Association.

#### College of Natural Sciences and Mathematics

Biology Student Association, Chicanos/Latinos for Community Medicine, College of Natural Sciences/Mathematics Student Council, Geology Students Association, Math Students Association, Microbiology Students Association, Society of Physics Students, Student Affiliates of the American Chemical Society, TOPS (The Organization of Pre-Professional Students).

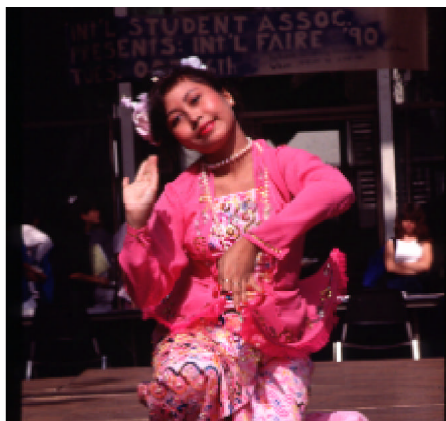
#### CSULB Campus Organizations

##### Coordinating Councils for Fraternities and Sororities

Interfraternity Council, National Pan-Hellenic Council, Pan-Hellenic Association.

##### Cultural Clubs

Afghan Student Union, African Repertory Ensemble, Armenian Student Association, Black Scholars Organization, Black Student Union, Cambodian Student Society, Chinese American Student Association, Chinese Student Association, Folkloristas Del Pueblo, Hawaii Club, Indian Student Association, International Students Association, Iranian



Student Association, Israeli Club, Korean Scholastic Society, Korean Student Association, La Raza Student Association, Latino Student Union, Muslim Student Association, Nikkei Student Union, Organization of African Students, Pacific Islander Club, Pakistan Student Association, Pan African Student Research Collective, Pilipino American Coalition, Vietnamese Student Association.

#### Fraternities

Alpha Phi Alpha, Delta Chi, Delta Lambda Phi, Delta Sigma Chi, Iota Phi Theta, Kappa Alpha Psi, Kappa Sigma, Lambda Theta Phi, Omega Psi Phi, Phi Beta Sigma, Phi Kappa Tau, Sigma Alpha Epsilon, Sigma Chi, Sigma Phi Epsilon, Sigma Pi, Tau Kappa Epsilon, Theta Chi, Zeta Phi Rho.

#### Honor and Recognition Societies

Golden Key National Honor Society, Mortar Board, Order of Omega (Greek Letter Org. Members), Phi Delta Gamma (Graduate), Phi Eta Sigma/Alpha Lambda Delta (Interdisciplinary Freshmen), Phi Kappa Phi (Interdisciplinary).

#### Political and Social Action Clubs

College Republicans, GLOBE, Model United Nations, SAFE (Students for AIDS Facts & Education), Young Democrats.

#### Religious Clubs

Asian American Christian Fellowship, Baha'i Club, Bridges, Campus Crusade for Christ, Catholic Newman Club, Chinese Christian Fellowship, Christians on Campus, Cooperative Protestant Campus Ministry, COPTICS, Grace Community Bible Study, Hillel, International Christian Fellowship, Interservice 49er Christian Fellowship, Korean Christian Fellowship, Korean Interservice Fellowship, Latter-Day Saints Student Association, Little SPARK, Methodist Wesley Foundation, Student Ministries, Students for Christ, Studies in the Old and New Testament, The Navigators, University Bible Fellowship, Victory Campus Fellowship.

#### Sororities

Alpha Kappa Alpha, Alpha Omicron Pi, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Delta Zeta, Gamma Phi Beta, Kappa Psi Epsilon, Sigma Gamma Rho, Sigma Kappa, Sigma Phi Omega, Zeta Phi Beta.

#### Special Interest Clubs

Alpha Phi Omega, American Red Cross Society, Army ROTC, Black Law Society, Cinema Society, Circle K, College Students in Broadcasting, Gay/Lesbian/Bisexual Students United, Illiterati, International Cultural Exchange, Latino Law Association, Law Society, Leadership Forum, Outdoor Adventure Club, PhE (Peer Health Educators), Ptahhotep Grand Nubians & Queens of Imani, Inc., Residence Hall Association, Sisters of Akanke Aboe & Brothers of Ajamu, 60+ Club, Social Dance Club, Society of Free Thinkers, Student Alumni Association, Students for OPTIONS, Students for Social Equality.

#### Sports Clubs

Akido Club, Alpine Ski Team, Archery Club, Badminton Club, Crew Team, Cycling Club/Team, Fencing Team, 49er Ice Hockey Team, Gymnastics Club, Hwa Rang Do Club, Judo Club, Karate Do, Kung Fu Club, Men's Rugby Team, Men's Soccer Team, Sailing Association, Sailing Team, Shotokan Karate Club, Snow Club, Tae Kwon Do Club, Water Ski Club/Team, Women's Soccer Team.

#### Student Resource Centers

There are five student-run resource centers on campus where students may go for information and support.

Activities in the centers vary and may include small group meetings, planning for major cultural events, occasional pot-



lucks, study hall, peer mentoring, and dissemination of information on community resources/volunteer opportunities and scholarships. Some centers may also house selected reading material.

American Indian Student Study Center, FO4-282, (562) 985-5963

Asian Pacific Student Resource Center, FO4-277, (no telephone)

Black Student Cultural Center, FO4-274, (562) 985-4502

Raza Resource Center, FO4-263, (562) 985-5223

Lesbian/Gay/Bisexual Resource Center (LGBRC). The LGBRC is a center run by students for students with the mission of offering support, conducting outreach and providing information to the campus community regarding lesbian, gay, and bisexual (L/G/B) issues. The Center maintains a library of books and videos on L/G/B topics. Speakers Bureau volunteers are available for classroom or residence hall panel discussions. The Center has community posting boards for jobs, scholarships and events on and off campus. The LGBRC also offers several rap/discussion groups, and a lounge is available for students to study or hold meetings. Throughout the year, the LGBRC sponsors various educational seminars and workshops designed to educate and increase visibility for L/G/B concerns.

The LGBRC services are open to any student, faculty or staff member interested in the lesbian/gay/bisexual community. The Center is located in the FO4 building. For further information, including Center hours, call (562) 985-4585 (general information) or (562) 985-4588 (event line).

### Fraternity and Sorority Housing

Most fraternities and sororities own or lease homes near the campus and provide lodging and meals for their members and pledges. Students interested in affiliating with a sorority or fraternity should contact the Panhellenic Association (for sororities), the Interfraternity Council (for fraternities), or National Pan-Hellenic Council via Office of Student Life and Development, University Student Union.

### Student Government

Student government through the Associated Students Inc. (ASI) is a unique opportunity for service to students by students. Students interested in management of the large A.S.I. corporation and in taking part in the decision-making process of the University, will also find student government rewarding. Every student becomes a member of the Associated Students upon registration. Through the Associated Students, Inc., a non-profit corporation in the State of California, financial support is given to approximately 30 student activity/interest commissions, a newspaper, college councils and departmental associations, and to various social, athletic, ethnic and cultural programs.

The corporate structure of the Associated Students, Inc. includes legislative, executive, and judicial branches for the student government. Students are elected to approximately 28 positions by the student body each year to fill the executive and legislative branches. In addition, students are also elected to policy-formulating bodies of the University including the Sports, Athletics and Recreation Board, the Child Development Center Board of Directors, the Forty-Niner

Shops Board of Directors, and the Academic Senate. Participation in these programs and other campus activities has been a significant part of many students' University experience.

The executive branch of student government is comprised of the A.S. President, A.S. Vice President, A.S. Treasurer and A.S. Administrator. The Associated Students President is the chief executive officer of the Associated Students, Inc. and acts as the representative and host of the Associated Students, Inc. to the University and the general public. The President can initiate or veto Senate legislation and is responsible for executing Associated Students policies. The President is also responsible for making all A.S. executive appointments and has the power to create committees. The President is also an ex-officio member of all A.S. executive bodies.

The Associated Students Vice President chairs the A.S. Senate and is a voting member of that body as well as other campus committees. The Vice President is responsible for assembling the agenda for the Senate meetings and serves on several boards and committees. The Vice President assists the President with his or her duties and assumes the President's duties should the A.S. President leave office or become incapacitated.

The Associated Students Treasurer is responsible for the Associated Students finances and enforcement of the A.S. fiscal policy. The Treasurer prepares the Associated Students budget, subject to Senate final approval, and chairs the A.S. Board of Control. The Treasurer approves all expenditures of A.S. monies and assists clubs and organizations with budget preparation.

The Associated Students Administrator is the chief administrative officer of the Associated Students. Appointed by the A.S. President each year, the Administrator is the executive assistant to the President and is responsible for overseeing the A.S. Commissions, activities, and services. The Administrator also represents the Associated Students and the President on several campus committees.

The Associated Students Board of Control is the fiscal advisory body to the Senate and is chaired by the A.S. Treasurer. The Board handles personnel matters and supervises the use and maintenance of the Associated Students buildings and equipment. All groups requesting Associated Students funding must go before the Board of Control for approval prior to appearing before the Senate. The Board of Control makes recommendations regarding expenditure allocations to the Senate, and the Senate has final approval in all A.S. Board of Control actions.

The A.S. Senate is the legislative branch of student government. It serves as the Board of Directors of the Associated Students Corporation by steering the corporation's finances and policies. The Senate creates and revises its by-laws, allocates funds for old and new programs, approves presidential appointments, fills vacancies in elected offices between elections, and forms committees to study problems and proposals. The Senate also charters on-campus student groups (except fraternities and sororities), which enables these groups to request Associated Students funding for programs, use the Student Union's facilities, plus enjoy the benefits of the Associated Students' support and recognition. The Senate is

comprised of 21 voting members, including the A.S. Vice President who serves as the Chair. There are two senators representing each of the seven colleges at CSULB. Senators must be majoring in one of the departments within the college they represent. In addition, there are six Senators-at-large seats also chosen by the general student body.

The Associated Students Judiciary interprets the Associated Students bylaws, codes, decisions, regulations, or any other A.S. document. When a dispute arises, the Judiciary may take disciplinary action, including suspension or revocation of charter privileges against recognized organizations on campus. The Judiciary also renders final decisions in election disputes. The decisions of the A.S. Judiciary are the final authority in Associated Students matters. A chief justice and six associate justices are appointed yearly by the A.S. President and approved by the A.S. Senate. The A.S. President also appoints an Attorney General and a Public Defender. This court allows students the opportunity to develop legal skills and address any injustice or wrongdoing in student government.

The Associated Students government offices are located on the Plaza level of the University Student Union in the West wing. For further information, please call (562) 985-5241 or write to: Associated Students Inc., 1212 Bellflower Blvd., Long Beach, CA 90815-0602.

### The University Student Union

The University Student Union (USU) is located in the center of campus and occupies approximately 148,000 square feet. With its large interior patios, flexible multipurpose and meeting/dining rooms, comfortable lounges, and food service facilities, the Union is the campus community and hospitality center. It houses and serves as the headquarters for the Associated Students, Inc. (student government and business office), University Student Union Administration Office, Student Life and Development, University-related student groups, legal counseling, Interfaith Center, Disabled Student Services, University Alumni Relations, an Information/Ticket Booth, the Office of the Assistant Vice-President for Student Services, and much more.

In March 1965, the student body voted to assess a fee each semester for the Student Union's construction, ongoing maintenance and to ensure continuation of various services and activities. In March 1995, the student body approved a \$17 million construction project that will add more services, program and lounge space, nationally branded vendors, meeting rooms and offices for clubs and organizations, plus provide safety upgrades to the building. The improvement project is scheduled to begin in November 1996 and conclude by August 1998.

The Information/Ticket Booth, located on the Plaza Level, offers photo developing, and tickets for campus events sponsored by student organizations are sold there. The Scheduling Office is a central scheduling and coordinating service for the entire campus. The Student Life and Development area offers advising for student organizations, as well as mail boxes and organizational files. The Student Union Food Court serves breakfast, lunch, and dinner with a wide variety of foods. The Counter sells various candies, popcorn, so-

das, and sundry items. Paradise Bakery, located on the Mall Level, offers a delicious selection of fresh-baked cookies, muffins, quiches, and beverages. Blue Marble Coffee House serves specialty coffees, baked goods and luncheon items.

Recreational facilities in the Games Area include bowling, billiards, table tennis, pinball and video games, table games, and the Television Lounge. For outdoor recreational enjoyment, a swimming pool and shower facilities are available. In addition, outdoor recreational trips are planned for skiing and camping enjoyment. These programs are open to the campus community. The Graphics Center offers sign making, graphic arts, and photography equipment complete with a darkroom.

The large multipurpose room, meeting and dining rooms, and the small auditorium provide a variety of facilities to various organizations for meetings, conferences, speakers, dances, films, and concerts as well as luncheons and banquets.

A wide variety of commercial services is also available. In addition to the food services, the Union offers Gary & Co. Hair Design and Campus Travel Agency.

### The Soroptimist House

The Soroptimist House, presented to the Associated Students by the Soroptimist Club of Long Beach, provides a facility for parties, receptions, and informal meetings. It has a terraced patio for outdoor events, carpeted lounges, a complete kitchen, and a dance area available for scheduling by all campus organizations and departments. The Soroptimist House has a small, intimate, home-like setting. Reservations may be made at the Scheduling Desk in the University Student Union.

# SOCIAL WORK

## College of Health and Human Services

Director

Vacant

Graduate Advisor

Ginger Kuluwaimakaokalani Wilson, (562) 985-4614

Director of Admissions/Undergraduate Advisor

Vacant

MSW 24 Hour Information Line

(562) 985-5654

BASW 24 Hour Information Line

(562) 985-5427

Department Office

Psychology Building (PSY), Room 114

Telephone

(562) 985-4616

FAX

(562) 985-5514

Faculty

Professors

Paul Abels

Kenneth Chau

Catherine C. Goodman

Jean M. Granger

Mary Ann Jimenez

Isaiah C. Lee

Julie O'Donnell

John Oliver

Elizabeth T. Ortiz

Marilyn Potts

Susan Rice

Associate Professors

Lester Brown

Madeleine Rose

Assistant Professor

Rebecca Lopez

Field Faculty

P. Abels, C. Atkin, H. Breton, J. Chavez, B. Cohen, C. Ellano, M. Foster, A. Glezakos, C. Goodman, D. Hirst, M. Hirst, F. L. Howard, T.

Hughes, R. Hurtado, M. Jimenez, M. Maram, M. Mindell, K. Muster,

D. Cebula Nelson, E. Ortiz, J. Ostrom, S. Peyer, J. Pijloo, S. Rice, M.

Rose, R. Rountree, J. Rubin, J. Strong, J. Waterhouse.

Department Secretary

Phyllis Simon, (562) 985-4615

Students desiring information should contact the numbers listed above.

The profession of social work aims at improvement of the quality of life for all people and the enhancement of the human potential for full and productive participation in society. As such, social work has universal application to meet human needs arising from personal-societal interactions. Social Work, based on the history and philosophy of the profession, has particularly undertaken efforts to work with the disenfranchised groups in our society to alleviate poverty and oppression and to empower at risk groups.

The social work method is a change-oriented process which helps individuals and social units of all sizes, structures and functions to discover, mobilize, develop and use their own and outside resources to change personal and social conditions which are barriers to meeting their needs. Change is accomplished through direct service, supervision, consultation, education, community organization, program development and evaluation, organizational and administrative advocacy, policy development, and social or political action.

Professional social workers are dedicated to service for the welfare and self-fulfillment of human beings; to the development and disciplined use of scientific knowledge of human and societal behavior; to the development and improvement of resources to meet individual, group, family, organization and community needs and aspirations at local, national and international levels; to the development and improvement of social institutions; and to the achievement of social justice.

Social workers are employed in varied settings, including the major societal institutions: health and mental health care, child welfare, family services, government, education, justice, aging services, recreation, labor and industry, and religion. They work in many job classifications: direct service, community organization, supervision, consultation, management, administration, education and training, policy analysis and research.

The educational program of the Department of Social Work is directed toward helping students gain professional knowledge and values, develop an understanding of social work methods and techniques, and achieve the skill required to undertake quality practice over the full spectrum of professional tasks. These objectives are accomplished with the student through an integration of the information and theories of the classroom with supervised practical experience in social agencies.

### Bachelor of Arts in Social Work (code 2-8555) (124 units)

The Department of Social Work offers, in conjunction with the University's two years of general education, a two year professional program leading to a Bachelor of Arts in Social Work degree. The BASW program is accredited by the Council on Social Work Education (Council on Social Work Education, Commission on Accreditation, 1600 Duke Street, Suite 300, Alexandria, VA 22314, phone: 703-683-8080). The objectives of the baccalaureate program are to prepare students for beginning social work practice and graduate social work educa-

tion. All social work baccalaureate courses incorporate issues and concerns related to ethnicity, gender, poverty, and sexual orientation.

Social Work majors should consider taking courses as electives or for fulfillment of general education requirements in the ethnic studies and women's studies programs, in other liberal arts departments, and in gerontology. The department can make recommendations concerning those courses which would be most useful to students interested in acquiring broader information closely allied to professional social work practice.

The field work sequence plays an integral role in the BASW curriculum providing an opportunity for the student to apply Social Work knowledge and practice skills in an agency based educationally focused field work placement. Students complete 400 hours of field placement (SW 495A/B) in their senior year for which they earn 14 academic units. Students complete 16 hours per week in an assigned agency placement. Normally, students are in agency placement on Tuesday and Thursday from 8:00 a.m. to 5:00 p.m. A variety of agencies in the surrounding communities are used, and the University field faculty select the most appropriate field placement site for students.

Students can contact the BASW information line or the Director of Admissions for academic advising concerning the requirements for admission into the BASW program.

#### Admission Under Impaction

The number of applicants to the Social Work program exceeds the number that can be accepted. For this reason, the Social Work program has been designated as impacted by the California State University. Applicants are subject to supplemental criteria in addition to those required for admission to the University. Applicants for admission will be designated a pre-major code (code 2-8554). Acceptance into the pre-major category does not imply or assure subsequent acceptance into the major. Similarly, acceptance into the pre-major is not a prerequisite for admission into the major. Admission is on a competitive basis and is determined on the basis of meeting all of the following supplemental criteria:

1. Declare Social Work as a major (if not declared prior to admission);
2. Complete a minimum of 56 semester units with a GPA of 2.5 or higher;
3. Complete the following prerequisites or their equivalents with a minimum GPA of 2.5:
  - A. Cultural Anthropology (ANTH 120)
  - B. Anatomy and Physiology (A/P 107)
  - C. Introduction to Psychology (PSY 100)
  - D. Introduction to Sociology (SOC 100)
  - E. Elementary Statistics (C/ST 210; HDEV 250; MATH 180; PSY 210; SOC 250, 255)
  - F. Abnormal Psychology (PSY 370);
4. Successfully complete the CSULB Writing Proficiency Examination (WPE) requirement.

To apply for admission to the Social Work major, after meeting the supplemental criteria above, a matriculated (fully accepted and enrolled) student must complete the departmental major application form obtainable from the department office, sign it, and attach two letters of recommendation and transcripts of all previous college work at CSULB or elsewhere. The deadline for applications to the fall semester is April 30 of the preceding calendar year.

In determining eligibility of an applicant for admission to the program, the admission committee will consider:

1. All information in the supplemental application;
2. All college/university academic work completed with emphasis on all prerequisite courses;
3. Documented exposure to the field of Social Work in a variety of settings such as work or volunteer experience;
4. Suitability and fit for the profession, as determined by the Department;
5. An interview of the applicant (at the discretion of the admission committee).

#### Conditional Admission

Students who meet all other criteria for admission to the social work major but who have not yet completed abnormal psychology and/or have not yet passed the WPE may be granted one semester of conditional admission. At the end of the conditional semester students must have successfully completed abnormal psychology and/or the WPE in order to progress to the spring semester Social Work courses. Students who do not remove all deficiencies during the conditional semester will be returned to pre-social work status and must reapply for admission when all requirements have been satisfied.

#### Sequence of Required Social Work Courses

Once admitted into the program, students will take the following sequence of courses:

First Level (fall): SW 220, 221, 330, 350

Second Level (spring): SW 331, 340, 340A, 351

Third Level (fall): SW 442, 465, 495A

Fourth Level (spring): SW 440, 441, 495B

#### Master of Social Work (code 7-8555)

The Master of Social Work program is accredited by the Council on Social Work Education. The goal of the Master of Social Work (MSW) program is education which stresses the worth and dignity of individuals, the interdependence among peoples, and the common human bond that unites all peoples. This is essentially an intercultural and international stance which requires a respect for differences of custom, tradition, belief, and perspective and a development of capacity to practice social work in an increasingly multi-cultural environment. The cross-cultural focus has been established in response to the development of a world community, the changing population characteristics of the University and adjacent communities and in response to the goals and objectives of the profession of Social Work.

The master's program emphasizes an ecological perspective which focuses on the fit and interactions of a person or system in relation to the various environments likely to be encountered. Within this perspective, knowledge, values, and

skills are used in a change-oriented process with a cross-cultural context to help individuals and social units achieve improved quality of life and social participation, including advocacy for just institutions and equitable access to opportunities and resources.

The master's program defines its mission as the provision of an educational program which does the following:

1. Provides knowledge of and experience with ethnic diversity, teaches skill in ethnic-sensitive practice, and provides motivation and skill to combat oppressive policies and discrimination. As such, the program actively offers opportunity for graduate education to students of various ethnic, racial, and socio-economic backgrounds who have life experience in bridging cultural gaps;
2. Contributes to the quality of social services delivered in the adjacent community (Los Angeles, Ventura, San Bernardino, Riverside, and Orange Counties) by providing an opportunity for advanced education to students who are already employed in the social services. These students may concurrently maintain employment within the social services and participate in the program to develop advanced skills in their area. Quality of services is also enhanced through close collaboration between the Department of Social Work and community service agencies offering fieldwork experiences and through the labor force of MSW's educated in a program with cross-cultural emphasis and specializations which reflect the needs of our adjacent community as well as the needs of urban communities nationally;
3. Prepares social workers for leadership and specialized practice with a specific population group. The program maintains high standards and prepares social workers for the depth and complexity of generic Social Work practice while being able to practice in a chosen area of concentration. Foundation knowledge, values, and skills required for intervention in a cross-cultural context are applied and developed through work within the area of specialization. Specialization consists of emphasis on a stage of the life cycle: either children, youth, and families or older adults and families. Specialized education is offered concurrently with basic foundation knowledge from entry into the program. Students are expected to have experience in the social services upon which to draw after entry into the program;
4. Teaches analytic skill necessary for reflective and autonomous practice and necessary for contribution to the advancement of knowledge. Social workers should be capable of integrating knowledge and practice, should be able to apply grounded, scientific principles to practice, should be capable of conceptualizing practice principles on the basis of their experience, and therefore should be able to contribute to the development of new knowledge;
5. Educates students to the values and ethics of the profession. The social worker is expected to be committed to the value that people should have equal access to resources, services, and opportunities. Social workers should be advocates of humane and responsive service, have regard for the worth and dignity of the individual, and conduct themselves in accordance with the professional code of ethics.

## Concentrations

The Master of Social Work degree offers opportunity for study in two areas of concentration: Older Adults and Families or Children, Youth and Families. Students meet requirements for their concentration by practice, behavior and policy courses, by related field experience and by research for their theses in the concentration area.

The concentrations reflect two of the major areas of social concern and programs in our society. Child neglect and abuse, single parents, drugs and gangs illustrate the tremendous need for service to children and their families. Interestingly, the other end of the age range also reflects neglect and a need for service. The aged, the fastest growing population segment in our society, often lead healthy productive lives; however, many at risk individuals and their families will require services. For example, older adults in the uppermost age brackets are often frail and, therefore, may have a greater need for social services, income maintenance, housing, health and personal care services. The probability that older women will live longer than men and experience differences in social and economic conditions places many of them at risk. In its bicentennial issue, U.S. News & World Report says geriatric social workers will be the fourth leading new job group created by the year 2000 with 600,000 new job openings.

With both groups, the family is often the mediating source, and the social worker needs to be able to work with the family as well. Both groups are represented by large numbers in Southern California, and programs are developing to serve the need. Professional social workers have a vital part to play in seeing these services are adequate and sound.

### The Children, Youth and Families Concentration

The Children, Youth and Families (CYF) concentration prepares students for practice in a variety of settings. Students are exposed to the full range of practice skills and have one year of direct practice experience and a second year of more intense direct practice or administrative practice experience.

Field work placements are available in a variety of agencies in the surrounding five-county area, including public, private and non-profit agencies. Typical settings include child welfare/protective services, health care, mental health, public social services, schools, community-based outpatient agencies, corrections/juvenile justice, residential treatment, programs for persons with developmental disabilities, substance abuse treatment and other specialized programs.

### Required Courses

SW 560 Direct Intervention and Planning: Focus on CYF

SW 597A Human Behavior and Dysfunction: Focus on CYF

SW 660 Direct Intervention with Families and Groups: Focus on CYF

SW 670 Social Work Administration: Focus on CYF

SW 681 Advanced Policy and Programming with CYF

SW 596 and SW 680 Field work placement in two different CYF agencies

SW 698/699 Master's Thesis on a topic related to concentration.

Two electives.

## The Older Adults and Families Concentration

The Older Adults and Families (OAF) concentration prepares students for practice in the delivery of social services to older adults and their families, in the planning and evaluation of social services and in administration of services and policy development. Students experience one year of placement in a direct practice setting and may select either a direct practice or administrative practice setting for their second year.

Field work placements are available in a variety of agencies in the surrounding five-county area including public and private nonprofit agencies. Typical settings include health care, adult protective services, mental health, community-based outpatient agencies, rehabilitation, programs for the developmentally disabled, substance abuse treatment, senior programs and other specialty services.

### Required Courses

SW 561 Direct Intervention and Planning: Focus on Aging

SW 597B Human Behavior and Dysfunction: Focus on Adults

SW 661 Direct Intervention with Families and Groups: Focus on the Aging and their Families

SW 671 Social Work Administration: Focus on Aging

SW 682 Advanced Policy and Programming with the Aging

SW 596 and SW 680 Field work placement in two different Aging and Family agencies

SW 698/699 Master's Thesis on a topic relating to the concentration.

Two electives

### Admission to Master's Degree Program

Students interested in full- and part-time study are admitted to the M.S.W. program for the fall or summer semester of each year. Prospective students should apply directly to the Department of Social Work. Review of applications is ongoing and continues until the class is filled. Ordinarily, decisions on admissions are concluded by June.

### Admission Requirements

To be admitted to graduate work on a full or part-time basis in the Master of Social Work program, applicants must meet the following criteria:

1. Hold a Bachelor's degree from a university or college of recognized standing, have a liberal arts background, and be eligible for admission to graduate standing at CSULB;
2. Have the professional and intellectual ability to perform graduate work satisfactorily. A cumulative GPA of 2.50 or above (on the 4.0 scale) on the last 60 units attempted is required for admission to the program;
3. Demonstrate suitability and fit for the profession, as determined by the Department.
4. Submit results of the General Aptitude Section of the Graduate Record Examination, taken within the past 5 years, to the department (waived for individuals who have completed a master's degree);
5. Complete the department application form, including:
  - A. Summary of
    - work and paid experience,
    - cross-cultural experience,
    - educational background;

### B. Special Academic Prerequisites:

- computer literacy
- human biology/anatomy
- elementary statistics;

### C. Reference forms;

### D. Personal statement.

6. Submit a copy of all college/university transcripts to the department;
7. International students must apply to the Center for International Education during the month of November. (562) 985-5476
8. Preadmission interviews may be required by the Program faculty.

### Field Work

The field work sequence plays an integral role in the MSW curriculum. The experience offers an opportunity for students to integrate and apply theoretical knowledge and Social Work practice and intervention skills in a community agency setting under the supervision of a qualified field instructor. A variety of agencies within the surrounding counties are utilized, reflecting the diverse settings in which social workers are employed. University field faculty select the most appropriate field placement site for students.

Each student has two field work placements and concurrent enrollment in practice courses during the course of study. Each placement involves 500 hours of field work in a community agency setting and attendance and participation in a field work seminar that meets weekly on campus. The field work sequence encompasses a total of 1000 hours, for which 12 units of academic credit are given. Concurrent and summer block models of field work placement are available. The concurrent model of field work parallels the academic year schedule, with placement beginning in September and continuing through mid May. Students take concurrent coursework and a field seminar while enrolled in field work and are currently in field work two days (16 hours) per week (M-F 8:00 am - 5:00 pm). The block model of field work occurs during the late spring and summer months, with students completing 36 hours per week (M-F 8:00am - 5:00pm) in field work while concurrently taking coursework and a field seminar on the remaining work day. Students enrolled in the full time (2 year) model or the part-time (3 or 4 year) models may take one year of concurrent and the second year in block field work placement. Students enrolled in the Summer Block Model will complete both field placements in the block model.

Students who are employed in social service agencies may request that their agency be evaluated as a site for their field work for the second year of field work. The agency must be able to meet all criteria established by the Department of Social Work to insure the educational focus of field work. Evaluation of field work sites and approval to utilize an agency of employment as a field work site will be completed by the field work faculty.

The Department of Social Work will reject an applicant or disqualify an enrolled student whose record of academic achievement or performance in field instruction does not meet the minimum standards of the profession.

## Pupil Personnel Services Credential with Specialization in School Social Work and Child Welfare and Attendance (code 803)

The California Commission on Teacher Credentialing issues the Pupil Personnel Services (PPS) Credential in four specialization areas: Counseling, School Psychologist, School Social Work and Child Welfare and Attendance. The Department of Social Work, College of Health and Human Services, offers the combined School Social Work and Child Welfare and Attendance Specializations of the PPS Credential within the context of the Master of Social Work (MSW) degree.

The PPS Credential in School Social Work and Child Welfare and Attendance authorizes the holder to be employed in the State of California as a School Social Worker and/or a Child Welfare and Attendance Specialist. The credential covers pre-kindergarten through 12th grade service in public and other schools requiring the credential. Individuals with the credential in School Social Work and Child Welfare Attendance are pupil advocates, and provide prevention and intervention strategies that remove barriers to learning. These professionals, in partnership with other educators parents and the community maintain high expectations for all pupils, facilitate pupils reaching their highest potential, foster optimum teaching and learning conditions, and prevent school failure. School Social Work is defined as the application of social work principals and objectives to help fulfill the major purpose of the education system: to provide a setting for teaching and learning in which all children can prepare themselves for the world they now live in, and the world they will face in the future.

Child Welfare and Attendance specialists provide assessment and intervention around issues of attendance for pupils.

### Requirements

1. Successful completion of all of the requirements for the 60 unit Master of Social Work (MSW) degree within the Children, Youth and Families Concentration. Required coursework will be completed in the following sequence areas: Field Work, Human Behavior and the Social Environment, Social Work Policy, Social Work Practice, and Social Work Research;
2. Completion of SW 665, School Social Work as one of the required electives within the 60 unit MSW program, taken either prior to or concurrently with school social work field work placement;
3. Successful completion of required School Social Work Seminar series presenting specialized topics;
4. Demonstrated knowledge in the following areas of pupil personnel services, as defined in the Commission on Teacher Credentialing Standards: Knowledge of techniques for facilitating individual growth and development to achieve academic success; Knowledge of the wide variety of socio-cultural influences that affect pupils in a school setting; Knowledge of human assessment; Knowledge of problem prevention and early intervention; Knowledge of consultation services; Knowledge of learning theory and psychological education; Knowledge of coordination and development of services; Knowledge of legal enablements and constraints; Knowledge of referral and utilization of services; Knowledge of human assessment as direct services to pupils, Knowledge of social interventions; Knowledge of consultation coordination and development

of services; Knowledge of referral, utilization, involvement and use of community resources; Knowledge of social research and services based on research; Knowledge of the code of professional ethics; Knowledge of attendance laws and the rights of minors; and Knowledge of skills using attendance laws and assessment skills.

5. Successful completion of 540 clock hours of field practice, demonstrating all of the required skills and knowledge areas, in an approved PPS site, under the supervision of an experienced MSW level practitioner and an individual who holds a PPS Credential. Supervised hours of field practice will include at least 100 hours in each of two settings (elementary, middle and/or high school), and experience in service delivery with populations representing racial and ethnic diversity, and will cover both school social work and child welfare and attendance competencies and standards.
6. Completion of required Application and forms from California Teachers Credentialing Division, including fingerprints, Certificate of Clearance and Character Reference form;
7. Completion of required health screenings;
8. Successful performance on C-BEST Examination;
9. Certification of program completion and demonstrated competence by the PPS Program Coordinator, Department of Social Work. The student may be required to complete additional course work, field work, or demonstrate specific competencies before approval.
10. Completion of all required forms and procedures of Credential Processing Center, CSULB.

### Advancement to Candidacy

A conditionally classified or fully classified student must maintain a minimum GPA of 3.0 on all courses taken subsequent to admission. In addition, a GPA of 3.0 must be maintained in all courses required for the degree. A student will be eligible for advancement to candidacy for the degree after successfully completing 12 units of graduate level courses in Social Work and passing the WPE.

### Course Load

The California State University, Long Beach requirement for full-time status as a graduate student is 8 weighted units. For part-time students pursuing the M.S.W. degree in the Department of Social Work, the residency requirement is one year of full-time work; therefore, part-time students pursuing the M.S.W. degree must take at least 2 semesters of at least 3 courses or 9 units. Students who wish to complete the M.S.W. degree in 2 years must take an overload of 6 units for 4 semesters or 15 units a semester.

### Requirements

The Master of Social Work program requires the completion of 60 semester units, taken in one of the four following sequences.

#### Plan A: (two years)

- Term 1 -- SW 500, 503, 505, 550, 596A; (fall)  
Term 2 -- SW 560 or 561, 592, 594, 596B, 597A or 597B; (spring)  
Term 3 -- SW 660 or 661, 680A, 693, 698A, 600 level elective; (fall)  
Term 4 -- SW 670 or 671, 680B, 681 or 682, 699A, 600 level elective (spring)

## Plan B: (four years)

- Term 1 -- SW 503, 505; (fall)  
Term 2 -- SW 550, 597A or 597B; (spring)  
Term 3 -- SW 500, 596A, 600 level elective; (fall)  
Term 4 -- SW 560 or 561, 592, 596B; (spring)  
Term 5 -- SW 660 or 661, 680A, 693; (fall)  
Term 6 -- SW 594, 670 or 671, 680B; (spring)  
Term 7 -- SW 698A, 600 level elective; (fall)  
Term 8 -- SW 681 or 682, 699A (spring)

## Plan C: (three years) (Special Sessions)

- Term 1--SW 503, 505, 600 level elective; (fall)  
Term 2--SW 592, 597A or 597B; (spring)  
Term 3--SW 693, 550; (summer)  
Term 4--SW 596A, 500; (fall)  
Term 5--SW 596B, 560 or 561, 594; (spring)  
Term 6--SW 698A, 600 level elective; (summer)  
Term 7--SW 680A, 660 or 661, 699A; (fall)  
Term 8--SW 680B, 670 or 671, 681 or 682. (spring)

## Plan D: (Summer Block Model)

- Term 1 (Summer Session) -- SW 503, 505;  
Term 2 -- SW 550, 600 level elective (fall)  
Term 3 -- SW 592, 594, 597A or 597B; (spring)  
Term 4 (Summer Session) -- SW 500, 560 or 561, 596C,  
596D, 698B;  
Term 5 -- SW 693, 600 level elective; (fall)  
Term 6 -- SW 681 or 682; (spring)  
Term 7 (Summer Session) -- SW 660 or 661, 670 or 671,  
680C, 680D, 699B.

Plans C (3 year) and D (Summer Block), which are done through Special and Summer Session Programs, are more expensive due to higher tuition costs.

For other requirements of Master's degree programs, see the University's graduate degree requirements.

## Courses (S W)

### Lower Division

220. Introduction to Social Welfare (3)  
(Open to non-majors.) Analysis of current functions and purposes of social welfare as an institution. Examination of historical and philosophical perspectives on social welfare in light of cultural, economics, political, psychological, and social forces. Study of the consequences of national welfare programs and policies. Analytical comparisons with other countries.
221. Introduction to Social Welfare Practicum (2)  
Prerequisite: Consent of instructor. Minimum of six hours weekly in an approved social service or allied setting. Social work field practice including observational, volunteer activities to aid career choices. Credit/No Credit grading only.

### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

#### 330. Human Behavior and Social Environment: Birth through Adolescence (3)

Designed to provide a multi-dimensional view of human development from conception through adolescence. Emphasis on the contexts of development stressing the ways in which the social environment provides expectations, resources and barriers to human development. Exploration of the influences of family, peers, institutions and culture and the effects of socioeconomic status, sexism and racism. Discussion of the implications for social work practice.

#### 331. Human Behavior and Social Environment: Young Adulthood through Old Age (3)

Extension of curriculum presented in SW 330 by applying it to young adulthood through old age. Study of the variety of theoretical perspectives. Emphasis on the contexts of development, stressing how the social environment provides expectations, resources and barriers to human development. Discussion of the effects of socioeconomic status, sexism and racism and of the implications for social work practice.

#### 340. Generic Social Work Practice (3)

Prerequisites: SW 220, 221, 330, 350, consent of instructor. Concurrent enrollment in SW 340A. Social work as a helping process. Basic principles, common elements, and generic frameworks for social work practice including interview techniques. Role of social workers in resolution of social, emotional, and environmental problems and the relationship of social work intervention.

#### 340A. Social Work Practicum (2)

Prerequisite: Concurrent enrollment in SW 340. Minimum of 6 hours weekly experience in approved social service or allied setting. Social work field practice including interviewing, assessment, and intervention activities. May be repeated for a maximum of four units. Credit/No Credit grading only.

#### 350. Social Policy: Law and Court Decisions (3)

(Open to non-majors.) Social policy as defined in legislation and judicial decisions affecting rights of individuals, minorities, families and the general welfare.

#### 351. Social Policy: Formulation and Analysis (3)

(Open to non-majors.) Policy formulation and analysis related to social welfare institutions and major social welfare policies and programs. Current values and issues in social welfare policy.

#### 406A. Applications of Social Work (3)

Prerequisites: Consent of Instructor. Students are expected to take 406A and 406B. Students apply for the 406A-B sequence during the Spring of the academic year before the courses are taken. Can be used for SW 221 or SW 340A, but must fulfill entire time commitment. Present project is in Leisure World. Course may be repeated for a maximum of 12 units. Different topics. Same course as PSY 406A.

#### 406B. Applications of Social Work (3)

Prerequisites: Consent of Instructor. Students are expected to take 406A and 406B. Students apply for the 406A-B sequence during the Spring of the academic year before the courses are taken. Can be used for SW 221 or SW 340A, but must fulfill entire time commitment. Present project is in Leisure World. Course may be repeated for a maximum of 12 units. different topics. Same course as PSY 406B.

#### 423. Child Abuse and Prevention (3)

Examination of child abuse as a social problem; its history and causal factors, including social change and changing family patterns. Intervention practices, including identification and investigation, social services and court intervention will be reviewed, especially the roles of health professionals, criminal justice and corrections personnel, social workers and educators. Finally policy implications will be examined with a focus on policy as intervention, as well as the role of concerned citizens and child advocates. Same course as SOC 423.



**440. Social Work Practice with Groups (3)**

Prerequisites: SW 331, 340, 340A. Concurrent enrollment in SW 495A or 495B. Adaptation of generic frameworks of social work practice to generic group approaches. Analysis of dynamics, theories, and principles underlying group practice. Programs, practice techniques, and roles involved with groups. Non-majors require the consent of the instructor.

**441. Social Work Practice with Communities and Institutions (3)**

Prerequisites: SW 331, 340, 340A, 351. Concurrent enrollment in SW 495A or 495B. Adaptation of generic frameworks of social work practice to generic approaches to community and institutional applications. Analysis of theories and principles underlying community practice. Adaptation of theories and activities to organizational contexts. Techniques and activities applicable to communities and neighborhoods. Non-majors require consent of instructor.

**442. Social Work Practice With Individuals and Families (3)**

Prerequisites: SW 331, 340, 340A. Concurrent enrollment in SW 495A. Adaptation of generic frameworks of social work practice to generic approaches in working with individuals and families. Theories, techniques, activities, and role of social workers; differential approaches to assessment, intervention, and helping processes.

**465. Research Methods in Social Work (3)**

Prerequisites: SW 340, 340A, 351, 442, one course in elementary statistics. Must be completed concurrently with 495A or 495B. Introduction to research methods in social work and emphasis on evaluation of social work and community service programs. Non-majors require consent of the instructor.

**475. Foundations of Cross Cultural Peer Training (3)**

Introduces theory and practice of working within a multicultural and community context. In a broadly based change-oriented process, explores beliefs, prejudices, and diversity issues to develop methods of promoting more humane responses within the campus community. Traditional grading only.

**480. Social Work with Families and Children (3)**

Contemporary social welfare programs designed to meet the physical, psychological, and social needs of families and children. Basic principles and methods of providing services, including the role of the social worker.

**481I. Immigration Issues in Social Work (3)**

Prerequisites: ENGL 100 and upper division status. Survey of major historical and contemporary issues regarding legal and illegal immigrant populations in California. Origins of the current immigrant flow and international and federal policies and mechanisms which facilitate immigrant entry into the U.S. Designed to assist social service provision by examining the unique immigrant experience and focusing on select variables which present barriers to immigrant clients in accessing services.

**484I. International Perspectives in Social Welfare for the Elderly (3)**

Prerequisites: ENGL 100 and upper division status. Critical analysis of aging problems in developed and developing countries, discussing demographic, socioeconomic and humanitarian issues from a social welfare perspective. Discussion of medical, financial and social service programs for the elderly to meet these needs in various countries.

**490. Special Topics in Social Work (1-4)**

Topics of special interest in social work for intensive study. Topics will be announced in the Schedule of Classes each semester. May be repeated with different topics.

**491. Non-Violent Conflict Resolution: In Your Life and On the Job and Around the Planet (3)**

Designed to help the student examine conflict and violence, their own and others' responses to different situations, and to learn to utilize a set of tools to deal with conflict in a productive, non-violent manner. Same course as I/ST 491.

**495A. Field Experience in Social Work (7)**

Prerequisites: SW 330, 331, 340, 340A, 350, 351. Concurrent enrollment in two of the following: SW 440, 441, 442, 465. Evidence of satisfactory malpractice liability insurance coverage. Open to seniors accepted for field work. Supervised practice experience in social welfare agencies and allied settings. Two hours weekly of campus seminar and 16 hours minimum (usually Tuesday and Thursday) in agency placement. Credit/No Credit grading only.

**495B. Field Experience in Social Work (7)**

Prerequisites: SW 442 and 495A. Concurrent enrollment in two of the following: SW 440, 441, and 465. Evidence of satisfactory malpractice liability insurance coverage. Open to seniors accepted for field work. Supervised practice experience in social welfare agencies and allied settings. Two hours weekly of campus seminar and 16 hours minimum (usually Tuesday and Thursday) in agency placement. Credit/No Credit grading only.

**499. Directed Studies (1-3)**

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member.

## Graduate Division

**500. Foundations of Generic Social Work Practice: A Cross-Cultural Perspective (3)**

Prerequisite: Concurrent enrollment in SW 596A or 596C. The assumptions, concepts, principles, and values of generic practice examined from a cross-cultural perspective in regard to professional relationships, social work roles, treatment processes, and service delivery models with individuals, families, groups, organizations, and communities; a conscious and systematic dual perspective used to compare simultaneously the values, attitudes and behavior of the larger social system with those of client's family and community system. Traditional grading only.

**503. Behavior and Environment in Cross-Cultural Perspectives (3)**

Review of psycho-analytic concepts, ego psychology, learning theory, role theory, and socio-cultural impacts upon individual behavior. Discussion of system theory, group conflict, social deviancy, sex discrimination, and poverty affecting personal adaptive functioning and group adjustment. Clinical application of these concepts and theories to assessment, diagnosis, and treatment of individuals and families. Traditional grading only.

**505. Oppressed Groups: Social Policy and Political Action (3)**

Discussion and analysis of the barriers to resources and social-political status faced by selected oppressed groups in the U.S. Forms of dissent and political action used, including protest and compromise, the politics of accommodation, input into the party system and the legislative process. Social work appraisals of group needs, differences and strategies for overcoming barriers with special emphasis on adequacy, equity. Traditional grading only.

**540. Social Work Practice in Health Care (3)**

Overview of the health care system and social work practice. Discussion of the interrelatedness of physical, psychological, social and cultural factors in health care and disease conditions ranging from congenital anomalies to terminal illness with attention to the role of social worker in the health care system: health maintenance, family planning, preventive and rehabilitative services. Traditional grading only.

**550. Computers and Social Services (3)**

Study of the application of computer technology to clinical practice and organizational management in social service settings. Discussion of the impact of computers on issues of confidentiality, ethics and future directions of the profession. Use of computers for access to national data base archives for purposes of social work research. Traditional grading only.

**560. Direct Intervention: Focus on Children, Youth and Families (3)**

Prerequisites: SW 500, SW 596A or SW 596C, and concurrent enrollment in SW 596B or SW 596D. Examination of varied practice strategies in depth. Behavioral, cognitive, social and psychodynamic models viewed in relation to the ecological systems ap-

proach. Emphasis on middle through termination phases of the helping process with special emphasis on cross-cultural perspectives. Traditional grading only.

**561. Direct Intervention: Focus on the Aged and Their Families (3)**

Prerequisites: SW 500, 596A or 596C, and concurrent enrollment in SW 596B or 596D. Examination of varied practice strategies in depth. Behavioral, cognitive, social, psychodynamic models viewed in relation to the ecological systems approach. Emphasis on the middle through termination phases of the helping process with special emphasis on cross-cultural perspectives. Traditional grading only.

**562. Social Work and AIDS (3)**

All aspects of AIDS (Auto Immune Deficiency Syndrome) and HIV (Human Immune Virus) relevant to Social Work practice, including child welfare, policy, psychosocial issues, counseling, alcohol and drug use, women, people of color, ethical issues, prevention, mental health, etc. so that students will have a solid working knowledge of the issues and concerns related to persons affected by AIDS and HIV. Traditional grading only.

**590. Special Topics (3)**

Content may vary from semester to semester. May be repeated under different course topics. Approval of instructor needed. Topics will be announced in the Schedule of Classes each semester. Traditional grading only. Course may be repeated for a maximum of 6 units with different topics for majors and 9 units for non-majors.

**592. Community Projects I (3)**

Designed to integrate the students' crosscultural, practice, human behavior, policy, community organization and research knowledge in the context of conceptualizing approaches for dealing with a selected community problem. Requires demonstration of mastery and ability to synthesize curriculum content through the development of practical interventive strategies which focus on an existing community concern. (Lecture/discussion/outreach.) Traditional grading only.

**594. Research Methods for Social Work Practice (3)**

An introduction to social work research methods, including research design for both quantitative and qualitative studies. Emphasis on building knowledge and skills for carrying out independent, cross-culturally focused research in social work and on the ability to evaluate research findings critically. Traditional grading only.

**596A. Field Instruction I (3)**

Prerequisite: Concurrent enrollment in SW 500. Evidence of satisfactory malpractice liability insurance coverage. Supervised practice experience in a community social agency based upon students' learning needs, interest and area of concentration. Focus on development of foundation of generic interventive modalities in individuals, families, groups and communities with emphasis on cross-cultural practice. Two hours weekly field seminar and 16 hours in agency placement. Credit/No Credit grading only.

**596B. Field Instruction II (3)**

Prerequisites: SW 500, 596A or 596C, and concurrent enrollment in SW 560 or 561. Evidence of satisfactory malpractice liability insurance coverage. Continuation of supervised practice experience in a community social agency on an advanced level of practice with individuals, groups and communities with emphasis on cross-cultural practice. Two hours weekly field seminar and 16 hours in agency placement. Credit/No Credit grading only.

**596C. Field Instruction I (3)**

Prerequisite: Concurrent enrollment in SW 500. Evidence of satisfactory malpractice liability insurance coverage. Supervised practice experience in a community social agency based upon students' learning needs, interest and area of concentration. Focus on development of foundation of generic interventive modalities in individuals, families, groups and communities with emphasis on cross-cultural practice. Two hours weekly field seminar and 36 hours in agency placement. Summer session only. Credit/No Credit grading only.

**596D. Field Instruction II (3)**

Prerequisites: SW 500, SW 596A or 596C, and concurrent enrollment in SW 560 or 561. Evidence of satisfactory malpractice liability insurance coverage. Continuation of supervised practice experience in a community social agency on an advanced level of practice with individuals, groups and communities with emphasis on cross-cultural practice. Two hours weekly field seminar and 36 hours in agency placement. Summer session only. Credit/No Credit grading only.

**597A. Human Behavior and Dysfunction: Focus on Children, Youth and Families (3)**

Based on basic understanding of varied developmental perspectives. Concentration on birth to adult behavior range in relation to the clinical ecological systems approach. Examination of all range of behaviors with a crosscultural perspective. Traditional grading only.

**597B. Human Behavior and Dysfunction: Focus on Adults and the Aged (3)**

Based on basic understanding of varied developmental perspectives. Concentration on the adult behavior range and relates to the clinical ecological systems approach. Examination of a range of behaviors with a crosscultural perspective. Traditional grading only.

**599. Independent Study (1-3)**

Prerequisites: Consent of Department and instructor. Independent study of special topics under supervision of a faculty member. Traditional grading only. Course may be repeated for a maximum of 6 units.

**642. Mental Health and the Older Adult: A Multi-Cultural Perspective (3)**

The course will focus on a broad-based selection of demographic, psychological and social issues concerned with the older person and their families. Topics will be described and analyzed from preventive, clinical and cross-cultural perspectives. Traditional grading only.

**643. Social Work Practice within Child Welfare Services (3)**

Prerequisite: SW 503. This course will assist the student in gaining an understanding of the broad field of social work practice commonly known as child welfare services. The content of the course focuses on needs of children for care and protection by society, and programs and services provided by the social welfare and social services delivery systems that are available and needed to insure their well being. Traditional grading only.

**660. Direct Intervention with Families and Groups: Focus on Children and Youth (3)**

Prerequisites: SW 500, SW 560 or SW 561, SW 596A or SW 596C, SW 596B or SW 596D, and concurrent enrollment in SW 680A or SW 680C. Teaching of specialized skills needed to work with families and groups, emphasizing work with children, youth and adults. Aspects of advanced clinical work using groups. Emphasis on cross-cultural perspectives. Traditional grading only.

**661. Direct Intervention with Families and Groups: Focus on the Aged (3)**

Prerequisites: SW 500, SW 560 or SW 561, SW 596A or SW 596C, SW 596B or SW 596D, and concurrent enrollment in SW 680A or SW 680C. Teaching of the specialized skills needed to work with families and groups, emphasizing work with the aged and their families. Aspects of advanced clinical work with groups. Emphasis on cross-cultural perspectives. Traditional grading only.

**662. Legal Issues in Social Work Practice (3)**

Examination of legal aspects concerning children, the family, and the aged, considering such issues as abortion, illegitimacy, right to treatment, mental health commitment procedures, rights of the elderly, children's rights, marriage, and divorce. Legal research methodology and classification of legal resources, principles of legal reasoning, understanding of federal and state court systems. Familiarity with legal assistance programs. Traditional grading only.

**663. Assessment and Treatment of Alcoholism (3)**

Social work practice with individual alcoholics, their family systems, and their community network of collaterals. Awareness of prevalence of alcoholism and significance for clinical social work practice. Dynamics and treatment of disease. Special relationship

issues, problems of cross-addictions and polydrug use, resource networks supporting substance abuse services, Fetal Alcohol Syndrome, and problems of special groups: women, minorities, youth, and elderly. Traditional grading only.

#### 664. Occupational Social Work (3)

Significance of work life factors on the biopsychosocial functioning of clients and the interface of person, family and employment. Concepts of human growth and behavior. Issues of engagement, diagnostic assessment, and intervention from the special perspective of work-site settings. Concepts related to work as a social environment and an interpersonal system. Occupational environment as a resource system and client system. Traditional grading only.

#### 665. School Social Work (3)

Social work and the public school as a process in school-community-pupil relations. Attention to the school as a social institution and its organization. Social work services in schools as a specialized field of social work practice - its conceptual framework; models of practice; social work roles; and target groups of children to be served. Examination of major socio-legal policy issues. Traditional grading only.

#### 666. Human Sexuality and Social Work (3)

Introduces social work majors to discipline of human sexual behavior. Surveys a range of sexually related issues encountered in therapeutic relationships, as part of administrative duties, and at the social policy level. Presents knowledge base and requires student examination of own attitudes regarding various aspects of human sexuality. Traditional grading only.

#### 667. Sex Roles and Gender Discrimination: Women's Issues in Social Work (3)

This course will examine historical and contemporary causes of gender discrimination against women in order to illuminate the problems faced by women at risk in American society. The special focus of the course will be women at risk for mental health problems, violence and poverty along with other critical issues affecting women, such as substance abuse and eating disorders. Traditional grading only.

#### 668. Social Work in Neighborhoods (3)

Designed as an introduction to the concept of neighborhoods and prepares students to assume social work roles and functions in neighborhood settings. Emphasizes the necessity of understanding the culture, physical and social organization, and power relationships of modalities: planning and service delivery, development, and organization. Traditional grading only.

#### 669. Comparative Approaches to Social Work Group Practice (3)

Examines in depth significant models of group work and the role of the leader and strategies of intervention proposed under these models. Also focuses on the formulation of a workable framework for assessment, intervention and evaluation in social work practice with small therapeutic groups. Traditional grading only.

#### 670. Social Work Administration: Focus on Children, Youth, and Families (3)

Prerequisites: SW 500, SW 560 or SW 561, SW 596A or SW 596C, SW 596B or SW 596D, SW 660 or SW 661, and concurrent enrollment in SW 680B or SW 680D. Basic processes of management in human services agencies with emphasis on structures serving children, youth, and families. Foundation for effective organizational participation and leadership. Relation of theories of organizational behavior and management to problems of social welfare agencies. Alternative models of the use of power in organizational settings and implications for manager's effectiveness. Framework for planning, monitoring and information management. Management tools, including computers and fiscal management. Traditional grading only.

#### 671. Social Work Administration: Focus on Aging (3)

Prerequisites: SW 500, SW 560 or SW 561, SW 596A or SW 596C, SW 596B or SW 596D, SW 660 or SW 661, and concurrent enrollment in SW 680B or SW 680D. Basic processes of management in human services agencies with emphasis on structures serving the aging. Foundation for effective organizational participation and leadership. Relation of theories of organizational behavior and management to problems of social welfare agencies. Alternative

models of the use of power in organizational settings and implications for manager's effectiveness. Framework for planning, monitoring, and information management. Management tools, including computers and fiscal management. Traditional grading only.

#### 672. Program Evaluation in Social Services (3)

Introduction to prevailing types of problem evaluation and preparation for continual evaluation checks or self evaluations as conducted within service agencies. Conceptualization of service delivery system. Program planning evaluation, program monitoring, impact evaluation, and cost-benefit and cost-effectiveness analysis. Traditional grading only.

#### 673. Supervision/Staff Development/Consultation (3)

Review of the philosophy, objectives, principles, and methods of social work supervision, staff development, and consultation. Consideration given to similarities and differences in the roles, knowledge, and skills required, emphasizing the teaching-learning-evaluating components. Issues arising from organizational settings, changing legislation, and program provisions and professional standards identified and examined. Traditional grading only.

#### 674. Clinical Diagnosis and Therapeutic Communication (3)

Utilization of in-depth diagnosis as an individualizing rather than labelling or stereotyping process. Use of case material illustrating varying levels of structuralization from disorganization of schizophrenic existence to conflict of neurotic character formation. Issues of therapeutic use of milieu, child abuse, racial and cultural differences, prostitution, unemployment, etc. Traditional grading only.

#### 676. Family Centered SW Practice: Therapy (3)

An advanced specialist overview of evolving viewpoints, perspectives, values, intervention techniques and goals of family therapy. Views the family as a unit of attention and target of intervention and will emphasize the development and enhancement of knowledge, skills, theory and values specific to family therapy and social work practice. Traditional grading only.

#### 677. Social Work Practice in Mental Health (3)

Reviewing the changing roles of social work in mental health settings, the influence of new psycho-social and psychiatric theories upon the care and treatment of the mentally ill or emotionally disturbed clients. Focus on social, economic and cultural factors as they affect social work roles in mental health management and clinical practice. Traditional grading only.

#### 678. Treatment of Couples with Marital Problems (3)

Clinical models and techniques for treatment of couples with marital problems. Integration of systemic and analytical theories. Presentation of strategies and techniques through simulations and video. Theories of change in treatment and identification of individual theoretical framework and capabilities. Wide range of systematology and dysfunction, variety of dyadic relationships and cultures. Traditional grading only.

#### 679. International Perspectives in Social Welfare (3)

Critical analysis of aging problems in developed and developing countries, including demographic, socio-economic and humanitarian issues from a social welfare perspective. Discussion of medical, financial, and social services programs for the elderly to meet these needs in various countries. Focus on the comparative study of social welfare systems, social work methods, and socio-health care programs. Examination of the diverse political-economic, socio-cultural, and socio-ecological forces shaping social welfare systems in relation to global peace, social justice and humanity. Traditional grading only.

#### 680A. Field Instruction III (3)

Prerequisites: SW 500, SW 560 or SW 561, SW 596A, SW 596B, and concurrent enrollment in SW 660 or 661. Evidence of satisfactory malpractice liability insurance coverage. Supervised social work practice in a community social agency with focus on advanced direct practice skills and administrative program development areas with emphasis on cross-cultural practice. Two hours weekly in Field Seminar and 16 hours in agency placement. Credit/No Credit grading only.

**680B. Field Instruction IV (3)**

Prerequisites: SW 500, SW 560 or SW 561, SW 596A, SW 596B, SW 680A, SW 660 or 661 and concurrent enrollment in SW 670 or SW 671. Evidence of satisfactory malpractice liability insurance coverage. Continued supervised social work practice in a community agency at an advanced level in both direct practice and administration within the student's area of concentration. Preparation for entering professional employment with emphasis on cross-cultural practice. Two hours weekly in Field Seminar and 16 hours in agency placement. Credit/No Credit grading only.

**680C. Field Instruction III (3)**

Prerequisites: SW 500, SW 560 or SW 561, SW 596A or 596C, SW 596B or 596D, and concurrent enrollment in SW 660 or 661. Evidence of satisfactory malpractice liability insurance coverage. Supervised social work practice in a community social agency with focus on advanced direct practice skills and administrative program development areas with emphasis on cross-cultural practice. Two hours weekly in Field Seminar and 36 hours in agency placement. Summer session only. Credit/No Credit grading only.

**680D. Field Instruction IV (3)**

Prerequisites: SW 500, SW 560 or SW 561, SW 596A or 596C, SW 596B or 596D, SW 680C, SW 660 or 661 and concurrent enrollment in SW 670 or 671. Evidence of satisfactory malpractice liability insurance coverage. Continued supervised social work practice in a community agency at an advanced level in both direct practice and administration within the student's areas of concentration. Preparation for entering professional employment with emphasis on cross-cultural practice. Two hours weekly in Field Seminar and 36 hours in agency placement. Summer session only. Credit/No Credit grading only.

**681. Advanced Policy and Programming with Children, Youth and Families (3)**

This course is designed to provide students with an advanced understanding of key issues and concepts associated with policies and programs affecting families and children in contemporary American society. Traditional grading only.

**682. Advanced Policies and Programming with the Aged and their Families (3)**

This course is designed to provide students with an advanced understanding of key issues and concepts associated with policies and programs affecting the aged and their families in contemporary American society. Traditional grading only.

**683. Brief Treatment (3)**

Prerequisites: SW 500, 560, 561, 596A/B. Based on content in SW 500, 560, 561, and other practice courses and covers methodologies used in three basic forms of brief and/or time limited psychotherapy. Covers the three major forms of time-limited clinical treatment. Provides a working knowledge of the methods used in the models, the ethnic sensitivity of the forms of treatment, and the empirical research that supports their use. Traditional grading only.

**690. Special Topics in Graduate Social Work (3)**

Prerequisites: Consent of Department. Topics of special interest in social work selected for intensive study. Topics will be announced in the Schedule of Classes each semester. Traditional grading only. Course may be repeated for a maximum of 6 units with different topics.

**691. Non-Violent Conflict Resolution: In Your Life, On the Job, With Your Clients, and Around the Planet (3)**

Designed to help social work students examine conflict and violence, their own and others' responses to conflict situations on the intrapersonal, interpersonal and community levels, and to learn to utilize a set of tools to deal with conflict in a productive, non-violent manner. Traditional grading only.

**693. Community Projects II (3)**

Prerequisites: SW 592. Focuses on demonstration of professional level skills and competency in executing appropriate community outreach interventions as conceptualized in Community Projects I. (Lecture/discussion/outreach.) Traditional grading only.

**698A. MSW Thesis I (3)**

Prerequisites: 30 units in the MSW program completed at a minimum GPA of 3.0 and Advancement to Candidacy. A two semester tutorial class in which the student completes an individual research project which meets University thesis requirements. Traditional grading only.

**698B. MSW Thesis I (3)**

Prerequisites: 30 units in the MSW program completed at a minimum GPA of 3.0 and Advancement to Candidacy. A two semester tutorial class in which the student completes an individual research project which meets University thesis requirements. Summer session only. Traditional grading only.

**699A. MSW Thesis II (3)**

Prerequisites: 33 units in the MSW program completed at a minimum of a 3.0 GPA, Advancement to Candidacy, and successful completion of SW 698A. The second semester of a two semester tutorial class in which the student completes an individual independent research project which meets University thesis requirements. Final comprehensive examination not required. (Independent Study) Traditional grading only.

**699B. MSW Thesis II (3) SS**

Prerequisites: 33 units in the MSW program completed at a minimum of a 3.0 GPA, Advancement to Candidacy, and successful completion of SW 698B. The second semester of a two semester tutorial class in which the student completes an individual independent research project which meets University thesis requirements. Final comprehensive examination not required. (Independent Study). Summer session only. Traditional grading only.

# TEACHER EDUCATION

## *College of Education*

Acting Department Chair

John Attinasi

Department Office

ED1-13

(562) 985-4506

24-Hour Information Line (Recorded Msg.)

(562) 985-1632

Multiple Subject Admissions

Susan McNamara

ED1-13

(562) 985-4507

Office of Field Programs/Student Teaching

Steve Turley, Director

Jan Condou, Administrative Assistant

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(562) 985-4508

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Professors

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Carole A. Cox

V. Yvonne Gold

Rita H. Jones (Emeritus, 1995)

Albert H. Koppenhaver (Emeritus, 1994)

Marina C. Krause

Mary Jo Lass (Emeritus, 1994)

Helen P. Newcastle

Consuelo Nieto

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Jean M. Casey

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Ella Glenn-Burnett

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Olga Rubio

Mary Ellen Vogt

Assistant Professors

Steve Turley

Sylvia Maxson

Linda C. Whitney

Office Manager

Gwendolyn Carlson

The Department of Teacher Education offers professional education course work that leads to the (a) Multiple Subject Credential (elementary), and the (b) Single Subject Credential (secondary; please consult the "Single Subject Teacher Education" section of the Catalog for information on admission criteria and program requirements). The department also offers a Master of Arts in Education with options in either elementary or secondary education. A specialist credential in Early Childhood Education is also available. All CED courses, including graduate level courses (500/600) are assumed to be traditional grading only unless stated otherwise.

### Multiple Subject Credential – CLAD/BCLAD (code 200)

A teacher with a Multiple Subject Credential is authorized to teach grades pre-K through 12 in self-contained classrooms. The Multiple Subject Credential Program (MSCP) at CSULB prepares students to be credentialed in the state of California for elementary and middle school instruction. The program emphasizes daytime field experience in elementary classrooms, and includes methodology courses and student teaching. Courses for the MSCP can be completed in one summer and two semesters, or three semesters, depending upon prerequisites (based on full-time attendance unit loads – see the current copy of the Schedule of Classes for full-time unit load requirements). Part-time attendance is allowed, but program requirements must be met within seven years from the date one starts the program.

Two Multiple Subject Credential Program (MSCP) options are offered: the Multiple Subject Cross-Cultural Language and Academic Development Emphasis (CLAD) Credential; and the Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Credential.

Effective Spring semester 1998, students will be admitted only to the CLAD Multiple Subject Credential Program. Effective Fall semester 1995, bilingual credential candidates will be admitted only to the BCLAD Credential Program.

### Admission

Before beginning the MSCP, students should be admitted to the University. Apply for admission if you are (a) a graduating senior at CSULB, (b) transferring from another institution, or (c) returning to the University after an absence of one or more semesters. Students may begin taking the prerequisite courses needed for admission to the MSCP as a junior with a minimum of sixty units. Admission to the University, however, does not constitute admission or acceptance to the MSCP. A separate application must be submitted to the MSCP Admissions Office in order to be considered for acceptance into the MSCP.

The MSCP is separated into three successive phases. Students may not advance to the next phase before completing the previous one.

During Phase One, students complete program prerequisites and submit applications to the MSCP. Students must be accepted into the program before advancing to Phase Two. In Phase Two, students complete methodology and culture courses. In Phase Three, students complete the culminating field experience (Student Teaching).

## Phase One – Admission and Prerequisites

### Requirements

1. Attend a MSCP Group Advisement Meeting either before or while enrolled in EDEL 380. The MSCP application and other necessary materials will be distributed only at these meetings. Students interested in one of the two Multiple Subject Credential options are advised to call for information brochures as early as possible before beginning these programs. The information brochures contain a schedule of Group Advisement Meetings as well as the off-campus location where students can purchase the MSCP Handbook (students must bring the handbook with them to the meeting). The MSCP Handbook is also available on campus at the Campus Copy Center. Please call the Campus Copy Center for their operating hours and the current price for the handbook at (562) 985-5050. Individual advising is not available until after students have attended a Group Advisement Meeting. By calling the Multiple Subject Credential Program (MSCP) "Hotline," students may leave their name and address and have information brochures mailed to them. The MSCP Hotline is available 24 hours a day by calling (562) 985-1632;
2. Successfully complete EDEL 380 or its approved equivalent with a grade of "B" or better. (Check the MSCP Handbook for approved equivalents. If the non-CSULB course is not on the pre-approved list, a "Prerequisite Course Equivalency Request" Form and a "Field Waiver Petition" must be submitted in advance of program application.);
3. Successfully complete EDEL 360 or MATH 110 or an approved equivalent with a grade of "C" or better. (Check the MSCP Handbook for approved equivalents. If the non-CSULB course is not on the pre-approved list, a "Prerequisite Course Equivalency Request" form must be submitted in advance of program application.);
4. Successfully complete (with a grade of "C" or better) one of the following: CD 329, ED P 454, or LING 329;
5. Successfully complete (with a grade of "C" or better) ED P 485 or LING 485;
6. Successfully complete (with a grade of "C" or better) one of the following courses in child development and learning: ED P 301, HDEV 307I, PSY 361;
7. Submit a negative tuberculosis skin test or chest X-ray taken within the last three years;
8. Submit one photocopy of all university and/or college transcripts;
9. Submit proof of having taken the California Basic Educational Skills Test (CBEST);
10. Submit three letters of recommendation;
11. Submit a typed personal statement of describing why you have chosen teaching as a career, what you hope to accomplish as a teacher, and how you view the role of the teacher;
12. Attend an oral interview with a department faculty advisor;
13. Submit the MSCP application along with documents verifying that the above prerequisites will be completed prior to the semester methods classes will be taken, as follows:  
Summer/Fall: January 1-March 1, July 1-August 1 (see note)  
Winter/Spring: August 1 - October 1

### THE ABOVE DEADLINES ARE STRICTLY ENFORCED

NOTE: Students enrolled in prerequisite courses (2-6, above) in summer session will be allowed to submit MSCP application packets July 1-August 1. Students who complete prerequisites by the end of summer may be admitted and begin taking methods immediately in Fall if all other admission requirements are met. Students must receive a grade of "B" or higher in EDEL 380, and a grade of "C" or higher in EDEL 360 or MATH 110. EDEL 360 or MATH 110 may be taken during the same summer session as EDEL 380. A "Prerequisite Course Equivalency Request" must be submitted and approved before program application. Special oral interview times are set up for students in this category. Please consult the MSCP Handbook for further details about this special application period.

## Phase Two – Culture, Methods, and Subject Matter Competency

### Culture Studies

Successfully complete (with a "C" or better) a course which concerns world societies and cultures (general education requirement D-2), such as AMST 319, AIS 319, ASAM 319, B/ST 319, C/LA 319, CHLS 319, W/ST 319 (or equivalent) and one of the following: ANTH 421, EDEL/EDSE 530, EDEL 430, EDP 432 (EDEL/EDSE 530 can only be taken by holders of bachelor's degrees or as a senior by petition to instructor and Department Chair).

### Methods Courses

Methods courses (EDEL 442, 452, 452B, 462, 472, and 475) are designed to prepare students with the objectives, principles, materials, and teaching procedures needed in basic content areas. Although all of the methods courses require daytime field work, at least one course must be taken off campus and at least one on campus. These courses must be completed with a minimum grade of "C" and a cumulative GPA of 3.0 or above. The CLAD/BCLAD Emphasis requires additional study in language and culture. CLAD/BCLAD students may take one methods course concurrently with student teaching, but it is not recommended.

### Option One – Cross-Cultural Language and Academic Development Emphasis (CLAD)

Core Program (15 units): EDEL 442, 452, 462, 472, 475; six semester units of college-level foreign language (or equivalent); Student Teaching (16 units).

### Option Two – Bilingual Cross-Cultural Language and Academic Development Emphasis (BCLAD)

Students in this option must be admitted to the Bilingual Cross-Cultural Language and Academic Development Emphasis Program. Ability to converse fluently in Spanish and English is required. Undergraduates should complete the Liberal Studies baccalaureate program with a Bilingual concentration. The Core program consists of 15 units: EDEL 442, 452B, 462, 472, and 475, along with Student Teaching (16 units); EDEL 482B (482C for students on an emergency bilingual permit). The BCLAD program offers a limited number of special bilingual sections of EDEL methods courses each semester: 452B and sections marked FA in the footnote. These sections are scheduled in the evening and contain demonstrations and assignments in Spanish and English. These sec-

tions provide enrichment opportunities for bilingual candidates to practice primary language pedagogy. Both CLAD and BCLAD students may take any section of EDEL 442, 462, 472 and 475. The culture and language components for the BCLAD are fulfilled in the Liberal Studies Bilingual concentration. Students completing a non-Liberal Studies bachelor's degree or those with a Liberal Studies degree obtained from another university must complete the equivalent of the culture/history (CHLS 340, 350) and language (SPAN 312, 313, 322) requirements through course work and language and culture examinations either prior to or during the program, but prior to the culminating field experience.

### Subject Matter Competency

All students admitted to the MSCP must meet Subject Matter Competency before beginning Phase 3. At CSULB, Subject Matter Competency can be accomplished in one of two ways: (a) pass the Multiple Subject Assessment for Teachers (MSAT) exam, or (b) submit verification of subject matter competency from an approved subject matter preparation program. For more information about the Subject Matter Competency requirements, please contact the Credential Processing Center at (562) 985-4109.

### Phase Three – Culminating Field Experience (CFE)

The culminating field experience (EDEL 482, 482B, or 482C - Student Teaching) is the final phase of the MSCP. A separate application for this phase is required, and must be submitted in person to the Multiple Subject Field Programs Office, located in ED1-06, one semester prior to beginning the CFE. It is possible that not all qualified applicants will be able to student teach in the semester of their choice. Applications are distributed at the Student Teaching Application meetings. Student Teaching Application meetings are held during the first two weeks of each semester. Dates are announced in Methods courses and are posted throughout the ED-1 and ED-2 buildings well in advance of the actual meeting dates. Deadlines for submitting applications to student teach are:

- Summer/Fall: March 1
- Spring: October 1

### Student Teaching Admission Requirements

1. Admission to the MSCP;
2. Passage of the California Basic Educational Skills Test (CBEST);
3. Meet the culture studies requirement for CLAD and BCLAD by successfully completing (with a grade of "C" or better) a course which concerns world societies and cultures in an international context (general education requirement D-2), such as C/LA 319 (or equivalent), and one of the following: ANTH 421, or EDEL/EDSE 530 (for bachelor's degree holders only or by petition) (CLAD/BCLAD only);
4. Six units of college-level foreign language, or equivalent experience (CLAD);
5. Passage of the Multiple Subject Assessment for Teachers (MSAT) is required of all non-Liberal Studies majors. This exam may be waived by submitting verification of successful completion of an approved subject matter

preparation program and all subject matter competency requirements must be completed prior to student teaching;

6. Have applied for a Grad Check for the Liberal Studies Certificate (non-Liberal Studies majors only). Must meet with the Liberal Studies Department prior to this application;
7. A tuberculosis skin test or chest x-ray valid through completion of student teaching;
8. Have completed Phases 1 and 2 of the MSCP. Students enrolled in the Bilingual Spanish/English program are exempt from the off-campus methods class requirement, but must still pass all five methods courses with no grade lower than a "C", and an overall GPA of 3.0 or higher;
9. Have received a grade of "C" or higher in EDEL 420 if student wishes to student teach at the kindergarten level;
10. Have submitted a certificate of clearance or proof of filing with Sacramento;
11. Have submitted a student teaching application, and an internship application if applying for an internship.

### CFE (Student Teaching) Options

#### Student Teaching

1. Student Teaching shall be a full-day experience, with one assignment in a primary classroom (grades K-3), and one assignment in an intermediate classroom (grades 4-6), with at least one grade level separation, e.g. 2,4; 3,5. One student teaching assignment must be in a public school. It is possible to complete student teaching during one regular semester or two consecutive summers, one entire summer (limited availability), or one summer and part of one regular semester;
2. Student Teaching 1 BCLAD candidates may complete student teaching while employed. See Bilingual Director for details.
3. In cooperation with approved school districts (ABC, Bellflower, Long Beach, and Paramount), an Internship Program is available for selected individuals to teach full time with full pay.

### Preliminary Multiple Subject Credential

Students completing either of the two options of the MSCP will be recommended for the Preliminary Multiple Subject Credential, which is issued for a five-year period. To renew this credential, the holder must meet requirements for the Professional Clear Credential.

### Professional Clear Multiple Subject Credential

Candidates must meet an approved fifth-year program, and be recommended by an institution which offers a multiple subject credential. A minimum of thirty post-baccalaureate units must be taken. The only exception to the post-baccalaureate requirement is for second semester undergraduate seniors who successfully petition in advance of obtaining the baccalaureate degree to have a maximum of twelve units taken in the senior year count toward post-baccalaureate studies. For further information about this petitioning process, please contact the Department of Teacher Education Multiple Subject Admissions Office at (562) 985-4507.

The following three courses must be taken in order to receive a Professional Clear Multiple Subject Credential: (a) H/SC 411A, (b) ED P 350, and (c) EDEL 491, ENGL 337, or MATH 278. These courses must be taken within five years after receiving the Preliminary Multiple Subject Credential, however, they can be taken as an undergraduate student. If they are taken at the undergraduate level, they will not count toward the thirty unit post-baccalaureate requirement for the Professional Clear Multiple Subject Credential. For further information about the Professional Clear Multiple Subject Credential, please contact the Credential Processing Center at (562) 985-4109.

### Early Childhood Specialist Credential (code 430)

This advanced credential program is integrated with various field experiences. Course requirements for the master's degree, elementary education option with a specialization in early childhood education closely coincide with those of this credential program. All courses in this program are applicable toward Child Development Permits.

#### Admission Requirements

1. Admission to the University;
2. A minimum GPA of 2.85 on the last 60 units of course work;
3. Pass the Writing Proficiency Examination (WPE) or CBEST;
4. Possess a valid basic teaching credential or be in the process of completing the Multiple Subject Credential Program;
5. Provide three letters of recommendation;
6. Verification of successful experiences with young children;
7. Submit a personal statement of teaching philosophy;
8. Attend a personal interview with the Director of the Graduate Program in ECE;
9. Complete a self-assessment of competency in Early Childhood Education;
10. File an approved individual program plan developed with an advisor.

#### Prerequisite

ED P 301.

#### Requirements

1. All of the following course work (37 units): EDEL 420, 421, 422, or 452 or 462, EDEL/EDSE 500A or 501, EDEL 522, 523, EDEL/EDSE 530, EDEL 621, 682 (4 units), and 526 or ED P 604;
2. Verification of two years of successful teaching experience, including a minimum of 90 hours in each of the following areas, is required of all candidates prior to completing the Specialist Credential program - a. preschool; b. kindergarten or the primary grades (1-3); c. multicultural settings.

### Reading Specialist Credential (code 410)

Program is undergoing revision. See department for information.

### Graduate Certificate in the Teaching of Reading and Language Arts

Program is undergoing revision. See department for information.

## Master of Arts in Education

### Option in Elementary Education (code 5-3110)

#### Specialization Prerequisites

##### Curriculum and Instruction:

A valid multiple subject or elementary teaching credential.

##### Early Childhood:

EDEL 420, 482 (or one year of documented and approved teaching experience), and one of the following: ED P 301, HDEV 307I, PSY 361.

##### Reading:

Program is undergoing revision. See department for information.

#### Clear Admission

1. Completion of program prerequisites.
2. A GPA of 2.85 or higher in the last 60 semester units of course work taken. Lower division and/or extension courses taken after obtaining the bachelor's degree are excluded from this calculation.
3. Evidence of achieving a score at the 25th percentile or above on the verbal and quantitative sections of the Graduate Record Examination (GRE) General Test. For applicants whose scores are below the 25th percentile on any section, specialization program faculty will determine appropriate measures for the candidate to be considered for clear admission. The specialization program faculty may approve upper division courses that are equivalent measures of scholarship to the verbal or quantitative sections. If courses are designated as the measure, students must pass, as a minimum, two approved courses with a grade of "B" or above to meet equivalency for a given area (verbal or quantitative).
4. Satisfactory completion of the Writing Proficiency Examination (WPE).
5. Personal-Professional Attributes

Each candidate will be evaluated in each of the following areas: 1. A personal interview with the director of the program, or designated program faculty (program interview policy form contains areas to be covered), and 2. Each applicant shall sit for an essay which will be scheduled with the director of the program. The essay shall address the following: how the program will help them attain their professional goals; how it will help them make a contribution to the profession; any other information relevant to their personal/professional plans.

6. To qualify for university admission in conditionally classified or classified graduate standing, a student must be accepted into a graduate degree program on a conditional basis or as clear admission status.
7. Prior to admission to the Elementary Master's Program, students may take up to, but no more than, 9 units of course work which may apply to the Elementary Master's Program. There is no minimum number of units required for admission to the program.
8. In accordance with University policy on "Graduate Transfer Units by Extension," up to six units of approved extension/continuing education or transfer credit is acceptable on the Master's program. This limit is raised to nine units of extension/continuing education credit if taken at CSULB.



9. University Master's degree policy requires students to take the Writing Proficiency Examination during the first semester of residence. Students who have met this requirement during the baccalaureate degree program at CSULB or another CSU campus are exempt.
10. Students should contact the Director of the Curriculum and Instruction or Early Childhood Education Master's Program no later than after completing 6 units to plan an official program.
11. Please refer to the "College of Education" section of the Catalog for information on conditional admission.

#### Advancement to Candidacy Requirements

1. Classified Status;
2. Completion of all the admission requirements for the Elementary Master's Program;
3. A minimum 3.0 overall grade-point average and a 3.0 grade-point average in all units undertaken for the program (at least 6 units);
4. An approved plan of study completed with the Curriculum and Instruction or Early Childhood Education graduate faculty on file in the Graduate Office;
5. A student must be enrolled in regular session or in summer session in the semester in which advancement to candidacy takes place. Please refer to "Graduate Degrees and Other Post Baccalaureate Studies" section of the catalog for University advancement-to-candidacy requirements;

#### Requirements

A minimum of 30 units is required with at least 21 in the 500/600-level series at this University. In consultation with the Director of Curriculum and Instruction or Early Childhood Education or designated faculty, students will select a comprehensive examination track or thesis track. The core requirements are as follows:

1. One of the following (3-6 units): ED P 400, or ED P 419 and ED P 420.
2. For comprehensive exam track (3 units): ED P 500.  
For thesis track (3 units): ED P 696.
3. The following (3 units): EDEL 530.
4. The following for comprehensive exam track (3 units): EDEL 695 [All required course work must be completed prior to taking EDEL 695].  
The following for thesis track (6 units): EDEL 698
5. The following for comprehensive exam track: written comprehensive examination. Successful completion of EDEL 695 with a grade of B or better is prerequisite to taking the comprehensive examination.

#### Specialization Requirements

##### Curriculum and Instruction:

1. One of the following (3 units): EDEL 500A or 501;
2. All of the following (9 units): EDEL 540, 560, and 570;
3. The following (3 units): EDEL 625;
4. Electives to total 30 units.

##### Early Childhood Education:

1. All of the following (12 units): EDEL 421, 422, 522, 621;
2. Two of the following (6 units): EDEL 523, 526, 622; ED P 604.

#### Reading:

Program is undergoing revision. See department for information.

### Option in Secondary Education (code 5-3140)

#### Prerequisites

A valid secondary education teaching credential.

(Please consult the "Single Subject Teacher Education" section of the catalog for information on secondary education teaching).

#### Clear Admission

1. Completion of program prerequisites.
2. A GPA of 2.85 or higher in the last 60 semester units of course work taken. Lower division and/or extension courses taken after obtaining the bachelor's degree are excluded from this calculation.
3. Evidence of achieving a score at the 25th percentile or above on the verbal and quantitative sections of the Graduate Record Examination (GRE) General Test. For applicants whose scores are below the 25th percentile on any section, specialization program faculty will determine appropriate measures for the candidate to be considered for clear admission. The specialization program faculty may approve upper division courses that are equivalent measures of scholarship to the verbal or quantitative sections. If courses are designated as the measure, students must pass, as a minimum, two approved courses with a grade of "B" or above to meet equivalency for a given area (verbal or quantitative).
4. Satisfactory completion of the Writing Proficiency Examination (WPE).
5. Personal-Professional Attributes

Each candidate will be evaluated in each of the following areas: 1. A personal interview with the director of the program, or designated program faculty (program interview policy form contains areas to be covered), and 2. Each applicant shall sit for an essay which will be scheduled with the director of the program. The essay shall address the following: how the program will help them attain their professional goals; how it will help them make a contribution to the profession; any other information relevant to their personal/professional plans.

6. To qualify for university admission in conditionally classified or classified graduate standing, a student must be accepted into a graduate degree program on a conditional basis or as clear admission status.
7. Prior to admission to the Secondary Master's Program, students may take up to, but no more than, 12 units of course work which may apply to the Curriculum and Instruction Masters. There is no minimum number of units required for admission to the program.
8. In accordance with University policy on "Graduate Transfer Units by Extension," up to six units of approved extension/continuing education or transfer credit is acceptable on the Master's program. This limit is raised to nine units of extension/continuing education credit if taken at CSULB.
9. University Master's degree policy requires students must take the Writing Proficiency Examination during the first semester of residence. Students who have met this requirement during the baccalaureate degree program at CSULB or another CSU campus are exempt.

10. Students should contact the Director of the Curriculum and Instruction Master's Program or designee to plan an official program upon admission to the program.
11. Please refer to the "College of Education" section of the Catalog for information on conditional admission.

#### Advancement to Candidacy Requirements

1. Classified Status;
2. Completion of all the admission requirements for the Curriculum and Instruction Master's Program;
3. A minimum 3.0 overall grade-point average and a 3.0 grade-point average in all units undertaken for the program (at least 6 units);
4. An approved plan of study completed with the Curriculum and Instruction graduate faculty on file in the Graduate Office;
5. Satisfactory completion of the CSULB Writing Proficiency Examination;
6. A student must be enrolled in regular session or in summer session in the semester in which advancement to candidacy takes place. Please refer to "Graduate Degrees and Other Post Baccalaureate Studies" section of the catalog for University advancement to candidacy requirements;

#### Requirements

A minimum of 30 units is required with at least 21 in the 500/600-level series at this University. In consultation with the Director of Curriculum and Instruction or designated faculty, students will select a comprehensive exam track or thesis track. The core requirements are as follows:

1. One of the following (3-6 units):  
ED P 400, or ED P 419 and ED P 420.
2. For comprehensive exam track (3 units): ED P 500.  
For thesis track (3 units): ED P 696.
3. The following (3 units): EDSE 530.
4. The following for comprehensive exam track (3 units): EDSE 695. [All required course work must be completed prior to taking EDSE 695].  
The following for thesis track (6 units): EDSE 698
5. The following for comprehensive exam track: written comprehensive examination. Successful completion of EDSE 695 with a grade of "B" or better is prerequisite to taking the comprehensive examination.

#### Specialization Requirements

##### Curriculum and Instruction:

1. One of the following (3 units): EDSE 500A or 501;
2. The following (6 units): EDSE/EDEL 540, 625;
3. One of the following alternatives:

##### Alternative I

- A. Two of the following (6 units): EDSE 435, 436, or 457 (these units must be taken as either a post-baccalaureate student or by advance petition in the second semester of the senior year);
- B. Electives chosen in consultation with an advisor to total 30 units.

##### Alternative II

Nine units of advanced course work in the Single Subject area of concentration. The area of selection is limited to

the areas identified as appropriate by the California Commission on Teacher Credentialing.

#### Reading:

Program is undergoing revision. See department for information.

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### Elementary Education Courses (EDEL)

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#### Upper Division

**360. Mathematical Concepts of Numbers and Geometry (3)**  
Not open to students with credit in EDEL 361 or EDEL 362. Unifying concepts of mathematics for elementary teachers. Includes the development of concepts of number, number operations, number properties, problem solving, geometric configurations, constructions, relationships and applications with metric measures. Traditional grading only.

**380. Introduction to Elementary Education (1-3)**  
Prerequisite: Junior Standing. Explore concepts and issues related to United States (California) elementary education including historical, philosophical, and legal implications of teaching in a culturally diverse society; the roles and functions of educators; implications of child development and learning; and the principle of educational equity. A concurrent 40-hr field work component in a self-contained elementary classroom is required. Must pass course with a grade of "B" or higher for admission to the Multiple Subject Credential Program. Traditional grading only.

**\*420. Teaching and Learning in the Kindergarten and Primary Grades (3)**

Teaching and learning in the kindergarten and primary grades with an emphasis on experiential approaches, multi-task classroom management, and an integrated curriculum. Discussion of the nature of the learning process, motivation, the value of error, and the use of portfolios for documenting student growth. Practical suggestions for implementing current research findings in curricular areas along with meeting the diverse needs of children in the classroom. Analysis of kindergarten and primary grade programs. Ten (10) hours of field work required.

**\*421. History and Philosophy of Early Childhood Education (3)**  
Historical, philosophical and psychological foundations of early childhood education and their relationships to current trends. Overview of the field of early childhood education. Analysis of various programs. Ten (10) hours of fieldwork required.

**\*422. Curriculum for Young Children (3)**  
Theory and practice related to the education of preschool and kindergarten children. Emphasis on theoretical constructs of developmentally appropriate curriculum, child-initiated learning, emergent curriculum, anti-bias approaches, and the value of play in the learning process. Discussion of methods of child study, ongoing authentic assessment, selection of materials, and reflective practice. Ten hours of field work required.

**\*430. Social and Cultural Diversity in Educational Settings (3)**  
Experiential opportunity to examine personal attitudes toward distinct groups of persons, to develop multicultural competencies, and examine racism. Study of cultural, historical, social, and psychological factors that promote equal human worth. Same course as ED P 432.

**\*442. Teaching Language Arts, K-8 (CLAD) (1-3)**  
Prerequisite: Admission to the Multiple Subject Credential Program. Content, methods, and assessment for teaching language arts to all students, including English language learners, speakers of non-mainstream English, and students with special needs in culturally diverse, literature-based classrooms: first and second language acquisition and English language development, relationships among reading, writing, and oral language, spelling instruction, and structure of the English Language. Minimum ten hours of field work in elementary classrooms with at least 25% of students classified as LEP. Traditional grading only.

**444. Content Curriculum in Linguistically and Culturally Diverse Elementary Schools (3)**

Prerequisite: Junior standing. Course presents an overview of elementary school content curricula, including Language Arts, Mathematics, Social Science, Science, Physical Education, and Fine Arts. California curriculum guidelines and Frameworks are emphasized. Required for students enrolled in the Multiple Subjects Credential Program with a Middle Level Emphasis. Traditional grading only.

**\*452. Teaching Reading, K-8 (CLAD) (1-3)**

Prerequisite: Admission to the Multiple Subject Credential Program or Education Specialist Program. Content, methods, and assessment for teaching reading to all students, including English language learners, speakers of non-mainstream English, and students with special needs, in culturally diverse, literature-based classrooms: phonemic awareness, phonics, vocabulary development, comprehension, diagnosis, and the role of independent reading for proficient and delayed readers. Minimum ten hours of fieldwork in elementary classrooms with at least 25% of students classified as LEP. Traditional grading only.

**\*452B. Teaching Reading in Spanish and English, K-8 (BCLAD) (1-3)**

Prerequisite: Admission to the Multiple Subject Credential BCLAD (bilingual) Program. Theory, research, and instructional methodology for teaching reading in two languages and transfer of literacy skills from first to second language. Traditions in teaching reading in Spanish and English as primary languages and English as a Second Language. Relationships among: emergent literacy, phonics- and syllabically-based approaches, primary language literacy development, literature-based programs, reading across the curriculum, and other paradigms of literacy. Examination of teacher beliefs, assumptions, theories, instructional practices, assessment and evaluation of literacy development among language minority children; materials selection and microcomputers in reading instruction. Minimum of ten hours field experience required in local classrooms where a non-English primary language is used for instruction. Traditional grading only.

**455. Teaching and Learning in the Culturally and Linguistically Diverse Middle School (3)**

Prerequisite: Admission to the MSCP Middle Level Emphasis Program. Course focuses on teaching in linguistically and culturally diverse middle schools (grades 6-8). Topics include history, philosophy, foundations of middle school education, middle school reform; the young adolescent, middle school curriculum, learning theories in practice, assessment, interdisciplinary teaching, team dynamics, classroom management and organization, peer coaching, theories and models of second language acquisition including SDAIE, and technology. Traditional grading only.

**456. Teaching Core Subjects in Culturally and Linguistically Diverse Middle Schools (6)**

Prerequisite: Admission to MSCP Middle Level Emphasis Program. Focuses on content and methodology of teaching Language Arts, mathematics, social science, and science at the middle level. Includes collaborative teaming with a credentialed teacher in a core or interdisciplinary middle school classroom. Curriculum development, content knowledge, SDAIE strategies, and appropriate middle school pedagogy are emphasized. Traditional grading only.

**458. Newspaper in Education (1-3)**

Use of the daily newspaper as an instructional tool in the classroom. Newspaper articles, features and editorials as a means of providing current content and bases for improvement of reading skills, interests, critical thinking and problem-solving. Understanding mass media.

**459. The Middle School Teacher as Advisor (3)**

Prerequisite: Admission to MSCP Middle Level Emphasis Program. Focus is on the advisor/advisory role of teachers in the middle school, the development of service learning programs, and the function of collaboration among teachers, agencies, professionals, and other stakeholders. Required during the semester of middle level student teaching. Course may be taken by credentialed, in-service middle school teachers. Traditional grading only.

**\*462. Teaching Mathematics in Culturally and Linguistically Diverse Classrooms (1-3)**

Prerequisite: Admission to the Multiple Subject Credential Program. Learning theories, research, and instructional practices of teaching mathematics to culturally and linguistically diverse students in multiple subject classrooms. Emphasis on specially designed academic instruction in English for mathematics, content-based ESL through mathematics, characteristics of effective mathematics programs, multicultural mathematics materials, and assessment alternatives. Ten hours of field work in local school classrooms where at least 25% of the students are classified as LEP. Traditional grading only.

**\*472. Teaching Social Studies in Culturally and Linguistically Diverse Classrooms (1-3)**

Prerequisite: Admission to the Multiple Subject Credential Program. Theory, research, and practice for teaching social studies to culturally and linguistically diverse elementary school students. Emphasis on the integrated curriculum, inquiry, learning, social participation, values, and access to the core curriculum for all students. Ten hours of field work in local school classrooms with at least 25% of the students classified as LEP. Traditional grading only.

**\*475. Teaching Science in Culturally and Linguistically Diverse Classrooms (2-3)**

Prerequisite: BIOL/NSCI 301 or SCED 401. Objectives, principles, materials, and methods for teaching elementary school science. Development of strategies and materials for teaching science concepts selected from the life, physical, and earth sciences. Inquiry and hands-on approaches stressed. Ten hours of field work in local school classrooms with at least 25% of the students classified as LEP. (Lecture 2 hours, laboratory 2 hours.) Traditional grading only.

**482. Student Teaching in Culturally and Linguistically Diverse Classrooms (8,8)**

Prerequisite: Admission to Multiple Subject Credential CLAD Student Teaching. All day teaching assignment for one semester in a public school in grades K-6 with assignments at the primary and intermediate level. Emphasis on teaching experiences with children of limited English proficiency. Weekly seminar. Credit/No Credit grading only, with an equivalent grade of "A" or "B" required for credit. Course is repeatable for a maximum of 16 units in the same semester.

**482B. Student Teaching in Bilingual Classrooms (8,8)**

Prerequisite: Admission to Multiple Subject Credential BCLAD Student Teaching. All day teaching assignment for one semester in a public school in grades K-6 with assignments at the primary and intermediate level, or one semester of teaching in a designated bilingual classroom (classroom must be within the supervision radius of CSULB). Emphasis on teaching experiences with children of limited English proficiency and on primary language instruction. Weekly seminar. Credit/No Credit grading only, with an equivalent grade of "A" or "B" required for credit. Course is repeatable for a maximum of 16 units in the same semester.

**482C. Student Teaching in Bilingual Classrooms (8,8)**

Prerequisite: Admission to Multiple Subject Credential BCLAD Student Teaching. All day teaching assignment for one semester in a public school in grades K-6 in a designated bilingual classroom under an emergency credential (classroom must be within the supervision radius of CSULB), with assignments at the primary and intermediate levels. Emphasis on teaching experiences with children of limited-English proficiency and on primary language instruction. Weekly seminar. Credit/No Credit grading only, with an equivalent grade of "A" or "B" required for credit. Course is repeatable for a maximum of 16 units in the same semester.

**\*490. Special Topics in Elementary Education (1-3)**

Topics of current interest in elementary education selected for intensive study. May be repeated under different topics but only six units may be applied toward advanced degrees. Topics will be announced in the Schedule of Classes.

**A. Manipulatives for the Mathematics Classroom (3)**

**\*491. Special Topics in Teacher Education (3)**

Prerequisite: Consent of instructor. Topics of current interest in teacher education selected for intensive study. A student may enroll for three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Topics will be announced in the Schedule of Classes. Same course as EDSE 491. (Lecture 2 hours, laboratory 2 hours.)

**\*497. Independent Study (1-3)**

Prerequisites: Consent of instructor and department chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units with no more than three units applicable to credential or major requirement.

**Graduate Division**

**500A. Reflective Processes For Beginning Teachers (3)**

Prerequisite: Currently teaching and hold credential or consent of instructor. To enhance effectiveness and success in beginning years of teaching (less than four years). Emphasis on acquisition and application of reflective processes. Acquire skills to identify and resolve personal and professional problems; delve into the current literature and research; engage in group processes; create, identify and evaluate alternative solutions and apply these to your own problems and situations. Same course as EDSE 500A.

**501. Enhancing Teacher Effectiveness: Strategies for Mentoring and Leadership (3)**

Prerequisite: A minimum of three (3) years teaching experience. To enable experienced teachers to acquire skills and understandings to improve their own instructional and professional effectiveness, become mentor teachers, and develop strategies for teacher leadership and supervision. Enhance ability to analyze and improve instruction and guide other teachers in using these skills. Conduct applied research on these topics. (Same course as EDSE 501).

**522. Parent Education and Involvement in Educational Environments (3)**

Analysis of trends, issues, programs and practices pertaining to parent education and involvement in educational settings. Emphasis on early childhood education in multicultural settings. Discussion of effective two-way communication between school and home, working with volunteers, involving parents as decision makers in school policies, and coordinating community support services for children and families. Analysis of federal and state programs which mandate parent involvement, parent education programs, and working with culturally diverse families. Ten (10) hours of field work required.

**523. Leadership, Advocacy and Supervision of Early Childhood Programs (3)**

Discussion of types of ECE programs, program development and implementation, different management approaches and leadership styles. Analysis of position statements and state documents pertaining to ECE programs. Discussion of promoting professionalism, the change process, and advocacy for young children and their families. Ten hours of field work required.

**526. Advanced Study of Infant and Toddler Programs (3)**

Prerequisites: ED P 301, EDEL 422 or consent of instructor. Curriculum and teaching of infant and toddler programs. Analysis and application of current research on infant and toddler development to group learning settings. Ten (10) hours of fieldwork required.

**530. Intercultural Education: US and Global Dimensions (3)**

Study to enhance teacher intercultural competence through a critical analysis of issues of cultural diversity and global interdependence. Students will investigate the current literature and research and reflectively apply findings to the resolution of interaction and equality problems in education and to the infusion of multicultural and international concepts, skills and attitudes into the K-12 curriculum. Same course as EDSE 530.

**540. Advanced Studies in Teaching Language Arts/Reading in Culturally and Linguistically Diverse Classrooms (3)**

Prerequisite: A valid teaching credential or consent of instructor. Advanced study of research, theory, and practice of teaching listening, speaking, reading and writing to culturally and linguistically diverse students. Includes evaluation of literature-based,

meaning-centered curriculum. Emphasizes integrating language arts and reading across the curriculum. Focuses on first and second language acquisition, language structure and analysis between English and other languages. Includes student action research. Same course as EDSE 540.

**551. Assessment and Instruction in Reading and Writing (3)**

Prerequisites: EDEL 452, EDEL 452B or EDSE 457; and teaching experience with preliminary or clear credential. A comprehensive study of reading and writing assessment and instruction. Examination and evaluation of procedures, strategies and materials effective in designing appropriate reading and writing instruction with an emphasis on early detection and correction of reading difficulties. Fieldwork required.

**557. Seminar: Current Issues, Trends and Applied Theory in Reading/Language Arts Pedagogy (3)**

Prerequisites: EDEL 452 or EDSE 457. Credentialed teaching experience or consent of the instructor. Current trends in the teaching of reading in K-12. Emphasis on applied theory to support important trends such as Early Intervention and Literacy Programs, Issues of Language and Cultural Diversity, Adolescent Reading, Adult Literacy, Family Literacy issues.

**559. Practicum in Teaching Reading and Language Arts (3)**

Prerequisites: EDEL 551 and EDEL 557 and teaching experience with preliminary or clear credential; EDEL 540 may be taken concurrently. Practicum, including seminar, classroom and clinical experience in assessment and instruction in reading and language arts for students considered at-risk.

**560. Problems of Teaching Elementary Mathematics (3)**

Prerequisites: teaching experience. Advanced study and research in elementary school mathematics. Emphasis on content, methods and materials. Includes individual research.

**570. Advanced Studies in Teaching Social Studies (3)**

Prerequisites: ED P 400, 500, or 696. Intensive study of selected topics in the teaching of social studies in the elementary school from the perspective of the research and methodologies of the social sciences.

**572A-B. Multiple Subject Internship (1-8)**

Prerequisite: Admission to the Multiple Subject Internship Program. Participants teach on salary in an approved school district while enrolled in eight units of EDEL 572 and other required course work. Credit/No Credit grading only. (Supervision)

**572J-K. Multiple Subject Internship (1-8)**

Prerequisite: Admission to the Multiple Subject Internship Program. Participants teach on salary in an approved school district while enrolled in eight units of EDEL 572 and other required course work. Credit/No Credit grading only. (Supervision)

**590. Special Problems in Elementary Education (1-3)**

Prerequisite: Consent of instructor. Advanced study of special topics and problems in elementary education. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

**621. Research Seminar in Early Childhood Education (3)**

Prerequisites: ED P 400 and teaching experience. Discussion and analysis of research in the field of early childhood education. Emphasis on appropriate assessment of young children and qualitative research design. Ten (10) hours of field work required.

**622. Seminar in Early Childhood Care and Education: International Perspectives (3)**

Discussion of early childhood programs in various countries around the world. Analysis of social, political, and economic influences on policies related to the care and education of young children. Discussion of the role of international and national agencies providing support for child welfare and education.

**625. Advanced Analysis of Instruction Through Reflective Strategies (3)**

Prerequisites: Teaching experience in grades K-12, EDEL/EDSE 500A or EDEL/EDSE 501, ED P 500 or ED P 696. Advanced study of instructional process through the study of theory and research

on teaching. Applied to the observation, diagnosis, analysis, and evaluation of the instructional process in grades K-12. The focus is practical application of theory and research to improve instructional effectiveness through analysis and reflective strategies. Same course as EDSE 625.

**681. Advanced Field Experiences in Early Childhood (4)**  
Prerequisite: Approval by Early Childhood Education (ECE) area committee. Supervised field experiences required of candidates for the ECE specialist credential who do not have teaching experiences in (1) pre-school; and (2) kindergarten or primary grades; and (3) a multicultural setting. Applications should be made by October 1 for the spring semester, and by March 1 for the fall semester and summer session. May be repeated for a maximum of 8 units. Credit/No Credit grading only. A maximum of four (4) units only for credit toward a master's degree program.

**682. Exit Assessment of Competencies in Early Childhood Education (4)**  
Prerequisite: Completion of all requirements for the Early Childhood Specialist Credential. During this advanced field work assignment, the candidate receives a final assessment of competencies demonstrated at the pre-school, kindergarten or primary levels. Applications should be made by October 1 for the spring semester, and by March 1 for the fall semester and summer session. Credit/No Credit grading only.

**695. Seminar in Teacher Education (3)**  
Prerequisites: Advancement to candidacy, approval of graduate director, and written application to Graduate Office. Application for enrollment must be made by March 1 for the fall semester and summer session, or by October 1 for spring semester. Successful completion of all required course work for the Master of Arts in Education, options in elementary or secondary education. Advanced studies in elementary and secondary education including reviews of the literature, and critique of educational research. Analysis of current trends, critical problems, and issues in education. For qualified candidates preparing to write the comprehensive examination. Traditional grading only. May be repeated once with permission of instructor. Same course as EDSE 695.

**697. Directed Research (1-3)**  
Prerequisites: Consent of instructor, department chair and associate dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by Mar 1 for the fall semester and summer session or by Oct 1 for the spring semester.

**698. Thesis (3,3)**  
Prerequisites: Advancement to candidacy, ED P 696, approval by director, department chair and associate dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for six units. Application for enrollment must be made to the Graduate Studies Office by March 1 for the fall semester and summer session or October 1 for the spring semester.

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## Education Middle School (EDMS)

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**444. Content Curriculum in Linguistically and Culturally Diverse Elementary Schools (3)**  
Prerequisite: Junior standing. Course presents an overview of elementary school content curricula, including Language Arts, Mathematics, Social Science, Science, Physical Education, and Fine Arts. California curriculum guidelines and Frameworks are emphasized. Required for students enrolled in the Multiple Subjects Credential Program with a Middle Level Emphasis. Traditional grading only.

**455. Teaching and Learning in the Culturally and Linguistically Diverse Middle School (3)**  
Prerequisite: Admission to the MSCP Middle Level Emphasis Program. Course focuses on teaching in linguistically and culturally diverse middle schools (grades 6-8). Topics include history, philosophy, foundations of middle school education, middle school re-

form; the young adolescent, middle school curriculum, learning theories in practice, assessment, interdisciplinary teaching, team dynamics, classroom management and organization, peer coaching, theories and models of second language acquisition including SDAIE, and technology. Traditional grading only.

**456. Teaching Core Subjects in Culturally and Linguistically Diverse Middle Schools (6)**  
Prerequisite: Admission to MSCP Middle Level Emphasis Program. Focuses on content and methodology of teaching Language Arts, mathematics, social science, and science at the middle level. Includes collaborative teaming with a credentialed teacher in a core or interdisciplinary middle school classroom. Curriculum development, content knowledge, SDAIE strategies, and appropriate middle school pedagogy are emphasized. Traditional grading only.

**459. The Middle School Teacher as Advisor (3)**  
Prerequisite: Admission to MSCP Middle Level Emphasis Program. Focus is on the advisor/advisory role of teachers in the middle school, the development of service learning programs, and the function of collaboration among teachers, agencies, professionals, and other stakeholders. Required during the semester of middle level student teaching. Course may be taken by credentialed, inservice middle school teachers. Traditional grading only.

**483A-B. Middle Level Student Teaching in Linguistically and Culturally Diverse Classrooms (12)**  
Prerequisite: Admission to MSCP Middle Level/CLAD Emphasis Student Teaching; Completion of all requirements for advancement to student teaching. Student teaching represents the culmination of the MSCP Middle Level Emphasis/CLAD Credential Program. It is a full-day experience with 10 weeks spent in an approved middle school with a limited English proficient student population of at least 26%. An additional five weeks of student teaching is completed in an elementary school classroom (grades 4-5). Weekly seminars are required. Credit/No Credit grading only, with A or B equivalent required for credit. Traditional grading only.

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## Secondary Education Courses (EDSE)

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### Lower Division

**157. Critical Thinking and Analytical Reading (3)**  
Prerequisite: ENGL 100 or equivalent (may be taken concurrently). Critical thinking and advanced reading comprehension. Includes laboratory experience and access to resource materials.

### Upper Division

**339. Linguistics for Crosscultural Language & Academic Development in Secondary School Settings (3)**  
Principles of language structure, variation and usage for educators. Educational aspects of first and second language acquisition theories. Social and psychological influences on linguistic behavior in middle and high schools. Cultural and political issues affecting language, attitudes, maintenance and shift. Traditional grading only. Same course as LING 339.

**\*435. United States Secondary Schools/Intercultural Education (3)**  
Prerequisite: Admission to the Single Subject Credential Program. Critical reflection on problems, issues, and questions of multicultural education in a pluralistic society: philosophy, history, and sociology of education; the curriculum and student population in the United States secondary school; and current controversies in education. Traditional grading only.

**\*436. Learning and Instruction in a Multicultural Setting (3)**  
Prerequisite: Admission to the Single Subject Credential Program. A course in systematic instruction that explores theories of learning, curriculum design and development, assessment and evaluation of student progress, classroom management and discipline, and problems of the adolescent, within a multicultural setting. Traditional grading only.

**\*457. Reading in the Secondary School (3)**

Prerequisite: Admission to the Single Subject Credential Program. Emphasis on assessment and instruction of individuals and groups in a multicultural setting; textbook selection and evaluation; vocabulary development; comprehension strategies; and the special reading needs of less prepared, of second language, and of accelerated learners. Includes individual instruction of an adolescent, and issues of diversity and equity. At least ten hours of field experience are required. Traditional grading only.

**458. Newspaper in Education (1-3)**

Use of the daily newspaper as an instructional tool in the classroom. Newspaper articles, features and editorials as a means of providing current content and bases for improvement of reading skills, interests, critical thinking and problem-solving. Understanding mass media.

**\*490. Special Topics in Secondary Education (1-3)**

Prerequisite: Consent of instructor. Topics of current interest in secondary education selected for intensive study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

**\*491. Special Topics in Teacher Education (3)**

Prerequisite: Consent of instructor. Topics of current interest in teacher education selected for intensive study. A student may enroll for three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Topics will be announced in the Schedule of Classes. Same course as EDEL 491. (Lecture 2 hours, laboratory 2 hours.)

**\*497. Independent Study (1-3)**

Prerequisites: Consent of instructor and department chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units, with no more than three units applicable to credential or major requirement.

## Graduate Division

**500A. Reflective Processes For Beginning Teachers (3)**

Prerequisite: Currently teaching and hold credential or consent of instructor. To enhance effectiveness and success in beginning years of teaching (less than four years). Emphasis on acquisition and application of reflective processes. Acquire skills to identify and resolve personal and professional problems; delve into the current literature and research; engage in group processes; create, identify and evaluate alternative solutions and apply these to your own problems and situations. Same course as EDEL 500A.

**501. Enhancing Teacher Effectiveness: Strategies for Mentoring and Leadership (3)**

Prerequisite: A minimum of three (3) years teaching experience. To enable experienced teachers to acquire skills and understandings to improve their own instructional and professional effectiveness, become mentor teachers, and develop strategies for teacher leadership and supervision. Enhance ability to analyze and improve instruction and guide other teachers in using these skills. Conduct applied research on these topics. Same course as EDEL 501.

**530. Intercultural Education: US and Global Dimensions (3)**

Study to enhance teacher intercultural competence through a critical analysis of issues of cultural diversity and global interdependence. Students will investigate the current literature and research and reflectively apply findings to the resolution of interaction and equality problems in education and to the infusion of multicultural and international concepts, skills and attitudes into the K-12 curriculum. Same course as EDEL 530.

**540. Advanced Studies in Teaching Language Arts/Reading in Culturally and Linguistically Diverse Classrooms (3)**

Prerequisite: A valid teaching credential or consent of instructor. Advanced study of research, theory, and practice of teaching listening, speaking, reading and writing to culturally and linguistically diverse students. Includes evaluation of literature-based, meaning-centered curriculum. Emphasizes integrating language arts and reading across the curriculum. Focuses on first and second language acquisition, language structure and analysis between English and other languages. Includes student action research. Same as EDEL 540.

**590. Special Problems in Secondary Education (1-3)**

Prerequisite: Consent of instructor. Advanced study of special topics and problems in secondary education. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

**625. Advanced Analysis of Instruction Through Reflective Strategies (3)**

Prerequisites: Teaching experience in grades K-12, EDEL\EDSE 500A or EDEL\EDSE 501, ED P 500 or ED P 696. Advanced study of instructional process through the study of theory and research on teaching. Applied to the observation, diagnosis, analysis, and evaluation of the instructional process in grades K-12. The focus is practical application of theory and research to improve instructional effectiveness through analysis and reflective strategies. Same course as EDEL 625.

**695. Seminar in Teacher Education (3)**

Prerequisites: Advancement to candidacy, approval of graduate director, and written application to Graduate Office. Application for enrollment must be made by March 1 for the fall semester and summer session, or by October 1 for spring semester. Successful completion of all required course work for the Master of Arts in Education, options in elementary or secondary education. Advanced studies in elementary and secondary education including reviews of the literature, and critique of educational research. Analysis of current trends, critical problems, and issues in education. For qualified candidates preparing to write the comprehensive examination. Traditional grading only. May be repeated once with permission of instructor. Same course as EDEL695.

**697. Directed Research (1-3)**

Prerequisites: Consent of instructor, department chair and associate dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by March 1 for the fall semester and summer session or by October 1 for the spring semester.

**698. Thesis (3,3)**

Prerequisites: Advancement to candidacy, ED P 696, approval by director, department chair and associate dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for six units. Application for enrollment must be made to the Graduate Studies Office by March 1 for the fall semester and summer session or October 1 for the spring semester.

# THEATRE ARTS

*College of the Arts*

Department Chair

Howard Burman

Department Office

Theatre Arts, Room 221

Telephone

(562) 985-5356

Faculty

Professors

Ashley Carr

Joanne Gordon

Holly Harbinger

Stanley Kahan (Emeritus, 1994)

Bernard J. Skalka

Nancy Jo Smith

Maria Viera

Associate Professors

W. Jeffrey Hickman

Danila Korogodsky

Assistant Professor

Ronald Allan Lindblom

Managing Director

Paul Stuart Graham

Administrative Coordinator

Margaret Robertson

The Department of Theatre Arts offers three basic programs leading to the bachelor of arts degree with opportunities for options in Performance (acting/directing), Technical Theatre (scenery/costume/ lighting design), and General Theatre. This flexibility of program planning in Theatre Arts has been organized to serve student needs in three principal areas: (1) Enrichment of the student's liberal arts background through the development of appreciations and insights derived from theatre arts courses taken as general education electives. (2) Development of interests and skills that will offer the student life-long satisfactions as an avocational outlet. (3) Preparation for Theatre Professions in community theatre, recreational theatre, educational theatre, and professional theatre. Several course offerings in theatre and dramatic literature are available jointly with the Comparative Literature Department. These courses cover the full range of world drama from both the viewpoint of theatre and dramatic literature.

The W. David Sievers Memorial Scholarship in acting, named for the first faculty member of the theatre program, is awarded annually to new students who exhibit potential in the field of performance. Award consists of a modest sum and is determined through competitive audition judged by faculty. In addition, the Fine Arts Affiliates of the University and the Dramatic Allied Arts Guild of Long Beach provide for monetary awards to qualified students in all areas of theatre. For further information contact the Department of Theatre Arts.

The Department of Theatre Arts offers graduate study leading to the Master of Arts and Master of Fine Arts degrees. The candidate is urged to observe the general requirements stated in this Catalog, as well as the specific departmental requirements stated here and, more fully, in the Department Program Planners, available upon request from the department.

All majors are required to participate with or without credit in the departmental production program. Furthermore, majors enrolled in any acting course are expected to audition and participate in departmental productions in that semester. The student is expected to accept any role in which he/she is cast. Majors are also expected to seek approval from their advisors before making any commitment to a theatre program which lies outside of the departmental academic atmosphere.

The Theatre Arts Department holds division II membership in the National Association of Schools of Theatre (National Association of Schools of Theatre, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700). The Bachelor of Arts, and Master of Fine Arts degrees are accredited by the association. The department is also a member in good standing with the Theatre Communications Group and the International Theatre Institute of the United States.

## Bachelor of Arts in Theatre Arts

The General Option in the Bachelor of Arts in Theatre Arts provides the opportunity for the student to gain a broad exposure to the discipline. The curriculum requires study in Acting, Technical and Design crafts, the History, Literature and Criticism of Theatre, and in Directing.

## Requirements

The Theatre Arts core is required of all majors regardless of option.

THEA 010 is required each semester of enrollment. These units are not included in the 124 for graduation.

Lower Division: THEA 010, 101, 114A, 142, 144, 146, 148.

Upper Division: THEA 321, 322, 323, 426, 452, 476.

All performance majors will also fulfill four performance requirements (with or without credit) to graduate. This requirement is met through acting, understudying, directing or assistant directing for a Mainstage production; acting or directing for a Showcase production; or by a special assignment approved by the performance faculty.

No more than 8 units of Theatre Arts activity (cast and/or crew) will apply toward degree requirements. Crew requirements for all majors: One major running crew assignment in residence for each of the areas of costume, make-up, stagecraft and lighting to be satisfactorily completed with or without credit during the semester following completion of the related course. Students with transfer credit in those related courses must fulfill the same running crew requirements, with or without credit, within the first three semesters of matriculation into the University.

At the beginning of the semester, all incoming students, including transfer students (including those who have been inactive for a year in our department), are required to audition (in the case of the Performance Option) or interview (in the case of all other options). Auditions and interviews to be conducted by appropriate faculty/student groups. (These auditions are required for admittance to certain upper division classes and are therefore used for appropriate placement of students at their level of competency as determined by the faculty.)

### General Option (code 2-5844) (124 units)

Choose 6 units from (A) Acting/Directing: 112, 214, 262, 374, 375; choose 6 units from (B) Technical/Design: 271, 442, 447, 342, 348, 385, 471; choose 9 units from (C) Hist/Lit/Crit: 324I, 380, 421I, 422I, 498, 523; and choose 3 units from (D) Production: 310B, 340B, 410A, 410B, 440A, 440B for a total of 24 units.

### Option in Performance: Acting/Directing (code 2-5847) (124 units)

THEA 112, 114B, 214, 262 and 9 units from THEA 271, 312, 316, 318, 374, 375, 380, 413, 414, 462, 498.

### Option in Technical Theatre: Scenery/Costume/Lighting Design (code 2-5848) (124 units)

THEA 341, 448 and 9 units approved from THEA 271, 340B, 342, 348, 355, 357, 385, 440A,B, 441, 442, 443, 447, 449, 451, 498.

## Master of Arts in Theatre Arts (code 5-5844)

### Prerequisites

1. A bachelor's degree with a major in Theatre Arts; or
2. A bachelor's degree with 24 units of upper division work in Theatre Arts, including courses comparable to those required at this University.

Each student applying for admission to a graduate degree program in Theatre Arts must initiate, in the department office, a request to receive a departmental evaluation, based upon diagnostic examination and an analysis of official undergraduate transcripts to determine any deficiencies and all areas which must be strengthened by the graduate program.

### Advancement to Candidacy

1. Satisfy the general University requirements;
2. Remove all undergraduate deficiencies as determined by the departmental evaluation and/or the Dean of Graduate Studies;
3. Submit a program for approval by the department chair, the graduate advisor and the Dean of Graduate Studies.

### Requirements

A minimum of 36 units in approved upper division and graduate courses, including:

1. 22 units in Theatre Arts, of which at least 18 units must be in the 500 and/or 600 series completed at this University. Required courses: THEA 696, 694, 523, 426, 514 or 542, and 698. Determination of the specific courses will be made by the Theatre Arts Graduate Committee and approved by the Theatre Arts Graduate Advisor;
2. 14 approved elective units, of which six may be in approved areas related to Theatre Arts. (No more than 6 units may be in Education. Student teaching and special methods courses will not apply);
3. Each student will select an area of specialization and complete a research thesis. The student must enroll in THEA 698 to a maximum of 4 units and thereafter enroll in XGS 700 until the thesis is complete and approved.

## Master of Fine Arts in Theatre Arts

The Master of Fine Arts Degree in Theatre Arts is the terminal degree offering the minimum professional training deemed necessary by the major Theatre Arts Schools in the United States.

All students admitted to the MFA program are members of California Repertory Company and are subject to the operating procedures of the company. CalRep, the professional arm of the Theatre Arts Department, prepares and performs plays from the canon of international dramatic literature in rotating repertory over a nine month period.

### Criteria for Admission to the Program

1. Students applying for the MFA program must have completed a bachelor's or master's degree in Theatre Arts from an accredited institution with a 3.0 GPA in upper-division theatre courses, meet University admission requirements, and submit evidence of creative ability and professional intent in one of the following areas: Acting, Technical Theatre, and/or Design;
2. When an undergraduate degree has been completed in a program having different requirements than those at CSULB or in some field other than Theatre Arts, additional preparation and time may be required before the student can be considered for classified status in the degree program. Up to 24 units of credit from an MA degree program may be acceptable after review of the faculty evaluation committee and approval by the Dean;



- Admission to the program in Acting requires audition and interview. Admission to the program in Technical Theatre/Design requires interview and/or submission of original work such as manuscripts, designs, renderings, slides, models and/or working drawings;
- All students admitted into the MFA program will be admitted as conditionally classified. In order to obtain fully classified status, a committee from the Theatre Arts faculty must authorize continuation in the program after evaluating academic progress, individual skills development and review of performance or portfolio at the end of the student's first full year of residence.

#### Advancement to Candidacy

- Attain fully classified status;
- Remove all undergraduate deficiencies determined by the departmental evaluation and the Dean of the College;
- Submit a program for approval by the department chair, the graduate advisor and the Dean of the College.

#### Requirements

The MFA degree is a 60-unit degree normally requiring full time residency. Course requirements are arranged according to the following structure depending on the student's choice of option, Acting or Technical Theatre/Design:

##### Option in Acting (code 7-5847)

60 units to include: 501 (one unit), 514, 517 (4 units), 518 (4 units), 519 (4 units), 520A, 520B, 521A, 521B, 522A, 522B, 523, 530A, 530B, 531A, 531B, 532A, 532B, 564A, 564B, 565A, 565B, 566A, 566B, 696, 699 (two units).

##### Option in Technical Theatre/Design (code 7-5848)

###### Costume Concentration

60 units to include: THEA 501, 541, 696, 523, 542, 696, 517, 518, 519, 544, 584, 546A, 546B, 556A, 556B, 656A, 656B, 583, 582, and 4 units from THEA 554, 540, 550 and 9 units of electives. Electives, with advisors approval, can be taken from the University at large. Recommended electives include courses from Theatre Arts, Art, Art History, Music and Design.

###### Lighting Concentration

61 units to include: THEA 501, 541, 696, 523, 542, 696, 517, 518, 519, 544, 584, 548A, 548B, 648A, 648B, 649A, 648B, 545A, 545B, 577, and 4 units from 554, 540, 550, and 9 units of electives. Electives, with advisor's approval, can be taken from the University at large. Recommended electives include courses from Theatre Arts, Art, Art History, Music and Design.

###### Theatre Management Concentration

60 units to include: THEA 451, 452, 476, 498Q (six units), 501 (one unit), 517 (six units), 518 (six units) 523, 570 (six units), 694Q (nine units), 696, 699 (five units), and 6 units of electives. Electives, with advisor's approval, may be taken from the University at large. Recommended electives include ENGL 417, MKTG 494, COMM 523, COMM 534, ENGL568, ENGL 578, and ENGL 584.

#### Scenery Concentration

60 units to include: THEA 501, 541, 696, 523, 542, 696, 517, 518, 519, 544, 584, 580A, 580B, 585A, 585B, 685A, 685B, 545A, 547, 581; and 4 units from 540, 550, 554; and 9 units of electives. Electives, with advisor's approval, can be taken from the University at large. Recommended electives include courses from Theatre Arts, Art, Art History, Music and Design.

The options share a common core of courses which offer study in aesthetics, conceptualization, history, theory, literature, and research. The remainder of the courses offer students the opportunity to further develop artistic skills in their particular area of option. The program culminates in a major creative project.

- The Acting option requires work in voice, movement, and process each semester. Process classes explore a wide range of acting styles. Ongoing performances in public presentations are required.
- The Technical Theatre/Design option requires work in a variety of skills development which emphasizes the technological as well as the artistic aspects of design and execution. Continuous advancing assignments in productions for public performances are required.

#### M.F.A. Transfer and Residence Policy

Transfer credit allowable toward the M.F.A. is normally not to exceed 24 units. All transferred credit use in the M.F.A. program must be approved by the Graduate Advisor.

#### Courses (THEA)

##### Lower Division

###### 010. Theatre Arts Showcase (1)

Participation in weekly programs dealing with all aspects of Theatre Arts. Required of Theatre Arts majors each semester. These units do not count toward graduation.

###### 101. Fundamentals of Script Analysis (3)

A basic approach to the analysis of the play script, intended to provide theatre practitioners and generalists with the tools necessary to understand the literary text of a play, and its application to work in performance, design and critical/ historical studies. Traditional grading only.

###### 110A,B. Theatre Arts Activity-Cast (1,1)

Participation in acting projects; open to students cast in University-sponsored productions.

###### 112. Beginning Voice and Speech for the Actor (3)

Theory and practice in developing command of oral techniques for stage including breath support, resonance, free vocal release, and articulation. Traditional grading only. (CAN DRAM 6)

###### 113. Introduction to Acting (3)

Review of actors and acting, past and present; their work as artists; basic exercises in voice, diction, movement, and personality projection. Open only to non-Theatre Arts majors. Attendance at University sponsored productions required.

###### 114A,B. Fundamentals of Acting (3,3)

Development and preparation of the actor's instrument: voice, body, imagination. Exercises in relaxation, sensory work, motivations and relationships. Individual study of textual problems for actors. (6 hrs lab.) (114A, CAN DRAM 8)

###### 122. Appreciation of Theatre Arts (3)

Appreciation and understanding of the arts of the theatre for the non-theatre major; standards for critical evaluation of the live theatre; lecture, discussion, written critiques and attendance at University sponsored productions required; not open to students with credit in THEA 124.

124. Introduction to World Theatre and Drama (3)  
Introduction to all aspects of theatre including criticism, dramatic literature, movements, themes, historical background and theatrical production from different parts of the world. (Same course as C/LT 124.)

140A,B. Theatre Arts Activity — Crew (1,1)  
Participation in technical play production projects; specific assignment determined at initial meeting; 60 hrs minimum participation time or major crew assignment.

142. Elementary Stagecraft (3)  
Basic physical equipment of the theatre, elementary scenic design, construction, rigging, painting and drafting. Practical lab assignments dealing with the preparation of scenery and props for University sponsored productions. Should be taken concurrently with THEA 148. Traditional grading only. (9 or more hrs lab)

144. Stage Make-up I (3)  
Practical introduction to techniques of theatrical make-up. Students must be clean-shaven due to the nature of the course. Preparation of make-up material for University sponsored productions. Should be taken concurrently with THEA 146. Traditional grading only. (9 or more hrs lab.)

146. Costume Crafts I (3)  
Techniques of costume and accessory construction for the stage; use of fabrics, materials and equipment. Preparation of costumes and accessories for University sponsored productions. Should be taken concurrently with THEA 144. Traditional grading only. (9 or more hrs lab.)

148. Stage Lighting I (3)  
Theory and practice of modern stage lighting; functions of light; design of lighting layout; properties of various instruments; practical experience in the hanging and focusing of lighting equipment for University sponsored productions. Should be taken concurrently with THEA 142. Traditional grading only. (9 or more hrs lab.)

210A,B. Theatre Arts Activity — Cast (1,1)  
Prerequisite: Sophomore class standing. Participation in acting projects; open to students cast in University-sponsored productions. (3 or more hrs lab.)

214. Intermediate Acting (3)  
Prerequisites: THEA 112, 114A and B. Should be taken directly following THEA 114B. Introduction to scene study. Application of techniques of body, voice and imagination to dramatic texts thereby stimulating an acting process for the development of a role. Traditional grading only. (6 hours laboratory)

240A,B. Theatre Arts Activity — Crew (1,1)  
Prerequisite: Sophomore class standing. Participation in technical play production projects; specific assignment determined at initial meeting; 60 hrs minimum participation time or major crew assignment. (3 or more hrs lab.)

262. Beginning Movement for the Actor (3)  
Practical study of movement fundamentals, body awareness, physical intentions, and non-verbal communication related to the beginning acting process. (6 hrs lab.)

271. Stage Management (3)  
Management skills required for the professional stage manager. Course examines responsibilities, and function of the stage manager in relation to the director, designers, and performers. Traditional grading only. (6 hrs lab.)

## Upper Division

310A,B. Theatre Arts Activity — Cast (1,1)  
Prerequisite: Junior class standing. Participation in acting projects; open to students cast in University-sponsored productions. (3 or more hrs lab.)

312. Applied Voice and Speech for the Actor (3)  
Prerequisite: THEA 112 or equivalent. Further study of vocal techniques for the theatre, including variety of quality, force, tempo and pitch, scansion, and imagery. Application of basics learned in 112 to more complicated dramatic texts.

316. Rehearsal and Performance (3)  
Prerequisites: THEA 214. Performance based class focusing on the interrelationship of actor and director. Working with the director on the creative process, interpreting the demands of the director and combining these with the actor's creative process. Traditional grading only. (6 hours laboratory)

318. Advanced Scene Study (3)  
Prerequisites: THEA 214, 316, and/or consent of instructor. Intensive scene study in modern dramatic texts. The class is designed to continue and strengthen the process of role development for the actor through scenic exercises. May be repeated to a maximum of six units. Traditional grading only. (6 hours lab.)

321. History of Theatre and Drama (4)  
Prerequisites: THEA 101 or concurrent enrollment or consent of instructor. History of drama and theatre from primitive ritual to the present day and its relationship to the social, economic and political forces from age to age. Traditional grading only.

322. Period Style for the Theatre (3)  
This course covers the relationship of the visual arts, culture, music, and literature to theatrical production from the time of the ancient Greeks to the present. It gives an overview of period style drawing together the philosophical, artistic, and intellectual forces that create that style. Traditional grading only.

323. Contemporary Theatre and Theory (3)  
Prerequisites: THEA 101 and 321. An in-depth analysis of current themes, practices, aesthetic imperatives and contemporary theatrical trends centered around the dramatic text.

\*324I. Western Theatre Today (3)  
Prerequisites: ENGL 100 and upper division status. Current trends, problems and achievements of the theatre of the present day from an international point of view, with an examination of influences of the avant-garde movement of post World War II (Expressionism, Dada, Surrealism, the Absurd, Existentialism). Same course as C/LT 324I.

340A,B. Theatre Arts Activity — Crew (1,1)  
Prerequisite: Junior class standing. Participation in technical play production projects; specific assignment determined at initial meeting; 60 hrs minimum participation time or major crew assignment. (3 or more hrs lab.)

341. Presentation Techniques for Theatre (3)  
Develop an understanding of form, shape, line, and tone through exercises with various media. Explore approach to visualization and presentation techniques for theatre design. Traditional grading only. (6 hrs lab)

\*342. Advanced Technical Theatre (3)  
Prerequisite: THEA 142 or consent of instructor. The investigation of the tools, materials, and procedures used in scenic construction and rigging. Supervised practical application of the techniques through scenic drafting and work on University sponsored productions. (9 or more hrs lab.)

\*348. Stage Lighting II (3)  
Prerequisite: THEA 148 or equivalent. Theory and practice of lighting design and current techniques of stage lighting. Lab or production assignment on University sponsored production required. (6 hrs lab.)

352. Foundations of Visual Expression (3)  
Introduction to the basics of visual composition stressing a link to the arts of Theatre Design. Emphasizes the development of visual discipline, creative skills and the poetic and artistic nature of theatre design.

364. Stage Combat (3)  
Prerequisite: THEA 262 or consent of instructor. A practical study of unarmed combat for the stage. Covers technique, safety, and application of combat skills to the acting process. Traditional grading only. (6 hrs lab.)

373. Directing for the Camera (3)  
Prerequisites: THEA 214 or consent of instructor. Study of script analysis, filmic space, creating mise-en-scene, decoupage, and working with the actor. Emphasis on a series of collaborative exercises between director and actor.

**\*374. Fundamentals of Directing (3)**

Prerequisite: THEA 101 or consent of instructor. Introduction to script analysis, rehearsal techniques, director's prompt book and organization of stage space and time. Using contemporary realistic plays to develop actor/director communication skills. Intensive scene work.

**\*375. Intermediate Directing (3)**

Prerequisite: THEA 374. Intensive work using nonrealistic plays to develop director's concept, advanced script analysis and an approach to the challenges of style. Introduction to collaboration with set, lighting, costume, sound, and make up designers. Intensive scene work with student actors focusing on rehearsal techniques. (6 hrs lab.)

**\*380. Playwriting (3)**

Creative writing for the stage. Study of character, concept, theme, dialogue and structure.

**\*385. Stage Make-Up II (3)**

Prerequisite: THEA 144 or consent of instructor. Introduction to character portraiture, fine painting techniques and makeup design rendering. Students must be clean shaven due to the nature of this course. Supervision in the practical application of these elements in University sponsored productions. (6 hrs lab)

**410A,B. Theatre Arts Activity — Cast (1,1)**

Prerequisite: Senior class standing. Participation in acting projects; open to students cast in University-sponsored productions. (3 or more hrs lab.)

**413. Film/Video Acting (3)**

Prerequisite: THEA 318 or consent of instructor. Acting techniques required for the stylistic range and variety of film and television scripts. Video recording and playback of scenes and filmic acting exercises to adjust acting skills to these media. Traditional grading only. (6 hrs lab.)

**414. Period Scene Study (3)**

Prerequisite: 318 and/or consent of instructor. Scenes from period plays including Greek, Shakespeare, Comedy of Manners. Analysis of the play's structure in terms of language, background, human behavior. May be repeated to a maximum of six units. Traditional grading only.

**415. Audition Techniques (3)**

Prerequisite: THEA 318 or consent of instructor. This course is designed to acquaint the actor with auditioning skills and practical business information necessary for acting professionally. Topics include: picture, resume, interview, audition, agent, casting, director, unions, contracts, job market and career strategies. Traditional grading only. (6 hrs lab.)

**4211. Classical Drama (3)**

Prerequisite: ENGL 100 and upper division status, one course in literature or Theatre Arts. An interdisciplinary examination of major plays of the Greeks and the Romans, both as literature and as theatre. Includes the "invention" of the drama as an art form and the development of tragedy and comedy. Considers also the debt of modern and dramatic literature to the theatre of the ancients. Same course as CLSC 4211.

**\*426. Dramatic Theory and Criticism (3)**

Prerequisite: THEA 101 or consent of instructor. Study of the major theories of dramatic literature and performance. Analysis of dramatic works from the standpoint of genre, style and structure.

**433. Design for Theatre (3)**

Prerequisites: THEA 101, 142, 144, 146, 148, 341, and 352. Integration of the styles and methods of theatrical costume, make-up, scenery and lighting design.

**440A,B. Theatre Arts Activity — Crew (1,1)**

Prerequisite: Senior class standing. Participation in technical play production projects; specific assignment determined at initial meeting; 60 hrs minimum participation time or major crew assignment. (3 or more hrs lab.)

**441. Scenographic Techniques (3)**

A study of the drafting techniques used to translate the designer's vision to the finished set on stage. Includes both traditional and computer aided design and drafting tools. Traditional grading only.

**442. Scenic Technical Skills (3)**

Prerequisites: THEA 342 or consent of instructor. The use of materials and construction methods in stage properties, set dressing and furniture. Painting techniques for scenery and properties. Supervision in the practical application of these elements in University sponsored productions. Traditional grading only. (6 hrs lab.)

**443. Stage Make-Up III (3)**

Advanced make-up techniques for characterization and style. Students must be clean shaven due to the nature of this course. Supervision in the practical application of these elements in University sponsored productions. Traditional grading only. (4 hrs lab.)

**447. Costume Technical Skills (3)**

Prerequisites: THEA 146 or consent of instructor. Analysis of the structure of costumes and accessories. Advanced technical projects using materials, patterning and construction methods in costume and accessories. Supervision in the practical application of these elements in University sponsored productions. (6 hrs lab.)

**448. Lighting Design I (3)**

Prerequisite: THEA 148. Techniques of designing lighting for various stage forms; creative planning and projection of designs for specific productions. Traditional grading only. (6 hrs lab.)

**449. Sound Design for the Theatre (3)**

Introduction to the scope, tools, materials and practices of sound in the theatre today. Traditional grading only.

**\*451. Computer Applications for the Theatre (3)**

The use of computers in the process of scenic, lighting, and costume design and the application of general purpose software in the management and operation of performing arts organizations.

**\*452. Writing for the Theatre Arts (3)**

Writing non-fiction prose, with emphasis on particular features of writing in the Theatre Arts. Traditional grading only. (6 hrs lab.)

**\*455. Metal Fabrication for the Stage (3)**

Prerequisite: THEA 142 or consent of instructor. A study of metal-working for the designer and technician in the theatre. Traditional grading only. (6 hrs lab.)

**\*457. Projection Workshop (3)**

A study and application of new and traditional techniques of scenic and lighting projection for the stage. Traditional grading only. (4 hrs lab.)

**\*462. Intermediate Movement for the Actor (3)**

Prerequisite: THEA 262 or consent of instructor. Further training in movement to explore and develop physical characterization for a role. Coursework includes individual movement problem solving, improvisation, scenes and monologues. (6 hrs lab.)

**472. Technical Direction (3)**

Prerequisites: THEA 342 or consent of instructor. The course will cover properties of materials, structural analysis, project planning processes and problem solving as they relate to the construction of stage scenery, its installation in the theatre, and the organizational process. Project work in the areas of scenery construction, rigging, pneumatics and hydraulics, shop organization and layout, and crew training and management will comprise the major portion of the course. Traditional grading only.

**\*476. Theatre Management (3)**

Examination of administration, management and promotion of a producing theatre organization. Practical application required in University-sponsored productions. (9 or more hrs lab.)

**\*480. Advanced Playwriting (3)**

Prerequisite: THEA 380 or consent of instructor. Writing the full-length play with emphasis on dialogue, subplot and character development.

**488./688. CSU Summer Arts (1-6)**

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

490. Special Topics in Theatre Arts (1-3)

Prerequisites: Senior standing in major or consent of instructor. Topics of current interest in Theatre Arts selected for intensive study. May be taken for maximum of nine units. Topics will be announced in the Schedule of Classes.

\*498. Special Studies in Theatre Arts (3)

Prerequisite: Senior standing in major or consent of instructor. Independent projects and research of advanced nature in the area of Theatre Arts under faculty supervision. Limited to 6 units in any one area. Area will be designated by letter at time of registration as (a) acting, (b) directing, (c) costume, (d) scenery, (e) properties, (f) playwriting, (j) theatre history, (k) theatre criticism, (l) movement, (m) makeup, (n) lighting, (o) voice, (p) stage management, (q) theatre management, (r) dance, (s) technical direction. Traditional grading only.

## Graduate Division

501. Introduction to Graduate Studies (1)

Methodological issues involved in graduate theatre research; bibliographical studies and library research; study and critical evolution of research; methods in the development of research as relates to the theatre artist. Traditional grading only.

502. Seminar in Theatre Management I (3)

Prerequisites: Acceptance into the MFA Program. Study of contemporary principles of management processes specifically targeted to people pursuing professional Theatre Arts Management careers. The principles and practices of marketing, development, fund-raising, and publicity are analyzed and assessed through research and study. Traditional grading only. Course may be repeated to a maximum of 6 units.

503. Leadership and the Arts (3)

Prerequisites: Acceptance into the MFA Program or senior status and completion of Thea 476 or consent of instructor. Study of contemporary principles of leadership and leadership development processes with special concern for application to people working in the arts. The context for leadership in arts organization is assessed and matched against students' personal leadership styles. Traditional grading only.

504. Managing the Not-For-Profit Arts Organization (3)

Prerequisites: Acceptance into the MFA Program or senior status and completion of THEA 476 or consent of instructor. Study of the principles of organizational management as applied to not-for-profit arts organizations. Issues include strategic planning and analysis, organizing, staffing, leading and controlling. Also to be studied are the principles and practices of fundraising in the not-for-profit environment. Traditional grading only.

514. History and Theory of Acting (3)

Prerequisite: Minimum of 6 units of acting or consent of instructor. Selected areas of study in the history, theories and criticism of acting.

517. Repertory Theatre I (2)

Prerequisites: Acceptance into the MFA Program. Design, preparation, rehearsals and performances of selected plays in California Repertory Company and University Players. Traditional grading only. May be repeated for a maximum of 4 units (6 hrs lab.)

518. Repertory Theatre II (2)

Prerequisites: Acceptance into the MFA Program. Design, preparation, rehearsals and performances of selected plays in California Repertory Company and University Players. Traditional grading only. May be repeated for a maximum of 4 units (6 hrs lab.)

519. Repertory Theatre III (2)

Prerequisites: Acceptance into the MFA Program. Design, preparation, rehearsals and performances of selected plays in California Repertory Company and University Players. Traditional grading only. May be repeated for a maximum of 4 units. (6 hrs lab.)

520A. Voice I (2)

Prerequisite: Acceptance into the MFA Program. Laying the groundwork in Voice and Speech techniques for professional actors. Traditional grading only. (4 hrs lab.)

520B. Voice I (2)

Prerequisites: Acceptance into MFA Program. Application of Vocal technique into various styles of verse and prose for meaningful vocal expressiveness. Traditional grading only. (4 hrs lab.)

521A. Voice II (2)

Prerequisites: Acceptance into MFA Program. Exploration of extensive vocal variety and expressiveness, using the four components of voice: quality, force, tempo, pitch. Expanding the boundaries. Traditional grading only. (4 hrs lab.)

521B. Voice II (2)

Prerequisites: Acceptance into the MFA Program. Analysis and development of dialects and accents for performance. Traditional grading only. (4 hrs lab.)

522A. Voice III (2)

Prerequisite: Acceptance into MFA Program. Advanced study of dialects. Coursework covers research, analysis, and performance of selected dialects in the context of a play. Traditional grading only.

522B. Voice III (2)

Prerequisite: Acceptance into MFA Program. Exploration of microphone techniques. Coursework covers stand-up, radio drama, dubbing, animation, and practice in the development of a demo-tape for professional voice-over work. Traditional grading only.

523. Theory and Practice of Contemporary Theatre (3)

Critical exploration of the major schools of thought between 1970-present including styles, genres and both national and international trends. Contributions of theatre practitioners and theorists and the role of the audience in this period. Traditional grading only.

530A. Acting in Repertory I (2)

Prerequisite: Acceptance into the MFA program. Foundation and development of individual and ensemble acting techniques necessary for the repertory actor and company. Applicable and related to performance schedule. Traditional grading only.

530B. Acting in Repertory I (2)

Prerequisite: Acceptance into the MFA program and THEA 530A. Variable modules of technique training in ensemble and interaction skills for the repertory actor. Dependent upon needs of individual actor, ensemble and/or performance schedule. Traditional grading only.

531A. Acting in Repertory II (2)

Prerequisite: Acceptance into the MFA program. Development of a variety of acting techniques available to the actor for playing situation, character, style and theatricality. Applicable and related to the performance schedule. Traditional grading only.

531B. Acting in Repertory II (2)

Prerequisite: Acceptance into the MFA program and THEA 531A. Variable technique modules in further development of repertory acting skills for playing situation, character, style and theatricality. Dependent upon needs of individual actor, ensemble and/or performance schedule. Traditional grading only.

532A. Acting in Repertory III (2)

Prerequisite: Acceptance into the MFA program. Advanced and professional technique training of skill variety in the repertory actor. Applicable and related to the performance schedule. Traditional grading only.

532B. Acting in Repertory III (2)

Prerequisite: Acceptance into the MFA program and THEA 532A. Variable advanced technique modules for expansion and enrichment of professional acting skills for the individual and ensemble. Dependent upon needs of individual actor, ensemble and/or performance schedule. Traditional grading only.

540. Non-traditional Material Use in the Theatre (2)

Prerequisite: consent of instructor. Creative use of non-traditional materials in the design and fabrication of props, accessories and set dressing. Exploration into decorative techniques and processes in the fabrication and finishing. (4 hrs lab)

541. Portfolio Development (2)

A study of the content and presentation forms of the designer's portfolio, resume and cover letter. Acquaints the designer/technician with interview skills and practical business information. Traditional grading only. (4 hrs lab.)

542. History and Theory of Design for the Theatre (3)

Critical exploration of the evolution of design theory and styles through historical evidence from the Renaissance to the present.

550. Computer Graphics for Theatre Design (2)

Hands on course centered on the creation and use of computer based graphic images and their application to costume, scenic, and lighting design and theatre management. Emphasis will be placed on illustration, photo and scanned image manipulation, figure drawing, and paint programs. Traditional grading only.

544. Visual Concepts in Theatre Design (2)

Foundations in visual conceptualization emphasizing the development of visual discipline, creative skills and the poetic nature of theatre design. Traditional grading only. (4 hrs lab)

545A. Computer Aided Design for the Theatre (2)

The application of two and three dimensional computer aided design and drafting programs to problems in technical theatre and design. The course concentrates on the application of 2D CADD programs to common theatrical drafting problems. The course will also explore the use of 3D CADD programs as a tool for the designer in the exploration of the theatrical space. Traditional grading only. (4 hrs lab.)

545B. Computer Aided Design for the Theatre (2)

Prerequisite: THEA 545A or consent of instructor. Advanced application of computer aided design for the theatrical lighting designer. Traditional grading only. (4 hrs lab.)

546A. Costume Design I (2)

Development of costume design through character and script analysis, and understanding of line, space, color and texture. Traditional grading only. (4 hrs lab.)

546B. Costume Design I (2)

Prerequisite: THEA 546A or consent of instructor. Exploration of the elements of design as demanded by a variety of scripts and styles. Traditional grading only. (4 hrs lab.)

547. Technical Direction (2)

Prerequisites: THEA 342 or consent of instructor. The course will cover the properties of materials, structural analysis, project planning processes and problem solving as they relate to the construction of stage scenery, its installation in the theatre, and the organizational process. Traditional grading only.

548A. Lighting Design I (2)

Techniques of designing lighting for various stage forms. Traditional grading only. (4 hrs lab.)

548B. Lighting Design I (2)

Prerequisite: THEA 548A or consent of instructor. Creative planning and development of lighting designs for specific productions. Traditional grading only. (4 hrs lab.)

549. Sound Design for the Theatre (3)

Introduction to the scope, tools, materials and practices of sound in the theatre today. Traditional grading only.

554. Textile Applications in Theatre Design (2)

Exploration and creative application of techniques of manipulating, painting and dyeing textiles for theatrical design. Traditional grading only. (4 hrs lab.)

556A. Costume Design II (2)

Development of skills in visual communication and style, including advanced rendering techniques and presentation. Traditional grading only. (4 hrs lab.)

556B. Costume Design II (2)

Prerequisite: THEA 556A or consent of instructor. Development of skills in research, interpretation, conceptualization and integrating multiple sources in design. Traditional grading only. (4 hrs lab.)

557. Projection Workshop (2)

Prerequisites: THEA 457 or consent of instructor. Advanced techniques of lighting projection for the stage. Traditional grading only. (4 hrs lab)

564A. Movement I (2)

Prerequisite: Acceptance into MFA Program. Practical study in movement fundamentals, body mechanics, and non-verbal communication. Exploration of movement as actor's tool to aid in the acting process. Traditional grading only. (4 hrs lab.)

564B. Movement I (2)

Prerequisite: Acceptance into the MFA Program. Analytical and practical exploration of movement principles of weight, space, time, and energy and their application to the acting process. Traditional grading only. (4 hrs lab.)

565A. Movement II (2)

Prerequisite: Acceptance into MFA Program. A practical study of unarmed combat for the stage. Coursework covers technique, safety, choreography, and application to the acting process, including the performance of scenes that include combat. Traditional grading only. (4 hrs lab.)

565B. Movement II (2)

Prerequisite: Acceptance into MFA Program. A practical study of armed combat for the stage, including quarterstaffs, broadswords, sabres, rapiers and daggers. Coursework covers technique, safety, and choreography. Traditional grading only. (4 hrs lab.)

566A. Movement III (2)

Prerequisites: Acceptance into the MFA Program. Historical and practical study of movement styles from selected theatrical periods through the eighteenth century. Coursework covers social dancing, movement, manners, and the handling of period costumes, props, and accessories. Traditional grading only.

566B. Movement III (2)

Prerequisite: Acceptance into MFA Program. Historical and practical study of movement styles of the nineteenth and twentieth centuries. Coursework covers social dancing, movement, manners, and the handling of period costumes, props, and accessories. Traditional grading only.

580A. Scene Design I (2)

Development of scene design through script analysis and understanding of space, form, line, color, texture and mood. Planning and development of the scenic rendering and model. Traditional grading only.

580B. Scene Design I (2)

Prerequisite: THEA 580A or consent of instructor. Exploration of the elements of scenic design as demanded by a variety of scripts and styles with specific challenges and complex production format. Traditional grading only.

581. Scenographic Techniques (3)

A study of the drafting techniques used to translate the designer's vision to the finished set on stage. Includes both traditional and computer aided design and drafting tools. Traditional grading only.

582. Stage Make-Up III (3)

Prerequisites: THEA 385 or consent of instructor. Advanced make-up techniques for characterization and style. Advanced make-up design and rendering techniques. Students must be clean shaven due to the nature of this course. Traditional grading only. (4 hrs lab)

583. Theatrical Patterning Methods (2)

Exploration of fitting, advanced patterning and construction techniques. Projects in fitting problems, flat patterning, draping, understructures and tailoring for the theatre. Traditional grading only.

584. Rendering and Painting for Theatre (2)

Introduction to the basics of rendering and painting stressing a link to the arts of theatre design. Developing an ability to depict form and space. Emphasizes the development of visual discipline, drawing and rendering techniques used in the visual presentation of stage design and scenic painting. Traditional grading only for Majors. (6 or more hours lab)

585A. Scene Design II (2)

Projects in scene design for the multi-set play. Consideration of stylistic unity, current trends and approaches as well as shifting problems. Development of advanced rendering techniques. Traditional grading only. (4 hrs lab.)

585B. Scene Design II (2)

Prerequisite: THEA 585A or consent of instructor. Further development of skills in scene design for the multi-set play. Development of advanced model making techniques. Traditional grading only. (4 hrs lab.)

590. Graduate Design (3)

Prerequisite: Acceptance into MFA Program. Advanced design projects and concepts with faculty supervision. Limited to 6 units in any one area and no more than 6 units in all areas in any one semester. Area will be designated by letter at time of registration as (c) costume, (d) scenery, (e) properties, (m) makeup, or (n) lighting. Traditional grading only.

602. Seminar in Theatre Management II (3)

Prerequisites: Acceptance into the MFA Program. Study of the application of contemporary principles of management processes specifically targeted to people pursuing professional Theatre Arts Management careers. The applications of the principles and practices of marketing, development, fund-raising, and publicity are analyzed and assessed through research and study. Course may be repeated to a maximum of 6 units. Traditional grading only.

614. Advanced Period Scene Study (3)

Prerequisite: Acceptance by audition into MFA program. Acting in Shakespeare and advanced scene study from selected theatrical periods and plays. Analysis and exercises include language, background, human behavior. Traditional grading only.

648A. Lighting Design II (2)

The direct application of cueing and the structuring of the total lighting design within the time constraints of rehearsal and production. Traditional grading only. (4 hrs lab.)

648B. Lighting Design II (2)

Prerequisites: THEA 648A or consent of instructor. Development of skills in the lighting design process for a variety of scripts and styles with specific challenges and complex production format. Traditional grading only. (4 hrs lab.)

649A. Lighting Design III (2)

Development of skills in lighting for the musical, opera, and dance. Traditional grading only.

649B. Lighting Design III (2)

Prerequisite: 649A or consent of instructor. Development of skills in lighting for other production venues. Traditional grading only.

656A. Costume Design III (2)

Development of skills in costume design for the musical, opera, and dance. Traditional grading only. (4 hrs lab.)

656B. Costume Design III (2)

Prerequisite: THEA 656A or consent of instructor. Development of skills in costume design for other production venues. Traditional grading only. (4 hrs lab.)

685A. Scene Design III (2)

Development of skills in scene design for the musical, opera, and dance. Traditional grading only. (4 hrs lab.)

685B. Scene Design III (2)

Prerequisites: THEA 685A or consent of instructor. Further development of skills in scene design for other production venues. Traditional grading only. (4 hrs lab.)

686. Theatrical Tailoring (2)

Investigation of tailored garments and understructures in selected historical periods. Projects in traditional and contemporary hand machine tailoring techniques, and in specialized construction for undergarments. Supervision in the practical application of these elements in university sponsored productions. (4 hrs lab.) Traditional grading only.

688./488. CSU Summer Arts (1-6)

Topic courses offered by the CSU Summer Arts festival in the visual and performing arts. See Summer Arts or University College course listing for topics offered. Audition or portfolio review by CSUSA is required for enrollment. Special course fees may be required. Course may be repeated for a total of 24 units.

694. Advanced Studies in Theatre Arts (3)

Advanced individual projects with faculty supervision in an area of Theatre Arts specialization. Limited to 3 units in any one area per semester and no more than 6 units in one semester with a total of 9 units in any one area. Traditional grading only. Areas will be designated by letter at time of registration as:

- A. Acting
- B. Directing
- C. Costumes
- D. Scenery
- E. Properties
- F. Playwriting
- J. Theatre History
- K. Theatre Criticism
- L. Movement
- M. Makeup
- N. Lighting
- O. Voice
- Q. Theatre Management
- S. Technical Direction

696. Aesthetic Theory and Conceptualization (3)

A study of theoretical aesthetics as it applies to the creative act. Practical application of research and variable aesthetic elements in production style and conceptualization. Traditional grading only.

698. MA Thesis (1-4)

Prerequisites: Advancement to candidacy and consent of department chair. Preparation, completion and submission of thesis. Traditional grading only.

699. MFA Thesis (1-6)

Prerequisite: Advancement to candidacy and consent of department chair. Planning, preparation and completion of thesis related to field of specialization. Traditional grading only. Course may be repeated for a maximum of 6 units.



# THE UNIVERSITY

## History

The history of the institution now known as California State University, Long Beach began in 1947 when a state survey of anticipated post-World War II population growth recommended the founding of a state college to serve Orange County and southeastern Los Angeles County. The college first called Los Angeles-Orange County State College was officially authorized by Assembly Bill 8, signed by Governor Earl Warren on January 29, 1949. The early curricular emphasis was on teacher education, business education, and the liberal arts, although additional pre-professional studies were quickly added.

Students registered for their first classes, which were held in a converted apartment building at 5381 Anaheim Road, Long Beach, September 26 and 27, 1949. Cost of enrollment was \$12.50! That first semester's schedule of classes contained only 25 courses to support a total of five baccalaureate degree majors. There were 169 students and 13 faculty. In November the students held their first council meeting and elected Roger Bryson to be the first A.S. President.

During the 1950's, under the leadership of President P. Victor Peterson, the foundations were laid for the campus as it now appears. The permanent 322-acre site was first occupied in November 1951. The land was a gift of the City of Long Beach, which bought it from the Bixby Ranch Company and donated it to the State of California. In this period the Forty-Niner newspaper was established; the second-semester editor was Isabel Patterson, the noted Long Beach philanthropist who later donated the funds to build the Child Development Center that bears her name. Before long the sheep, rabbits, and meadowlarks on the top of the hill gave way to the Language Arts and Fine Arts Buildings, the Little Theatre, and the Library. Enrollment increased when freshmen and sophomores were admitted in 1953. A faculty council was established, and after 1961 the faculty governance process was embodied in the Academic Senate.

President Carl McIntosh oversaw further rapid growth throughout the 1960's. Enrollment soared from 10,000 students in 1960 to 20,000 in 1966. Expansion meant many new physical facilities, a broader range of degree and course offerings, and a greatly enlarged faculty. The mission of the campus was modified to encompass both undergraduate and graduate education through the master's degree in six schools: Applied Arts and Sciences, Business Administration, Education, Engineering, Fine Arts, and Letters and Science. In 1965 an International Sculpture Symposium brought 8 world-renowned sculptors to campus to create permanent monumental works of art. The School of Fine Arts pioneered in offering the first professional arts degrees (BFA, MFA) in the California State University system.

Under the leadership of President Stephen Horn, the campus continued its rapid growth during the early 1970's, although the pace slowed considerably later in

the decade. The Legislature changed the name to California State University, Long Beach in 1972. A year later enrollment reached 30,000. Important new buildings included the University Student Union, the Isabel Patterson Child Development Center, the Psychology and Theatre Arts Buildings, the Student Services/Administration Building, and the West Library, with its six floors of stacks and study areas.

During this period the University developed a campus-wide system of academic requirements, established a pioneering Learning Assistance Center, and began to emphasize the internationalization of its curriculum. Greatly increased faculty research and creative activity established the University as a significant contributor to the wealth of human knowledge.

Little physical expansion occurred during the 1980's, but there were substantial qualitative improvements. With additional dormitories, the number of residential students doubled to more than 1800, giving the campus a new sense of community. The acquisition of KLON, FM-88, which soon became one of the nation's premier public radio stations, featuring jazz and information programming, the expansion of the University Art Museum, and opening of the Earl Burns Miller Japanese Garden, the University Music Center, and the Loraine Huntington Miller and Charles Elmer Huntington International Houses all enhanced the rich cultural fabric of the University. In 1989 the Library celebrated the acquisition of its one-millionth volume and a year later opened a striking, technology-oriented north campus building which houses the state-of-the-art New Media Center. At the same time, led by its success in basketball, volleyball, baseball, and softball, the athletic program rose to national prominence.

The University faced new challenges in the 1990's, as a serious downturn in the California economy led to significant reductions in state support for higher education. Under President Curtis L. McCray the campus community undertook a major campaign to increase its private fundraising and grants-and-contracts activity in an effort to offset a portion of the lost state revenue. A number of significant construction projects bore testimony to the success of this campaign: the Richard and Karen Carpenter Performing Arts Center, the Martha B. Knoebel Dance Theater (part of the new Dance Center), the Pyramid Events Center, a 2800-space parking structure, the remodeling of the University Bookstore, the relocation of the University Art Museum, the renovation of many buildings used by the College of Health and Human Services, and the new CSULB Foundation Office Building — all were accomplished or enhanced with non-state funds.

The fifth president of the University, Robert C. Maxson, took office on June 1, 1994. Building on an initiative begun by Interim President Karl W. E. Anatol, he pledged to enhance the



Robert C. Maxson, President



quality of the services provided to students, to make the campus more "user-friendly," and to achieve a mix of students on campus that closely reflects the diversity of the region the University serves and meets the needs of the Southern California economy.

### Setting

The hilltop portion on the 322-acre campus overlooks the Pacific Ocean. Eighty permanent buildings house the various colleges, 63 academic departments and programs, 11 centers, 3 institutes, and 3 clinics.

An impressive University Student Union is located at the crossroads of the campus, providing a focal point for the total campus community. A centralized Student Services/Administration center in close proximity to the Union adds needed services. Specialized facilities for Engineering Technology, Dance, Design, Music, and Nursing have been completed, as has the International House student residence hall and meeting complex.

A state-of-the-art building for the College of Business Administration, complete with decision-support laboratories, multi-media capability, and modern lecture halls, opened in 1991. The Department of Dance occupied its new quarters in the largest and best-equipped instructional dance facility in the nation in time for the spring 1994 semester.

A central feature of the landscape design is a planting of 3,200 Helen Borcher flowering peach trees donated by the citizens of Long Beach. Secluded landscape areas and buildings of appropriate scale help maintain a learning environment that encourages small group identification and personal privacy in the midst of 30,000 individuals sharing the same site, on what is essentially a large urban campus.

The campus has assumed a highly individual character. In 1965, the International Sculpture Symposium contributed 9 monumental pieces and designs to the University. These works received credits in 21 national and international publications, and in 1972 additional community funds in the form of a trust provided for the completion of the Carlson Memorial Tower, designed by French sculptor Andre Bloc. The campus sculpture collection has continued to expand, with the addition of works by artists such as Guy Dill, Michael Davis, Robert Irwin, Bryan Hunt, and Woods Davy. These acquisitions were made possible by private donations and grants from the National Endowment for the Arts to the University Art Museum.

### Mission

California State University, Long Beach is a large urban comprehensive university in the California State University system. Its mission is high-quality education leading toward a broad range of baccalaureate and graduate degrees span-

ning the liberal arts and sciences and many applied and professional fields, with emphasis on instruction at the upper-division (junior and senior) and graduate levels, in accordance with the California Master Plan for Higher Education.

CSULB is committed to serving the people of California. To assure access and equity consistent with educational priorities, the University endeavors to serve students who can only attend in the evening as well as those who can attend during traditional daytime hours, those who must attend part time as well as those who attend full time, and those from population groups whose rates of enrollment historically have been lower than average as well as those from groups that have had historically higher rates of education. The University serves students who have graduated in the top third of the State's

high school graduating class, students who have completed a community college program, and adults re-entering education.

The University's educational mission is to promote intellectual and personal development and to prepare students for lifelong learning as well as preparing them to succeed in a variety of professional endeavors and to function as informed, contributing members of the community. To these ends, the mission of the undergraduate

program is grounded in a strong general education curriculum, emphasizing the acquisition of writing, critical thinking, and analytical skills and knowledge of cultural and artistic traditions, the analysis of human behavior and society in the past and present, and scientific modes of inquiry. The mission of all degree programs is to provide each student with the skills necessary to pursue knowledge and to integrate information from various sources, and also to provide depth in at least one area of specialization. The mission of the graduate programs is to prepare students to enter careers requiring training beyond the baccalaureate, to advance in their jobs, or to pursue advanced study. Doctoral programs are intended to provide both advanced knowledge and the skills needed to pursue independent research. Educational support programs and services for students emphasize the importance of personal, interpersonal, and societal development.

A fundamental goal of all of the University's programs is to prepare students to function effectively in a culturally diverse society, by developing an understanding of our diverse heritage, including the essential contributions of women and ethnic minorities. Instruction emphasizes the ethical and social dimensions of all disciplines, as well as their applications to contemporary world issues. Building upon the culturally diverse region it serves and the international character of its faculty, the University emphasizes international education in its curriculum.

The University seeks to involve students in learning by offering most of the curriculum in small sections taught by fully



qualified, professionally active faculty members, and by providing opportunities for undergraduate as well as graduate students to work with faculty members in independent study and research. CSULB serves the surrounding community through applied research, training and community service programs, and consulting for government agencies, non-profit organizations, and private industry.

#### Accreditation

The University is accredited by the Western Association of Schools and Colleges (P.O. Box 9990, Mills College, Oakland, CA 94613-0990, 510-632-5000), the agency responsible for granting regional accreditation to colleges and universities in California, Hawaii, and Guam. It is accredited by the California State Board of Education and is on the list of approved institutions of the American Association of University Women. Additional information concerning University accreditation may be obtained from the Office of Academic Affairs. Additional information concerning departmental accreditation may be obtained from the department concerned or the Office of Academic Affairs.

- Art – National Association of Schools of Art and Design, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700
- Athletic Training – Professional Education Committee, National Athletic Trainers Association, Inc., Department of Physical Education, Indiana State University, Terre Haute, IN, phone: 812-237-3026; and Kinesiotherapy, P.O. Box 614, Wheeling, IL 60090, phone: 800-296-2582
- Business Administration – American Assembly of Collegiate Schools of Business, 605 Old Ballas Road, Suite 220, St. Louis, MO 63141-7077, phone: 314-872-8481
- Chemistry (undergraduate) – American Chemical Society, Committee of Professional Training, 1155 Sixteenth St., NW, Washington, DC 20036, phone: 202-872-4589
- Communicative Disorders (graduate) – American Speech-Language-Hearing Association, Council on Academic Accreditation, 10801 Rockville Pike, Rockville, MD 20852, phone: 301-897-5700
- Computer Science (undergraduate) – Computing Science Accreditation Board, Two Landmark Square, Suite 209, Stamford, CT 06901, phone: 203-975-1117
- Construction Engineering Management – American Council for Construction Education, 1300 Hudson Lane, Suite 3, Monroe, LA 70201-6054, phone: 318-323-2816
- Dance – National Association of Schools of Dance, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700
- Design – National Association of Schools of Art and Design, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700
- Engineering (undergraduate: Chemical, Civil, Computer, Electrical, Engineering Technology, Mechanical) – Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite #1050, Baltimore, MD 21202, phone: 410-347-7710
- Family and Consumer Sciences – American Association of Family and Consumer Sciences, Council for Accreditation, 1555 King Street, Alexandria, VA 22314, phone: 703-706-4600; and Commission on Accreditation/Approval for

Dietetics Education, American Dietetic Association, 216 West Jackson Boulevard, Suite 800, Chicago, IL 60606-6995, phone: 312-899-4872

- Health Science (graduate) – Council on Education for Public Health, 1015 Fifteenth Street, NW, Washington, DC 20005, phone: 202-789-1050
- Music – National Association of Schools of Music, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700
- Nursing – Commission on Collegiate Nursing Education, 1 Dupont Circle, NW, Suite 530, Washington, DC 20036-1120, phone: 202-887-6791
- Physical Therapy – Commission on Accreditation in Physical Therapy Education, American Physical Therapy Association, Transpotomac Plaza, 1111 North Fairfax Street, Alexandria, VA 22314, phone: 703-706-3245
- Public Policy and Administration – National Association of Schools of Public Affairs and Administration, Commission on Peer Review and Accreditation, 1120 G Street, NW, Suite 730, Washington, DC 20005, phone: 202-628-8965
- Radiation Therapy Technology – Joint Review Committee on Education in Radiologic Technology, 20 N. Wacker Drive, Suite 900, Chicago, IL 60606-2901, phone: 312-704-5300
- Recreation and Leisure Studies – National Recreation and Park Association, Council on Accreditation, 22377 Belmont Ridge Road, Ashburn, VA 20148, phone: 703-858-0784
- Social Work – Council on Social Work Education, Commission on Accreditation, 1600 Duke Street, Suite 300, Alexandria, VA 22314, phone: 703-683-8080
- Theatre Arts – National Association of Schools of Theatre, 11250 Roger Bacon Drive, Suite 21, Reston, VA 22090, phone: 703-437-0700
- University Art Museum – American Association of Museums, Suite 200, 1225 Eye St., NW, Washington, DC 20005, phone: 202-289-1818

#### The Faculty

The faculty of California State University, Long Beach is a dedicated group of men and women. Each has been well-prepared for the work of providing instruction to undergraduate and graduate students. The faculty create an intellectual atmosphere that encourages students to develop a spirit of investigation which becomes a life-long approach to issues and problems. It is the faculty's hope that students will gain respect for excellence of performance and take advantage of the wide range of educational opportunities available to them.

Faculty earn academic rank as they develop their course materials, research, academic and community service, and publications. The highest faculty rank is "Professor," sometimes called "full Professor." The intermediate rank is "Associate Professor." Most faculty begin their careers as "Assistant Professors."

The faculty are assigned to departments and programs within colleges of the University. The department chair is the academic leader of the department faculty.

A dean is the chief academic officer of a college. Deans are appointed by the Provost and Senior Vice President for

Academic Affairs in consultation with the President and the college faculty. Most colleges have one or more associate deans to assist in the administration of college resources.

Elsewhere in this Catalog you will find the explicit policy of the University on grades and grading as well as policies on class attendance, withdrawal from courses, and cheating and plagiarism. These and other policies reflect the concerns of the faculty that students take seriously the opportunities made available to them. Beyond these rules and regulations the faculty expect student participation in education that may be different from or more active than what students have been used to in secondary schools. For every discipline the fund of knowledge to be absorbed, understood, and added to is expanding rapidly.

The role of the university professor is somewhat different from that of the high school teacher. University faculty are involved in the creation of knowledge as well as the dissemination of it. The expectation is that the students will not only use the 150 instructional days per year to the best possible advantage, but also by reflecting on the learning process, by thinking about how the professor came to understand and organize the knowledge presented, will learn how to take full advantage of the University's resources and those elsewhere, thus taking responsibility for the life-long process of personal education.

#### Academic Organization of the University

During the regular session California State University, Long Beach is as large as a small city. More than 26,000 students, 769 tenured and tenure-track faculty, 629 lecturers, and nearly 1,200 staff members study and work on campus each week. In order to operate, the campus has been organized into seven separate units and many academic departments and programs. The names of the colleges, departments, and programs and their current deans are shown at the beginning of this catalog.

Colleges are usually composed of academic areas with some common characteristics. Because of this, colleges themselves suggest a way to look at the enormous fund of knowledge that is this University. One function of a college is to provide a forum for the faculty and the students to express academic matters before a knowledgeable group of people. At the university level this is a very important aspect of the educational process.

For students who have just begun their life in the University, some of the departments of the colleges will be unknown territory. Other departments and programs will turn out to be considerably different from first expectations or previous experiences with high school subjects of the same or similar names. For students who have begun to focus their academic interests, exploration of the departments and programs of a college beyond the favorite first contact area will often prove to be a valuable part of the process of choosing an academic major.

This catalog is organized alphabetically by department and program.

#### Departments, Programs, and Studies

The elemental unit of academic organization at this University is the department. Departments are most often coincident with a discipline and usually share the same name. Faculty are members of departments. Thus the department of Biological

Sciences has many "programs," including degrees in Biology and Microbiology, a minor in Biology, and a certificate in Biomedical Art. You will also find in this catalog academic areas, like Gerontology, which are not part of any one department. Some of these areas are called "Studies," e.g., Women's Studies, Medieval Studies. This means that the field is essentially an interdisciplinary one and is the product of the activities of faculty from many departments. The faculty of Religious Studies formed a department and is an exception.

#### University College and Extension Services (UCES)

UCES is the self-support community-outreach branch of California State University, Long Beach. Its mission is to meet the lifelong personal and professional-development learning needs of citizens, industries, and institutions in the Long Beach area and beyond.

Credit programs and courses are offered by UCES during summer and winter. Other credit courses are offered in the fall and spring semesters through open university, and special sessions. UCES' Integrated Distance Education for Adult Students (IDEAS) is currently developing three courses for delivery on the World Wide Web. These courses are upper division, general education, credit courses. Offered as Special Sessions courses, they do not require admission to CSULB. Visit the Web site at: <http://www.ideas.uces.csulb.edu/on-line>. In addition, UCES offers more than 550 continuing education programs in the following areas: business, management, science, technology, arts, humanities, social sciences, and human services.

UCES offers customized corporate on-site training. Other programs also offered through UCES include the American Language Institute, international business, global logistics, executive education, and the Software Engineering Forum for Training (SEFT).

The Advanced Media Production Center provides training in computer graphics, animation, and video production.

#### Academic Senate, Councils, and Committees 1997-1998 Academic Year

The faculty is subdivided into departments and programs. Normally these sub-divisions have committees to discuss curriculum and other matters. Since departments and programs are constituent parts of the colleges, they also send members to college-level committees and councils. These bodies serve to develop, refine, and review curriculum. At the University level faculty members from all of the colleges are elected to several councils and to the Academic Senate. These bodies concern themselves with campus-wide issues. Many of these councils, their subcommittees, and the Academic Senate have also provided for staff, student, and administration membership.

Chair of the Academic Senate —  
David Hood (History)

Chair of the Planning and Educational Policies Council —  
Margaret Merryfield (Chemistry and Biochemistry)

Chair of the Graduate Council —  
Alice Littlejohn (Library and Learning Resources)

Chair of the Financial Affairs Council —  
Joseph Magaddino (Economics)

Chair of the Teacher Preparation Committee —  
Pamela Ashe (Counseling and Psychological Services)

## The University Library

The University Library excels in all forms of information delivery to students, faculty, and members of the community. The main library, located at the south end of campus, is a six-story structure, recently remodeled and enlarged, housing over one million books, along with bound periodicals, federal and state documents, rare books, maps, videos, cd's, films, and other non-print materials. The north campus library is a one-story building in which a central gallery connects three library "pods" for quiet study, informal reading, and computer-based work, and houses the University Art Museum.

Direct personal assistance in the use of library resources is provided by skilled staff at a number of library service desks. Assistance with identifying, locating, and using library resources is available in the reference center on the first floor of the main library. Access to library collections is available throughout both library buildings, from other points off campus, and from home and office computers through COAST, CSULB's on-line catalog.

The reference center is one of several sites for the library's network of bibliographic databases. This network is the gateway to journal citations and abstracts, government document references, the holdings of other libraries, and delivery of full-text documents on a broad range of subjects. In addition to information databases which are locally owned, the library provides Internet access to many others. Still others are available from commercial database vendors such as DIALOG, BRS, and Dow Jones. Through the library's Interlibrary Document Delivery service, books and articles needed by students and faculty can be obtained quickly and efficiently from sources elsewhere in California, the nation, and overseas.

The library's instruction program offers a full range of opportunities to the campus community, from a library skills course required of new first- and second-year students to advanced seminars in research methodology and information retrieval tailored to the needs of specific disciplines or courses.

The library serves the needs of the disabled through study facilities, terminals, and other equipment such as a Kruzweil reading machine.

Outstanding collections in history, politics, the arts, and humanities are found in Special Collections. There are extensive holdings on the history of California, the Emancipation movement, as well as a notable collection of first editions, private printings, manuscripts, anthologies, criticisms, and ephemera on the poet Robinson Jeffers. California legislators Vincent Thomas, Mark Hannaford, and Richard Hanna have donated to the library papers and files related to their years of public service, and an important collection of radical literature centering on the California political activities of Dorothy Healy is another scholarly resource located in Special Collections. These materials are complemented by original art works and photographic prints by Edward Weston, Ansel Adams, and numerous contemporary West Coast photographers.

The Learning Resources department offers a variety of creative technical and consultative services in the area of graphic arts, multimedia, video, photography, and sound. Audio-visual equipment in support of classroom instruction also is provided.

## University Computer Facilities

The University provides an extensive array of computing resources. Windows and Macintosh computers are located across campus and most are connected to the Internet. A great variety of software is installed in these labs, including productivity tools (word processing, spreadsheets, etc.), graphics packages, statistical programs, and network applications (web browsers, telnet and ftp clients, e-mail, etc.). Campus computing labs also provide access to library databases such as COAST, the CSULB Library On-line Catalog, MELVYL, the University of California On-line Catalog, and CARL UnCover, a periodical index and document delivery service of 6,000 currently published journals. A tremendous amount of information about the university, including advising, curricular, and student services, is also available at the official CSULB web site <http://www.csulb.edu/>.

Student accounts, which can be obtained at no cost from Academic Computing Services at the North Campus Library building, are required for e-mail access and personal web page development. Students can access their e-mail from home by dialing (562) 985-7777 or (562) 985-7778. The campus supports 56Kflex technology for off-campus modem connections. In addition, Academic Computing Services distributes Dr. Solomon Anti-Virus

Toolkit software at no cost to students, faculty, and staff members. This software, which has monthly updates, protects personal computers from over 14,000 viruses.

The University is also internationally recognized for its New Media Center at the North Campus Library building. The Center supports the development and use of interactive multimedia instructional materials for both classroom presentations and individual student learning. The Center provides lab facilities, training, consulting, development expertise and access to multimedia hardware and software. The Center is a charter member of the national New Media Centers program, which was created by major technology companies to select centers of excellence in using New Media to support learning.

## Research Centers and Institutes

- Center for Aerospace Sciences – Tuncer Cebeci, Director
- Center for Asian Pacific American Studies – John Tsuchida, Director
- Center for Behavioral Research and Services – Fen Rhodes, Director
- Center for Career Studies – Paul Bott, Director
- Center for Commercial Deployment of Transportation Technologies – Richard Williams and Robert Behm, Directors
- Center for Criminal Justice Research and Training – Arthur Basile, Director



- Center for Educational Applications of Brain Hemisphere Research – Betty Edwards, Consulting Director; Jay Kvapil, Director
- Center for Educational Research and Services – Robert Berdan, Director
- Center for European Studies – Jutta Birmele, Director
- Center for First Amendment Studies – Craig Smith, Director
- Bureau of Governmental Research and Services – Michelle Saint-Germain, Director
- Center for Health Care Innovation – Connie Evashwick, Director
- Center for Humanities – Shirley Mangini, Director
- Center for Language - Minority Education and Research – David Ramirez, Director
- Molecular Ecology Institute – Kenneth Jenkins, Director
- Physical Therapy Assessment Center – Ray Morris, Director
- Senior University – Sue Perisi, Director
- Institute for the Study of Judeo-Christian Origins – Robert H. Eisenman, Director
- Center for Southeast Asian Studies – Teri Yamada, Director
- Center for Successful Aging – Jeanne Bader, Director
- Center for Usability in Design and Software Assessment – Thomas Z. Strybel and Gerald L. Hanley, Directors

#### Fine Arts Public Performances and Exhibitions

The College of the Arts presents more than 350 performing and visual arts events each year; many are works by faculty and students; others are performances by world renowned artists. With the support of the Louise Carlson Cultural Fund and the Lillian Newman Komaroff Memorial for the Performing Arts, the College presents an annual performing arts series featuring outstanding professional artists and touring companies.

Performing arts events are held in a number of specially designed facilities: the University Theatre with a proscenium stage and seating for 400; the flexible Studio Theatre, which seats 230 in several different configurations, including theatre-in-the-round; the CalRep Theatre, with 86 seats; the newly rebuilt Gerald R. Daniel Recital Hall, which seats 280; the brand-new Martha B. Knoebel Dance Theater, which seats 250; and the Carpenter Performing Arts Center which can seat up to 1162.

The Department of Art presents a weekly schedule of graduate student exhibitions in College of the Arts Galleries B and C. Annual events include a New Faculty Exhibition each October, Winter Art Sale during the first week of December, Student Art Exhibition in the University Art Museum each May, and an Alumni Exhibition each June.

The Department of Dance presents two major performances each year during November and May. The modern dance concerts feature works by CSULB's highly acclaimed dance faculty performed by the faculty and students. Informal concerts featuring choreography by CSULB students are presented each semester. The Annual Intermedia Festival each May is a unique collaboration between the Departments of Dance and Music.

The Department of Design presents the Senior Design Show, an outstanding exhibition of projects by Interior Design and Industrial Design students each May in the Graduate Center. Design graduate students present exhibitions throughout the year in Galleries B and C.

The Department of Music presents more than 100 concerts each year featuring 18 performing groups including the Symphony Orchestra, Wind Symphony, Jazz Ensembles, University Choir, String Quartet, Opera, Forty-Niner Chorus, Men's Chorus, Women's Chorus, Collegium Musicum, and others. During the first week of December, the Choral Studies Program presents the Annual Winter Festival Concert in Long Beach's historic First Congregational Church.

The Department of Theatre Arts produces five major productions each year. Acclaimed for quality acting and innovative sets, the theatre season includes contemporary dramas, classics, and musicals. The California Repertory Company, composed of graduate students pursuing the MFA degree, department faculty, and area professionals, performs five additional plays annually in an intimate, 86-seat theater as well as other campus venues.

Tickets for all dance, music, theatre arts, and Carpenter Center performances are sold through the CSULB Arts Ticket Office located in the Carpenter Performing Arts Center at 6200 Atherton Avenue. The Arts Ticket Office is open from 11 a.m. to 5 p.m., Tuesday through Friday, and 11 a.m. to 4 p.m., Saturdays. A satellite ticket office, located in the southwest corner of the Theatre Arts Building, is open for the convenience of students from 11 a.m. to 2 p.m., Monday through Friday. Ticket offices near the entrances to each of the University's performing arts venues are also open one hour prior to performances. Special faculty, staff, and student rates are available for most performances. Visa and Mastercard are honored. For information or to charge tickets, call the Fine Arts Ticket Office at (562) 985-7000.



#### University Art Museum

The University Art Museum, one of the units of the College of the Arts, provides the campus and surrounding communities with quality exhibitions in the visual arts on a year-round basis and presents scholarly publications, guest lectures, and educational outreach programs designed to reach a broad general public. Programs that are an integral part of the museum include the Museum Studies Certificate Program, which

trains students for careers in museum work; Art to the Schools, which brings educational projects in the visual arts into the classroom; the Summer Institute for Teachers, which helps teachers utilize the resources of museums as part of their curriculum; and Get the Picture, a workshop to acquaint youth with the history and heritage of the City of Long Beach and surrounding regions.

In 1984, the University Art Museum was accredited by the American Association of Museums (American Association of Museums, Suite 200, 1225 Eye St., NW, Washington, DC 20005, phone: 202-289-1818) and thus ranks among the top ten percent of the nation's 6,000-plus museums. It is one of only two nationally accredited art museums in a public university in Southern California. Its exhibitions and collections, including the Monumental Sculpture Collection spread throughout the 322-acre campus, have brought the University and Long Beach area recognition from both the professional art community and an international public. The Museum has an active community membership program which offers special events, museum tours, and international travel opportunities planned exclusively for museum members. All students are invited to join ArtPartners, the student and young professional group affiliated with the University Art Museum. For information about University Art Museum activities, call (562) 985-5761.

#### The Earl Burns Miller Japanese Garden

Beauty, simplicity, harmony, and peace are all expressed in a traditional Japanese garden. California State University, Long Beach and the community have been enriched by the Earl Burns Miller Japanese Garden, which provides a setting to experience these important qualities.

Mrs. Loraine Miller Collins' appreciation of Japanese culture is reflected in the planning for the garden. The detailed design was careful work of Long Beach landscape architect Edward R. Lovell, whose visits to Japan and a number of its gardens enhanced the project. The Japanese stone sculptures were personally selected by Mrs. Collins, as were the bonsai pines, and the furnishings for the teahouse.

The natural effects of the garden design are an expression of the Japanese attitude of respect and love for all nature, a valuable heritage which has been continued. Everything in a Japanese garden has significance: the moss-covered rocks, the brilliant colors of the azaleas, the cascading water, the gracefulness of the forms of the trees, the movement of the colorful koi in the lake. Placement of plants and rocks are all based on asymmetry and rhythm. Every element is part of an overall composition which provides for a delightful sense of peace and harmony.

A unique aspect of the garden is that it has been designed to encourage access by the physically disabled.

#### The Forty-Niner Shops

The Forty-Niner Shops, an auxiliary organization, enhances and supports the educational process of CSULB by providing goods and services at reasonable and competitive prices. The Forty-Niner Shops, Inc. operates the University Bookstore, Campus Copy Center, the University Dining Plaza, and a variety of food and refreshment stations across the campus. The Forty-Niner Shops, Inc. is a nonprofit corporation which has faculty, student, staff and administrative representation on its Board of Directors.

The University Bookstore stocks textbooks, general and reference books, school supplies, clothing gifts, computer hardware, software and supplies. Services offered include ATM services, bus passes, debit card, gift certificates, check cashing and the sale of money orders and stamps.

The Campus Copy Center offers copying (including color), duplicating, offset printing, book and report binding, transparencies, faxing and shipping. Self service copiers are available for your copying needs at the Main Library, North Library, Bookstore Convenience Store, College of Business, University Dining Plaza, the Outpost and the Student Career Development Center.

The University Dining Services includes the Residence Dining Halls and the University Dining Plaza which includes the A La Mode, Center Court, the Nugget and the Chartroom featuring a wide variety of foods. Catering services are available for campus functions. The satellite food operations consist of the Hot Dog Carts, vending machines, The Outpost (located near the College of Engineering) and Pyramid Concessions.

#### President's Scholars Program

Donations are sought to endow the President's Scholars Program. The President's Scholars Program at CSULB affords qualifying valedictorians and National Merit finalists from accredited California high schools an exceptional scholarship package. The elements of this package include full payment of the State University Fee and other student fees, an annual book allowance, paid housing in campus residence halls, priority registration, personalized academic advising, parking, and e-mail and internet access. The scholarship for valedictorians is valued at approximately \$25,000 over four years and for National Merit Scholars approximately \$35,000 over four years. The scholarship is renewable annually based on maintenance of satisfactory academic progress.

#### University Relations and Development

The Division of University Relations and Development serves as the primary contact with the University's alumni, friends, and community supporters. Its mission is to support the University's position as a flagship institution for excellence in teaching, research, and service by developing private support from individuals, corporations, and foundations. The activities of University Relations and Development include alumni relations, corporate relations, college-based development, estate planning and gifts, KLON radio, major gifts, media relations, public affairs, and publications. Each year, millions of dollars are given to support and further the educational mission of the University.

#### Alumni Association

The CSULB Alumni Association is the link between the University and its more than 165,000 alumni. The Association develops social, educational and recreational programs that bring alumni back to campus.

All former students who attended at least one semester at CSULB are considered alumni and are eligible to join the Alumni Association. Graduates and credential recipients can join by completing an enrollment card and paying a one-time \$25.00 fee; non-graduates, including employees and friends of CSULB, may join as associate members for a yearly fee.

Alumni volunteers assist on Alumni Association committees helping to plan Homecoming festivities, commencement, hospitality center, the summer Concerts in the Grove series, and other events.

Members of the Alumni Association receive a benefit package that includes library privileges at all CSU institutions (there are restrictions on computer usage), on-campus assistance at the Learning Assistance Center at no extra charge, the Career Development Center for a yearly fee, an Association credit card, a hotel/motel discount program, and access to membership in health insurance programs. Also available to members are the semi-annual Alumni Calendar of Special Events; the CSULB Review publication; University Student Union privileges; and discounts on some CSULB theater performances, athletics events and local attractions.

For more information on Alumni Association services call the Alumni Relations Office at (562) 985-5252.

### The Annual Fund

Alumni actively and generously support the University through the Annual Fund. Over 55,000 alumni, parents, and friends are contacted annually to support University activities. The majority of donations are undesignated and are used to meet the most critical needs of the University. Some donors prefer to designate their gifts to their departments or colleges.

### Parents' Fund

The Parents' Fund was established to give parents the opportunity to support the University. Parents of currently enrolled and graduated students are contacted yearly by the Annual Fund. The willingness of parents to pledge financial support to the University is a confirmation that CSULB provides an excellent educational environment for the students it serves.

### Senior Gift Campaign

Every graduating senior is contacted near graduation to initiate a pledge in support of the campus. Seniors are asked to donate \$100 to purchase a brick to be permanently placed in the Alumni Brick Plaza. Gifts of \$99 or less are designated to the Annual Fund to be used for essential campus needs. Seniors have proven to be generous and loyal donors to the University.

### Major Gifts and Deferred Giving

The Office of University Relations and Development works with individual and corporate donors in securing current and deferred gifts. Major named gifts on campus include such legacies as the Isabel Patterson Child Development Center, the Earl Burns Miller Japanese Garden, the Carpenter Performing Arts Center, and the Martha B. Knoebel Dance Theater.

Endowed scholarships honoring individuals and families have been established in all areas of the University. Many individuals have included CSULB in their wills by providing for

scholarships and faculty development. The University can also accept the transfer of securities, real property, personal libraries, private collections, works of art, and musical instruments as gifts to enhance educational quality.

Major gifts may serve restricted purposes in accordance with the donor's designation, or their use may be left to the discretion of the President of the University.

### The Academic Corporate Council

The Academic Corporate Council consists of 25 corporate senior executives who provide counsel to the University in the creation of corporate partnerships and serve as advocates and supporters of the University in the community. Each company donates \$5,000 annually to support the President's Scholars Program.

### The President's Associates

The President's Associates is composed of more than 200 alumni, community leaders, parents, and friends whose financial support significantly enhances the quality of education at CSULB.

Each member contributes unrestricted tax deductible gifts of \$1,250 (or more) per year, which are pooled with other charitable donations to fund a wide range of top-priority projects such as the President's Scholars Program.

For additional information about donor opportunities contact the Vice President for University Relations and Development, (562) 985-5197.

### KLON-FM 88 Public Radio

FM88/KLON (88.1 on the FM dial), a noncommercial radio station is licensed to the California State University, Long Beach Foundation. KLON's primary signal coverage is the southern portion of the Los Angeles basin

with secondary coverage to most of Los Angeles and Orange Counties. It has a potential audience of 2,000,000.

The station is on the air 24 hours per day with a program format of jazz, information, and public affairs. KLON provides professional learning opportunities for CSULB students, including a unique opportunity for students in the Film and Electronic Arts and Journalism departments to gain experience in a full-time, professional radio station with direct supervision by faculty members and industry professionals. KLON provides additional learning experiences for students in marketing, graphic design, industrial design, and public relations. FM 88 is a listener-supported radio station, funded by a combination of institutional, governmental, corporate, foundation, and private contributions.

### University Foundation

The California State University, Long Beach Foundation is a non-profit, tax-exempt corporation organized to administer grants and contracts for research and other activities related to the University's programs. On behalf of the University, the Foundation also accepts donations, gifts, and bequests for University-related use, and provides tax-deductible advantage to the donor.



Research and other activities involving the Foundation are related directly to academic programs. They involve substantial interaction between faculty, staff, and students.

Donations, gifts, and bequests provide a significant addition to the accomplishments of the University. Public funds provide support for most of the instructional and instructional-related activities and facilities.

Charitable donations counseling and consulting services are available to potential donors. Information can be secured from the Vice President for University Relations and Development (562) 985-5197, or by addressing a letter to the California State University, Long Beach Foundation, a 501(c)(3), non-profit corporation recognized by the Internal Revenue Service.

### Honor Societies

- Phi Beta Kappa – Founded at the College of William and Mary in 1776, it is the oldest and most prestigious honor society for students of the liberal arts and sciences. A chapter was established at California State University, Long Beach in 1977.

Graduating seniors are elected to membership in Phi Beta Kappa on the basis of extraordinary scholarly performance at this University, after study of their records by faculty members who are themselves members of Phi Beta Kappa. No action on the part of the student is necessary to initiate consideration. In reviewing candidates the Elections Committee of the chapter will look for evidence of broad liberal arts and cultural interests, scholarly excellence, and good character. Certain minimum requirements must normally be met:

1. Residence at CSULB for at least four semesters (60 units) at the time of graduation.
2. A grade-point average of 3.70 or more in courses taken at CSULB and in all college work.
3. A major, or the equivalent, in one of the liberal arts or sciences.
4. At least 90 semester hours in liberal subjects, including:
  - A. Reasonable breadth or work outside the major.
  - B. Knowledge of a foreign language. This means satisfactory completion of at least one course at the second year college level (3 semesters) or three years of a single language in high school or the equivalent.
  - C. Knowledge of mathematics. This means satisfactory completion of course work to the level of one of the following: MATH 111, 112, 114, 115, 117, or the equivalent.

The Elections Committee may make minor exceptions to the specific requirements noted above.

Inquiries should be directed to the President of the University chapter of Phi Beta Kappa, Dr. Roberta Markman, c/o Department of Comparative Literature and Classics.

Two additional societies which may elect students from all academic areas are:

- Mortar Board – A national honor society for senior students who have achieved academic excellence and have made personal contributions to campus life through service and research. A 3.0 GPA is required.

- Phi Kappa Phi – Founded in 1897 at the University of Maine, it is the oldest and largest national honor society which recognizes and encourages superior scholarship in all academic disciplines. Chapter 86 was established at California State University, Long Beach, in 1963.

The honor society promotes the pursuit of excellence in all fields of higher education including the arts, humanities, sciences, engineering, education, health sciences, and business. Admission to Phi Kappa Phi is by invitation only and requires nomination and approval by the chapter and national Society. Membership for juniors, seniors, and graduate students is based on integrity of character, one year residence in the University, and outstanding scholarship. For consideration, students must possess the following:

1. A junior must be enrolled in the final semester of the junior year and have completed at least 75 units, 24 of which must be at CSULB, with an overall GPA of 3.75.
2. For consideration as a senior, the student must have completed at least 90 units, 24 of which must be at CSULB, with an overall GPA of 3.75.
3. Graduate students must be enrolled at CSULB for at least one year and have achieved a minimum GPA of 3.85 in graduate course work; except that a candidate for a master's degree who has not completed a full year's residence shall be eligible for election within a period of one month prior to the comprehensive examination for the degree.
4. Any member of the faculty, including the administrative staff of the university, who is a graduate of a four-year collegiate institution of recognized standing and
  - A. whose undergraduate or graduate scholastic record would have made for eligibility for election to membership; or
  - B. who has attained a position of distinction in a field of work.

To support first-year graduate work, the Society annually offers on a competitive basis nationally, 50 Fellowships for \$7,000 to seniors, with honorable mentions receiving \$1,000. Local scholarships are awarded by the Chapter; last spring eight \$500 scholarships were awarded to deserving students. Inquiries should be directed to the President of the University chapter of Phi Kappa Phi, Dr. C. J. Walter, Dean of Business Administration.

Other societies may limit membership to particular academic areas. Among these organizations at California State University, Long Beach are the following:

- Beta Alpha Psi (Accounting) — National scholastic fraternity to give recognition to excellence in the field of accounting.
- Beta Gamma Sigma (Business Administration) — National honorary business society to recognize superior academic performance.
- Chi Epsilon (Civil Engineering) — National honor society open to Civil Engineering majors with a 2.9 GPA.
- Chi Sigma Iota (Counseling) — International honor society open to graduate students with a GPA of 3.5, scholars, and practitioners in the counseling profession.
- Eta Kappa Nu (Electrical Engineering) — National honor society furthering area interests and promoting scholarship. GPA requirements for seniors 2.8, for juniors 3.0.



- Kappa Delta Pi (National honor society for teachers) — encourages high professional, intellectual, and personal standards. Recognizes outstanding contributions to education.
- Omicron Nu (Family and Consumer Sciences) — National honor society recognizing superior scholarship and promoting leadership and research in the field of Family and Consumer Sciences.
- Phi Alpha (Social Work) — National honor society to improve the goals of social work on campus. GPA requirement 3.0.
- Phi Beta Delta (International Education) — National society, founded at CSULB, recognizes students from all disciplines with high GPAs and extensive involvement in international education or international studies.
- Phi Delta Gamma (Scholarship) — National honor society which fosters academic achievement and professional preparation.
- Phi Delta Kappa (Education) — National organization which promotes service, research, and leadership in education. Members include both students and faculty.
- Phi Epsilon Kappa (Physical Education) — National society for recognition in sports and physical education. 3.0 GPA requirement and faculty recommendation.
- Phi Mu Alpha-Sinfonia (Music) — National organization for students in music. Promotes music in America, especially contemporary American music.
- Phi Alpha Alpha (Public Administration) — National society to encourage scholarship among students of public administration.
- Phi Sigma Tau (Philosophy) — National honor society for students with a strong undergraduate concentration in philosophy.
- Pi Kappa Lambda (Music) — National honor society for scholastic achievement in music.
- Pi Lambda Theta (Education) — National organization for undergraduate and graduate students. Purpose is to maintain high standards of scholarship and preparation for teaching.
- Pi Mu Epsilon (Mathematics) — National honor society recognizing distinction in mathematics.
- Pi Sigma Alpha (Political Science) — National honor society for political scientists. Open by invitation to upper-division and graduate students with a 3.0 GPA.
- Pi Tau Sigma (Mechanical Engineering) — National honorary fraternity encouraging and recognizing outstanding scholastic achievement of students in the field.
- Psi Chi (Psychology) — National honor society recognizing distinction in Psychology. Sponsors research and other participation in psychology.
- Sigma Alpha Iota (Music) — National organization for women in music. Aims to further the development of music in America through performance, study, and participation in both campus and community projects.
- Sigma Theta Tau (Nursing) — International honor society recognizing superior scholastic achievement, leadership, and community service in nursing.
- Sigma Tau Delta (English) — National honor society conferring distinction for high achievement in the study of English language and literature.
- Sigma Xi (Science) — National honor society.
- Tau Beta Pi (Engineering) — National honor society recognizing engineering students for academic achievement and participation in activities. Members are elected from top 20 percent of the senior and top 12 percent of the junior class.



# WOMEN'S STUDIES

*College of Liberal Arts*

Director

Patricia Rozee

Office

FO2-226

Telephone

(562) 985-4839

FAX

(562) 985-4237

Faculty

Professors

Elyse Blankley (Women's Studies and English)

Norma Chinchilla (Women's Studies and Sociology)

Margaret Costa (Kinesiology and Physical Education)

Betty Edmondson (Kinesiology and Physical Education)

Shirley Mangini (Spanish/Portuguese)

Claire Martin (Spanish/Portuguese)

Consuelo Nieto (Education)

Patricia Rozee (Psychology and Women's Studies)

Sharon Sievers (History)

Toni Stanton (Anatomy/Physiology and Women's Studies)

Theresa Turk (Sociology)

Associate Professors

Patricia Cleary (History)

Wendy Griffin (Women's Studies)

Assistant Professors

Xiaolan Bao (History)

Angela Bowen (Women's Studies and English)

Mary Caputi (Political Science)

Jane Howell (Anthropology)

Eve Oishi (Women's Studies)

**I**t is the goal of the Women's Studies Program to provide for students, the University, and the community an intellectual context from which it is possible to study the experience of women. By definition, this enterprise crosses disciplinary and cultural lines; it means that we are in the University not only to fill in gaps and to facilitate the development of coherent bodies of knowledge about women in established disciplines, but that we represent a core of emerging knowledge that is growing into a new discipline.

Women's Studies seeks to equip students with the knowledge, skills, and perception necessary to their realization of the fullest range of options available to them as human beings. We want to provide and encourage contexts conducive to academic excellence and sensitive to academic freedom that will assist students in 1) the reexamining of traditional ideas

about women and men in cultures characterized by patterns of sex-role stereotyping; 2) acquiring an understanding of the history and contributions of women of varying social, racial, and ethnic backgrounds; 3) developing the analytical tools required to understand and appreciate the implications of the last three decades of feminist theory and research; and 4) preparing for a variety of vocations which increasingly demand knowledge about women's experience.

Women's Studies, in its own Program and through courses in other departments and disciplines, offers the University the intellectual excitement inherent in the development of a new discipline, and a humanistic perspective from which to view the accumulated knowledge of other disciplines, particularly their assumptions about women, both as actors and subjects. Women's Studies encourages the development of research and curriculum related to women in other disciplines and departments throughout the University. We also provide information and advising for students and other members of the University community on the subject of women and women's issues.

The Women's Studies Program offers a major and minor. Students may also graduate with a B.A. in Inter-disciplinary Studies that has Women's Studies as one of its disciplines. CSULB also offers a Special Major at the graduate level through which students may design a major combining Women's Studies with another discipline. Designated Women's Studies courses may be used to fulfill the Social Science (Category II) and other General Education requirements, as well as I.C. and H.D. requirements. For additional information and advice relative to these programs, or ways in which to combine Women's Studies with another Major or Concentration, please consult the Program Office or the Undergraduate Advisor.

## Bachelor of Arts in Women's Studies (2-8450) (124 units)

### Requirements

A total of 45 units will be required for the Women's Studies major to include: 6 lower division units to include W/ST 101 and 102; 39 upper division units distributed among the following categories:

### Core Requirements

#### Theory and Methodology

Nine units to include W/ST 300, 415; and one of the following: W/ST 314, 365I, 382, 405; HIST 402;

#### U.S. and Global Ethnic/Gender Diversity

Six units chosen from the following: W/ST 315, 318I 319 (or ASAM, AIS, B/ST, CHLS 319); W/ST 320 (CHLS 415); W/ST 370, 381 (ASAM, HIST), 401I, 406 (HIST); SOC 346; or POSC 323.

Women's History (3 units), chosen from W/ST 485A (or HIST); W/ST 485B (or HIST); W/ST 406 (HIST).

Women's Studies Capstone/Seminar (3 units) W/ST 495.

Internship (3 units) W/ST 498.

## Electives

15 units of electives to include: 9 units from one of the following clusters and 6 units from the approved elective list.

### Clusters

Nine units from one of the following clusters.

#### Feminist Aesthetics

W/ST 314, 316 (FEA 317), 319 (ASAM, B/ST, AIS, CHLS), 354 (PHIL), 320 (CHLS 415), 350, 356, 365I, 370, 382 (ENGL), 401I, 405, 406 (HIST, A/ST), 410, 420, 425, 430, 432, 475 (ANTH), 490, 494, 495; ANTH 413; ENGL 384, 484; PHIL 354; PSY 230, 350I, 351, 354; COMM 412, 442I; HIST 484.

#### Social Change and Social Policy

W/ST 307I, 308, 314, 316 (FEA 317), 319 (ASAM, B/ST, AIS, CHLS), 325 (SOC), 338I (KPE), 350, 356, 370, 381, 392 (ASAM, HIST), 401I, 402, 405, 406 (HIST, A/ST), 410, 420, 425, 430, 432, 440, 475, 485A (HIST), 485B (HIST), 490, 494, 495; ANTH 305I, 307I, 351, 413; FIN 309I; GEOG 307I; HDEV 307I, 320, 357I; JOUR 120; PSY 200, 210, 230, 350I, 351, 354; OCST 417I; SOC 142, 346, 427, 450, 454, 455; COMM 411, 412, 442I, 451; ANTH 475; LING 470; HIST 484; POSC 401.

#### Human Diversity in Global Perspective

W/ST 307I, 314, 315, 318I, 319 (AIS, ASAM, B/ST, CHLS), 320 (CHLS 415), 325 (SOC), 338I (KPE), 356, 370, 381 (ASAM, HIST), 401I, 402, 405, 406 (HIST, A/ST), 410, 420, 425, 430, 432, 440, 475 (ANTH), 485A (HIST), 485B (HIST), 490, 494, 495; ANTH 305I, 307I, 351, 413; B/ST 310; GEOG 307I; HIST 307I; I/ST 317I, 318I; JOUR 120; OCST 417I; POSC 220; PSY 200, 210, 230, 350I, 351, 354; SOC 142, 346, 450, 454, 455; COMM 411, 412, 451; POSC 401; HIST 484; LING 470.

NOTE: Courses cross-listed with any of the above courses are accepted as substitutes.

For all Clusters: Variable or Special topics courses such as AIS 490; ASAM 490; BIOL 495, 496; C/LT 403, 404; CHLS 490; ENGL 490, 469, 479, 490, 498; HIST 490; MUS 490; PHIL 490; SPAN 490 can be accepted as electives when their content falls within the scope of the discipline of women's studies and the selected cluster, upon approval of the Women's Studies undergraduate advisor.

### List of Approved Electives

Six units from the following approved elective list.

W/ST 307I, 308, 314, 315, 316 (FEA 317), 319 (ASAM, AIS, B/ST, CHLS), 338I (KPE), 350, 354 (PHIL), 356, 365I, 370, 381 (ASAM, HIST), 382 (ENGL), 401I, 402 (POSC 401), 405 (HIST 484), 406 (HIST, A/ST), 410, 415, 420, 425, 430, 432, 440, 475 (ANTH), 485A (HIST), 485B (HIST), 490, 494, 495; ANTH 202, 305I, 307I, 351, 413; ASAM 341; B/ST 310; GEOG 307I; HDEV 320, 357I; HIST 303, 307I, 309I, 402, 484; JOUR 120; PSY 200, 210, 230, 354; SOC 142, 327, 445, 450, 454, 455; COMM 411, 412, 451; LING 470.

Note: Special and variable topics courses may also constitute approved electives when they have a women's studies content. Students should consult with the Women's Studies advisor.

## Minor in Women's Studies (code 0-8450)

### Requirements

A minimum of 24 units, to be selected with approval of a Women's Studies advisor, from the following categories:

1. Women's Studies Core Requirements: 9 units selected from W/ST 101, 102, 300, 485A or 485B; 6 units consisting of W/ST 415 and 495;
2. Cross-Cultural Courses: Three units selected from W/ST 314, 315, 319, 320 (or CHLS 415), W/ST 365I, 401I, 406 (HIST 406), 490 (or ASAM 370) or other selected 490 courses;
3. Electives: at least six additional units of upper division Women's Studies courses. W/ST 498 or 499 units may be applied only with the prior approval of a Women's Studies advisor.

### Courses (W/ST)

#### Lower Division

##### 101. Women and Their Bodies (3)

An introduction to the rapidly expanding body of literature and ideas related to the biology and sexuality of women.

##### 102. Women In Contemporary Society (3)

An introduction to some of the basic questions raised by the contemporary feminist movement relating to the social, political and economic status of women.

#### Upper Division

General Education Category A must be completed prior to taking any upper division course except upper division language courses where students meet formal prerequisites and/or competency equivalent for advanced study.

##### 300. Principles of Feminism (3)

Prerequisites: ENGL 100 and upper division status or by consent of instructor. An introduction to principles of feminist history, thought, theory, methodology, and current issues that emphasizes but is not limited to the United States. Traditional grading only.

##### 307I. Women and the Economy: Money, Sex, and Power (3)

Prerequisites: ENGL 100 and upper division status or instructor's permission. This course is an interdisciplinary examination of assumptions about the economic roles of women; analysis of the sexual division of labor, domestic work, and its ideology; women as wage workers; women and development, U.S. women and the economy. Special focus will be on the origin, migration, settlement, and economic patterns of, problems facing, and attitudes about women from major ethnic and racial groups in the United States.

##### 308. Women and the Law (3)

History of women's experience under the law; constitutional law; 19th amendment and ERA; equal protection issues; discrimination in employment; marriage and family law.

##### 309. Women in Science (3)

Prerequisites: Upper division status; ENGL 100; six units of general education science courses; or permission of instructor. The purpose of this course is to increase awareness of the accomplishments of women in natural science, engineering, and mathematics in their socio-historical context; and the obstacles that have precluded easy access to careers for women in these areas. Specific topics encompass the historical roles of women in science, contributions of celebrated women scientists and women scientists who made significant contributions but were ignored or devalued by their scientific peers, and the nature of the research problems they pursued including methodology and outcomes. Other key issues include stereotypes and images of women in science; cultural, societal, and institutional obstacles to the entry and success of women in science; and ways of overcoming these obstacles. Disciplines included in this course are science, history, and sociology. Traditional grading only. Same as NSCI 309. (Lecture 3 hrs.)

314. **Women's Lives (3)**  
Study of the lives of a cross-section of Women in the U.S. from colonial era to the present based on biographical and autobiographical sources.
315. **Black Women in America (3)**  
Prerequisites: ENGL 100 and upper division status or by consent of instructor. An examination of American black women from the eighteenth century to the present. Taught from an interdisciplinary perspective and presented in their own voices. Traditional grading only.
316. **Women in the History of U.S. Film (3)**  
History of women as they are represented, presented as images, or constructed in the development of U.S. film. Theory and analysis of film from a feminist perspective. Same course as FEA 317.
- 318I. **U.S. Women of Color (3)**  
Prerequisites: ENGL 100 and upper division standing or by consent of instructor. An examination of the social construction of race and gender through the use of historical documents, personal narratives, literature and film. Covers historical and contemporary issues, as well as experiences of U.S. Women of Color. Disciplines are history, literature, and film criticism.
319. **The Ethnic Experience in the U.S. (3)**  
Ethnic Studies 319 is an examination of the dynamics of the development of our multicultural society, emphasizing study of the four distinct ethnic strands of American society (Asian American, Black American, Mexican American, and American Indian) and their role in the maintenance of cultural diversity in the United States. (Lecture/Discussion.) Same course as AIS 319, ASAM 319, B/ST 319, CHLS 319.
320. **Latina Women in the United States (3)**  
Prerequisite: Junior standing or permission of instructor. This course will examine the cultural, political, economic, and sexual forces that mold Latina women. The first section of the course will focus on cultural stereotypes and responses to these stereotypes by Latina women scholars. The second section of the course will focus on Latina class differences and the politics of race. This will provide an overview of the contemporary public policy issues affecting Latinas and the broader Latino community. The contradictions that are identified in this course segment will be juxtaposed against selected African American perspectives to identify areas of symmetry as well as areas of divergence in the domain of political strategizing for political reform and Latina empowerment. The last section of the course will address issues of gender identity and sexuality that challenge, undermine, and strengthen the position of Latina women in the greater society. Same Course as CHLS 415.
325. **Sociology of Women (3)**  
Socio-cultural position of women; a brief history of women's role and status; societal attitudes toward women's place in society, Same course as SOC 325.
- 338I. **Women in Sport (3)**  
Prerequisites: ENGL 100 and upper division status. Survey of women's historical and contemporary involvement with sport. The social, cultural and developmental implications of sports participation for women. Same course as KPE 338I.
350. **Feminist Issues in Mental Health (3)**  
Introduces issues related to the mental health of women, from historical, anthropological, sociological and psychological perspectives. Emphasis is on the relationship of power, sexism, sex role socialization and gender stereotypes to mental health.
354. **Feminism and Philosophy (3)**  
A study of feminist thinking and writing about philosophy with special emphasis on feminism's re-examination of the methodology and subject matter of classical and contemporary metaphysics, epistemology, philosophy of science, philosophy of language, political philosophy, ethics and aesthetics. Traditional grading only. Same course as PHIL 354.
356. **Women and Sexual Orientation: Lesbianism (3)**  
Examination of lesbianism from psychological and historical perspectives; includes discussions of lesbianism in literature, representations of lesbianism in various media; the place of lesbianism in the politics of the women's movement and in gay liberation, and the development of "queer theory".
- 365I. **Images of Women in Popular Culture (3)**  
Prerequisites: ENGL 100 and upper division status. Analyzes the construction of images of women in popular culture. Discussion of theories of culture, gender and ideology. Analysis of film, advertising, magazines and popular fiction.
370. **American Indian Women (3)**  
Overview of the role of women in traditional Indian societies and in the modern world. Changes in Indian societies occasioned by contact with Europeans and how these changes have altered sexual role definitions will be examined.
381. **Asian American Women (3)**  
This course will explore the largely unwritten history of Asian American women. Using an inter-disciplinary perspective, we will look at not only secondary sources but also autobiographical, literary, and journalistic writings; oral histories, diaries, anthropological studies, psychological/clinical reports, and film to reconstruct the lives of Asian American women. We will examine how having been burdened by the triple oppression of gender, race, and class, Asian American women have been actively pursuing equality and dignity. Same course as ASAM 381 and HIST 381.
382. **Women and Literature (3)**  
Images of Women in English literature; works in various genres that present the range and complexity of women's lives; feminist critical approaches and bibliographic resources. Specific content will vary. (Lecture-Discussion) Same course as ENGL 382.
384. **European Women's History (3)**  
European Women's History is an upper division course which investigates how European history has impacted on women and how women and women's issues have shaped historical events. Issues that the course will address include: the nature, methodology and approaches of women's history; the significance of the Enlightenment and French Revolution for women and the role women played in these events; the work women of all classes did, and how industrialization affected the position of women; women's role in and their relationship to 19th and 20th century wars and revolutions; women's health and sexuality; the role of the women in the family; women's socialization and education; the "Women Question" and attempts to remedy women's position; recent feminist theory; and a speculative look at the future of European women. Same course as HIST 338.
392. **Feminist Pedagogy: Peer Facilitation (3)**  
Prerequisite: Consent of Instructor. Peer facilitation of small group discussion, teaching assistance and other assignments directed by a supervising faculty member, supplemented by seminar, reading and journal writing. May be repeated for a maximum of six units. Traditional grading only.
- 401I. **History of Women in Global Perspective (3)**  
Prerequisites: ENGL 100 and upper division status or consent of instructor. Comparison of how different social and cultural systems have affected the changing historical role of women. Interdisciplinary analysis of women's social, economic, and political roles in selected industrialized and "developing" societies. Includes an examination of the impact of colonialism and neo-colonialism. Traditional grading only.
402. **Women and the Feminine in Western Political Theory (3)**  
This course will examine the differential treatment of women and men in western political theories. Analyses of classic and contemporary texts will afford an opportunity to puzzle over the extent to which western political thought has been written from a masculinist perspective. Issues such as femininity, and the role of the women in the family will be discussed. The course will include thinkers such as Plato, Rousseau, Marx, and a variety of feminist theorists. Same course as POSC 401.
405. **Topics in Women's Oral History (3)**  
Using oral history, this course will focus on women's experience in different periods in the 20th century. Different topics will be emphasized each semester, including a study of women's changing history through a comparison of two generational groups; the development and transformation of the contemporary women's movement. May be repeated with different topics for a maximum of six units. Same course as HIST 484

**406. Asian Women (3)**

Historical experience of women in Asia, with emphasis on Chinese and Japanese societies; links with the experience of Asian-American women. Same course as A/ST 406 and HIST 406.

**410. Women and Religion (3)**

Prerequisites: ENGL 100 and upper division status, or by consent of instructor. A study of the socio-religious construction of the "nature of women" from prehistory to present day. Analysis of women in traditional religions as well as in women's religions around the world and the rise of fundamentalisms. Traditional grading only.

**415. Feminist Theory (3)**

Prerequisites: W/ST 300 or consent of instructor. Examines contemporary feminist theoretical perspectives. Discussion of primary sources from a number of positions, including liberal, socialist, post-structural, "third world", postmodernist and postcolonial feminisms. Issues include gender and sexuality, race, ethnicity, class and nationality. Focus on discussion of current debates which cross disciplinary boundaries. Active student participation required. Traditional grading only.

**420. Mothers and Daughters (3)**

Analyzes how mothering is "reproduced" in daughters, and why/how patriarchal culture regulates the mother/daughter bond. Readings are primarily literary texts, with theoretical materials drawn from an interdisciplinary framework. Special emphasis is given to the shaping of the mother/daughter relationship in a range of historical, racial, class and sexual contexts.

**424. Ecofeminism (3)**

Prerequisites: UNIV 100, upper division standing, prior women's studies class or consent of instructor. Ecofeminism examines the complex ways women and nature have been exploited through 1) patriarchal socio-religious ideology, 2) socio-economic underpinnings and environmental impact of international development, 3) the practical meaning of environmental devastation on women's lives and how this is tied to patterns of consumption and waste in industrialized nations, and 4) the consequences of and reactions to environmental pollution in the United States today.

**425. Women and Power (3)**

Prerequisites: A previous W/ST class (101, 102, or 300) and upper division status or consent of instructor. Examination of the ways power has been defined, obtained, shaped and maintained, and the effect this has historically had on women. Applies theory to contemporary issues affecting women and explores strategies for empowerment.

**430. Women and Violence (3)**

Women as victims and survivors of physical, psychological, and philosophical violence. Problems of rape, woman battering, incest, pornography and sexual harassment; examination of legal, religious and philosophical issues and alternatives for change.

**432. Women in the City (3)**

Examines the way women respond to the urban environment, both literally and imaginatively. Special attention paid to the sexual division of space, particular needs of immigrant and third world women, and utopian cities of sisterhood. Readings feature literary texts, augmented by an interdisciplinary range of theoretical and empirical studies of cities.

**440. Issues in Women's Health (3)**

Prerequisites: Upper division status; ENGL 100; and W/ST 101, A/P 107, 207, or BIOL 211B. The purpose of this course is to help women attain and/or maintain an optimum state of health and to become discerning consumers of the health care industry. Fundamentals of normal physiology and natural defense mechanisms will be covered in order to promote understanding of the cause, prevention and treatment of various conditions or disorders, including reproductive organ dysfunction, menstrual disorders, sexually-transmitted disease, infertility, complications of pregnancy, osteoporosis, cancer, and cardiovascular disease. The importance of lifestyle habits (diet, exercise, stress, etc.) will be emphasized throughout. Other topics will include gender differences in health and mortality, the history and current status of research on women's health issues, and the current political climate regarding women's reproductive rights.

**445. Native American Women in Literature (3)**

Prerequisite: AIS 340 or equivalent ethnic studies literature course. The course is the study of literatures of North American Native women writers with oral literature forming the base of understanding. The range of works is from tale, myth, song, prayer, poetry, essay, short story and novel from various periods, areas and cultural groups. Traditional grading only. Same course as AIS 440.

**455. Philosophical Perspectives on Sex and Love (3)**

Prerequisite: 6 units of philosophy or consent of instructor. Philosophical perspectives on sex and love explores philosophical issues concerning sex, gender and love through readings and discussion of classical and contemporary philosophical sources. Topics such as sexual perversion, romantic love and gender discrimination are examined. Same course as PHIL 455.

**475. Language and Gender in Cross-Cultural Perspective (3)**

Analysis of men's and women's communication in its social and cultural context; role of gender in interpreting conversational interactions in the U.S. and elsewhere; acquisition of gender differences; cultural dimensions or perceptions and stereotypes and their effect on communication. Same course as ANTH 475 and LING 470. Traditional grading only.

**483. Women in Eighteenth-Century England and America (3)**

Prerequisites: ENGL 100 and upper/division status. Study of representations and realities of women's lives, 1688-1800, from an international and interdisciplinary perspective. Critical methodology of history and literature; analysis of literary and historical texts to explore women's experiences of law and economics; religion; education and culture; marriage, sex, and health; politics and revolution. Same course as HIST 483.

**485A. History of Women in the U.S. Early Period (3)**

Provides a survey of the roles and activities of American women from colonial period to 1850; variety of female life experiences; slavery, immigration; relationships to the family, economy and political movements. (Lecture) Same course as HIST 485A.

**485B. History of Women in the U.S. Since 1850 (3)**

Changing roles and status of women in economic and social change; suffrage movement; women in union movement and WW II; the decade of the sixties and the "second wave" of feminism. (Lecture) Same course as HIST 485B.

**490. Special Topics (1-3)**

Topics of current interest in women's studies, selected for intensive study. May be repeated with different topics for a maximum of six units. Cross-listed with AIS 490.

**490K. Women and War: Voices of Resistance**

An interdisciplinary course which studies the autobiographical testimonies of women who have experienced war and its aftermath and how their voices have been interpreted in recent years. Included are literary, historical, sociological and psychoanalytical considerations of the impact of war on women during World War I and II, the Spanish Civil War, and confrontations in Central and Latin America. Same topic as SPAN 493A, HIST 490F. (Lecture)

**491. Special Topics (1-3)**

**492. Special Topics (1-3)**

Topics of current interest in women's studies, selected for intensive study. May be repeated with different topics for a maximum of six units.

**494. Women's Studies Colloquium (3)**

Prerequisites: Consent of instructor. Analysis and interpretation of current issues in the discipline. Specific topics will be chosen by the instructor. May be repeated with different topics to a maximum of six units.

**495. Senior Integrative Seminar (3)**

Integrates body of knowledge accumulated in multidisciplinary minor or special major. Designed as a seminar in research and methodology.

**498. Field Work (1-3)**

Consent of instructor. Practical experience in campus or community organizations concerned with women's issues. May be repeated for a maximum of six units.

**499. Directed Studies (1-3)**

Consent of instructor. Independent work in areas of special interest to student and instructor. May be repeated for a maximum of six units.

# EMERITUS FACULTY

(Number in parentheses indicates year of appointment)

- Herbert L. Aarons (1965) Associate Professor Emeritus, 1991.  
Sociology
- Rifaat Ali Abou-El-Haj (1964) Professor Emeritus, 1995.  
History
- Ruth H. Afflack (1966) Professor Emeritus, 1992.  
Mathematics
- Irving F. Ahlquist (1949) Professor Emeritus, 1983.  
History
- Eugene Albert (1967) Associate Professor Emeritus, 1992.  
Mathematics
- Kamal T. Al-Chalabi (1966) Professor Emeritus, 1990.  
Civil Engineering
- Robert L. Alexander (1964) Professor Emeritus, 1991.  
Civil Engineering
- Frank J. Alfieri (1967) Professor Emeritus, 1994.  
Biological Sciences
- Barbara S. Allen (1970) Professor Emeritus, 1995.  
Music
- Charles A. Allen (1957) Professor Emeritus, 1978.  
English
- Kenneth J. Ames (1968) Professor Emeritus, 1987.  
English
- Rhoda M. Andersen (1974) Associate Professor Emeritus, 1988.  
Recreation and Leisure Studies
- Robert E. Anderson (1964) Professor Emeritus, 1988.  
Music
- Roy C. Anderson (1950) Professor Emeritus, 1974.  
Secondary Education
- Roy C. Anderson (1965) Professor Emeritus, 1996.  
Economics
- Shane Andre (1967) Professor Emeritus, 1994.  
Philosophy
- Edna M. Andrews (1967) Professor Emeritus, 1982.  
Accounting
- Carl R. Anselmo (1964) Professor Emeritus, 1994.  
Biological Sciences
- George L. Appleton (1953) Professor Emeritus, 1986.  
Physics and Astronomy
- Blair C. Archer (1950) Professor Emeritus, 1983.  
Art
- Alfonso L. Archuleta (1965) Associate Professor Emeritus, 1983.  
Spanish/Portuguese
- Daniel D. Arnheim (1959) Professor Emeritus, 1990.  
Physical Education
- Harold Aspiz (1958) Professor  
English
- William D. Ash (1957) Professor Emeritus, 1990.  
Marketing
- Charles W. Austin (1966) Professor Emeritus, 1994.  
Mathematics
- Arthur M. Axelrad (1964) Professor Emeritus, 1996.  
English
- Jerry Bailor (1968) Associate Professor Emeritus, 1990.  
Theatre Arts
- John J. Baird (1956) Professor Emeritus, 1984.  
Biological Sciences
- Dan F. Baker (1961) Professor Emeritus, 1986.  
Radio Television and Film
- Dorothy W. Baker (1961) Assistant Professor Emeritus, 1983.  
Home Economics
- Irmgard F. Bartenbach (1964) Professor Emeritus, 1988.  
German, Russians and Classics
- Kenneth T. Bartlett (1959) Professor Emeritus, 1993.  
Physical Education
- Eleanor H. Bates (1970) Professor Emeritus, 1988.  
Anthropology
- Roger D. Bauer (1959) Dean, Professor Emeritus, 1992.  
College of Natural Sciences and Mathematics, Chemistry and Biochemistry
- Phyllis Beacom (1979) Lecturer Emeritus, 1991.  
Home Economics
- Louis L. Beck (1970) Professor Emeritus, 1989.  
Teacher Education
- Edwin N. Becker (1955) Professor Emeritus, 1983.  
Chemistry
- Earl S. Beecher (1961) Professor Emeritus, 1994.  
Finance, Real Estate and Law
- Donald A. Beegle (1963) Professor Emeritus, 1988.  
Health Science
- Bruce E. Beekman (1958) Professor Emeritus, 1992.  
Biological Sciences
- Virginia M. Belt (1963) Professor Emeritus, 1983.  
Finance
- Marilyn J. Bergin (1971) Senior Assistant Librarian Emeritus, 1997.
- Stewart Berkshire (1974) Associate Professor Emeritus, 1988.  
Accountancy
- Arnold J. Berry (1973) Professor Emeritus, 1992.  
Chemistry and Biochemistry
- George V. Betar (1963) Professor Emeritus, 1981.  
English
- Mark C. Biedebach (1967) Professor Emeritus, 1996.  
Biological Sciences
- Stuart E. Black (1962) Associate Professor Emeritus, 1991.  
Computer Engineering and Computer Science
- Albert G. Black (1962) Associate Professor Emeritus, 1988.  
English
- Enid V. Blaylock (1966) Professor Emeritus, 1983.  
Educational Psychology and Administration
- James H. Bliss (1964) Professor Emeritus, 1980.  
Journalism
- Blaze O. Bonazza (1966) Professor Emeritus, 1983.  
English
- William D. Bonis (1963) Professor Emeritus, 1991.  
Philosophy
- David C. Borders (1962) Professor Emeritus, 1990.  
Art
- Warren J. Boring (1956) Professor Emeritus, 1981.  
Physical Education
- James A. Bourret (1968) Professor Emeritus, 1992.  
Biological Sciences
- Donna L. Boutelle (1967) Professor Emeritus, 1994.  
History
- Dean O. Bowman (1973) Dean Emeritus, 1977.  
School of Business Administration
- Robert E. Brasher (1956) Senior Assistant Librarian Emeritus, 1986.
- J. Wesley Bratton (1950) Professor Emeritus, 1969.  
Education
- Alice M. Brekke (1970) Professor Emeritus, 1991.  
English
- Paul L. Brent (1956) Professor Emeritus, 1986.  
Instructional Media
- Robert C. Brice (1968) Professor Emeritus, 1980.  
Engineering Technology
- Alexander L. Britton (1965) Professor Emeritus, 1980.  
Educational Psychology
- Helen H. Britton (1981) Librarian Emeritus, 1991.
- Charles B. Brooks (1957) Professor Emeritus, 1983.  
English
- Robert J. Brophy (1968) Professor Emeritus, 1993.  
English
- Ruth M. Bryan (1962) Assistant Fine Arts Librarian Emeritus, 1977.
- David L. Bryant (1949) Executive Dean Emeritus, 1969.  
Administration
- Steven M. Buck (1961) Professor Emeritus, 1990.  
Speech Communication
- William E. Buckner (1970) Professor Emeritus, 1990.  
Home Economics and Gerontology
- R. Burdett Burk (1954) Professor Emeritus, 1975.  
Elementary Education
- Darrell V. Burras (1957) Professor Emeritus, 1980.  
Information Systems
- Benjamin C. Butcher (1969) Professor Emeritus, 1990.  
Marketing
- Jerry D. Byrd (1982) Lecturer Emeritus, 1992.  
Recreation and Leisure Studies
- Earl R. Cain (1959) Professor Emeritus, 1986.  
Speech Communication
- Guy H. Cain, Jr. (1960) Associate Professor Emeritus, 1980.  
Electrical Engineering
- Daniel A. Campbell (1962) Professor Emeritus, 1990.  
Physical Education
- Herbert L. Camburn (1960) Professor Emeritus, 1996.  
Theatre Arts
- Filemon C. Campo-Flores (1972) Professor Emeritus, 1996.  
Management/Human Resources Management
- Earl R. Carlson (1961) Professor Emeritus, 1990.  
Psychology
- Maude C. Carlson (1952) Head Social Science Reference Librarian Emeritus, 1967.
- Robert W. Cash (1970) Professor Emeritus, 1995.  
Educational Psychology and Administration
- Ottis L. Castleberry (1956) Professor Emeritus, 1983.  
Speech Communication
- Shirley Cereseto (1967) Professor Emeritus, 1982.  
Sociology
- L. Lincoln Chao (1964) Professor Emeritus, 1983.  
Information Systems
- Sudershan Chawla (1962) Professor Emeritus, 1997.  
Political Science
- Chunduri V. Chelapati (1965) Professor Emeritus, 1996.  
Civil Engineering

Chia-Hwa Chen (1964) Professor Emeritus, 1992.  
Physics and Astronomy

Richard H. Chow (1958) Professor Emeritus, 1986.  
Physics and Astronomy

David C. Church (1968) Associate Professor Emeritus, 1986.  
Industrial Education

Robert E. Click (1962) Professor Emeritus, 1982.  
Art

Marguerite A. Clifton (1978) Professor Emeritus, 1987.  
Physical Education

Robert B. Clyde (1967) Counselor Emeritus, 1978.

Joan Cobin (1973) Professor Emeritus, 1988.  
Nursing

James E. Cockrum (1955) Professor Emeritus, 1978.  
Instructional Media

Floyd A. Cohen (1965) Professor Emeritus, 1992.  
Mathematics

Ira S. Cohen (1959) Professor Emeritus, 1983.  
Political Science

Charles L. Cole (1967) Professor Emeritus, 1996.  
Economics

James L. Comer (1971) Professor Emeritus, 1981.  
Physical Education

Bert L. Conrey (1955) Professor Emeritus, 1983.  
Geological Sciences

Jean L. Conroy (1961) Associate Professor Emeritus, 1994.  
Mathematics

Joseph Contreras (1961) Professor Emeritus, 1980.  
Art

Peter A. Cortese (1973) Associate Dean, Professor Emeritus, 1991.  
School of Applied Arts and Sciences, Health Science

Edmund A. Cotta (1958) Professor Emeritus, 1991.  
Marketing

Hidden T. Cox (1963) Professor Emeritus, 1986.  
Biological Sciences

James S. Crafts (1957) Professor Emeritus, 1980.  
Art

Duane C. Craven (1967) Associate Professor Emeritus, 1996.  
Communicative Disorders

Walter B. Crawford (1963) Professor Emeritus, 1985.  
English

Lyle R. Creamer (1962) Professor Emeritus, 1992.  
Psychology

Robert D. Crossan (1955) Professor Emeritus, 1985.  
Educational Psychology and Administration

Walter C. Crowe (1952) Professor Emeritus, 1980.  
Physical Education

Benjamin H. Cunningham (1968) Professor Emeritus, 1991.  
Journalism

Larry G. Curtis (1969) Professor Emeritus, 1994.  
Music

Murray D. Dailey (1966) Professor Emeritus, 1992.  
Biological Sciences

Donald L. Dame (1965) Professor Emeritus, 1992.  
Art

Richard H. Darbee (1954) Professor Emeritus, 1979.  
English

Honore E. Dash (1967) Associate Professor Emeritus, 1980.  
Biological Sciences

Boyd A. Davis (1951) Professor Emeritus, 1980.  
Director of Academic Planning

James E. Day (1955) Professor Emeritus, 1983.  
English

C. Thomas Dean (1952) Dean, Professor Emeritus, 1980  
School of Applied Arts and Sciences, Industrial Education

Dorothy Deatherage (1955) Professor Emeritus, 1990.  
Physical Education

Kee K. DeBoer (1977) Librarian Emeritus, 1992.

Doris C. DeHardt (1961) Professor Emeritus, 1988.  
Psychology

Sigrid G. Deeds (1988) Professor Emeritus, 1994.  
Health Science and Gerontology

Beverly DeLong-Tonelli (1966) Professor Emeritus, 1993.  
Romance, German, Russian Languages and Literature

Robert L. DeLorme (1966) Professor Emeritus, 1994.  
Political Science

George D. Demos (1962) Professor Emeritus, 1983.  
Educational Psychology

Robert J. DeVoe (1968) Associate Professor Emeritus, 1992.  
Management/Human Resources Management

Harold R. Dilbeck (1969) Professor Emeritus, 1991.  
Finance, Real Estate and Law

Orval L. Dillingham (1955) Professor Emeritus, 1982.  
Art

Grace E. Dinerstein (1967) Professor Emeritus, 1981.  
Home Economics

Keith A. Dixon (1958) Professor Emeritus, 1992.  
Anthropology

Marjorie B. Dole (1959) Counselor Emeritus, 1973.

Francis J. Donahue (1960) Professor Emeritus, 1986.  
Spanish-Portuguese

John F. Dorsey (1961) Associate Librarian Emeritus, 1989.

William R. Doud (1971) Professor Emeritus, 1989.  
Information Systems

Ralph W. Duckwall (1964) Professor Emeritus, 1986.  
Theatre Arts

Stacy E. Dukes (1964) Associate Professor Emeritus, 1988.  
Design

Elizabeth O. DuPont (1965) Professor Emeritus, 1983.  
Physical Education

Eldon J. Dvorak (1961) Professor Emeritus, 1991.  
Economics

Walter E. Edelman, Jr. (1967) Professor Emeritus, 1997.  
Mechanical Engineering

Robert F. Eggers (1964) Professor Emeritus, 1994.  
Theatre Arts

Albert L. Ehrreich (1957) Professor Emeritus, 1988.  
Geological Sciences

Dorothy L. Ericson (1953) Professor Emeritus, 1974.  
Women's Physical Education

Milton J. Fatt (1963) Professor Emeritus, 1997.  
Mathematics

Armando T. Ferreira (1957) Professor Emeritus, 1995.  
Art

Josephine B. Fiebigler (1966) Professor Emeritus, 1983.  
Psychology

William E. Fisher (1955) Professor Emeritus, 1973.  
Secondary Education

Francis J. Flynn (1950) Executive Dean, Development Emeritus, 1971.

Gerald Ford (1969) Associate Professor Emeritus, 1994.  
Management/Human Resources Management

William E. Fogg (1956) Professor Emeritus, 1981.  
Educational Psychology

Dorothy L. Fonia (1965) Professor Emeritus, 1992.  
Physical Education and Gerontology

Florence H. Forst (1964) Professor Emeritus, 1979.  
Educational Psychology and Administration

Robert W. Frazer (1965) Professor Emeritus, 1975.  
History

John E. Fredrickson (1955) Professor Emeritus, 1983.  
Physics and Astronomy

Paul J. Fritts (1965) Professor Emeritus, 1990.  
Geological Sciences

Robert K. Froyd (1958) Associate Professor Emeritus, 1980.  
Mathematics

Charlotte D. Furth (1966) Professor Emeritus, 1990.  
History

Stanley R. Gabrielsen (1958) Professor Emeritus, 1976.  
Recreation and Leisure Studies

Alice A. Gabrielson (1961) Senior Assistant Librarian Emeritus, 1987.

Dixon L. Gayer (1959) Professor Emeritus, 1980.  
Journalism

Olga S. Gazdik (1968) Assistant Librarian Emeritus, 1982.  
Music

George W. Genevro (1957) Professor Emeritus, 1982.  
Industrial Education

Juliana T. Gensley (1962) Professor Emeritus, 1977.  
Elementary Education

Albert C. Germann (1957) Professor Emeritus, 1983.  
Criminal Justice

Norma B. Gibbs (1966) Associate Professor Emeritus, 1992.  
Educational Psychology and Administration

Nadyne C. Gibson (1955) Professor Emeritus, 1977.  
Music

Helen C. Gilde (1959) Professor Emeritus, 1994.  
English

Paul R. Gilon (1969) Professor Emeritus, 1992.  
Information Systems

Alan J. Glasser (1959) Professor Emeritus, 1980.  
Educational Psychology

Leo Goodman-Malamuth (1956) Professor Emeritus, 1993.  
Speech Communication

Frank F. Gorow (1953) Professor Emeritus, 1974.  
Secondary Education

Herman H. Graff (1964) Professor Emeritus, 1986.  
Art

Harold V. Graham (1969) Professor Emeritus, 1983.  
Teacher Education

David E. Gray (1954) Vice President, Administration and Staff Coordination  
Emeritus and Professor Emeritus, 1983.  
Recreation and Leisure Studies

John H. Green (1955) Professor Emeritus, 1980.  
Theatre Arts

Beatrice M. Greer (1968) Assistant Professor Emeritus, 1985.  
Art

James R. Gregory (1970) Professor Emeritus, 1997.  
Anthropology

Betty Rose Griffith (1968) Professor Emeritus, 1988.  
Physical Education

Calvin D. Gross (1962) Professor Emeritus, 1992.  
Art

Emma Jean Gunderson (1971) Professor Emeritus, 1997.  
Information Systems

Serafina Q. Gunter (1964) Professor Emeritus, 1980.  
Accounting

C. Robert Guthrie (1963) Professor Emeritus, 1980.  
Criminal Justice

Charles D. Hamburger (1965) Professor Emeritus, 1996.  
Management/Human Resources Management

Arlene D. Hamilton (1966) Associate Professor Emeritus, 1983.  
Home Economics

Raphael M. Hanson (1961) Professor Emeritus, 1986.  
Psychology

Sally A. Haralson (1966) Professor Emeritus, 1989.  
Psychology

Leroy C. Hardy (1953) Professor Emeritus, 1986.  
Political Science

Charles V. Harlow (1968) Professor Emeritus, 1994.  
Finance, Real Estate and Law

Edwin R. Harris (1959) Professor Emeritus, 1997.  
Chemistry and Biochemistry

Luster E. Hauth (1964) Professor Emeritus, 1992.  
Speech Communication

Glenn E. Hayes (1967) Professor Emeritus, 1991.  
Engineering Technology

Ellis R. Hays (1968) Professor Emeritus, 1991.  
Speech Communication

John L. Healy (1956) Associate Professor Emeritus, 1983.  
Speech Communication

Jack Heeger (1990) Associate Professor Emeritus, 1992.  
Journalism

Stephen S. Heineman (1969) Professor Emeritus, 1992.  
Engineering Technology

Reinald C. Heise (1958) Professor Emeritus, 1988.  
Management/Human Resources Management

Stanford M. Helm (1954) Professor Emeritus, 1977.  
Music

Braxton C. Henderson (1964) Professor Emeritus, 1975.  
Information Systems

Don A. Hennessee (1952) Assistant Humanities Librarian Emeritus, 1976.

John A. Hermann (1955) Professor Emeritus, 1982.  
English

Truman O. Hickerson, Jr. (1965) Professor Emeritus, 1992.  
Accountancy

John E. Higgins (1964) Professor Emeritus, 1980.  
History

Cliff W. Hill (1967) Associate Professor Emeritus, 1987.  
Biological Sciences

Robert A. Hipkiss (1966) Professor Emeritus, 1997.  
English

Howard G. Hitchcock (1958) Professor Emeritus, 1990.  
Art

Mabel J. Hoffman (1961) Professor Emeritus, 1980.  
Nursing

Joan C. Hoff-Templeton (1957) Professor Emeritus, 1994.  
Design and Gerontology

Robert T. Holmes (1961) Professor Emeritus, 1986.  
Marketing

Stephen Horn (1970) President Emeritus 1988  
Trustee Professor Political Science

Adelore L. Houde (1965) Professor Emeritus, 1985.  
Electrical Engineering

Everett H. Hrubant (1957) Professor Emeritus, 1988.  
Biological Sciences

Carol A. Hunter (1969) Professor Emeritus, 1983.  
Educational Psychology and Administration

Talma B. Hupfield (1959) Associate Professor Emeritus, 1984.  
Home Economics

Raul A. Inostroza (1966) Professor Emeritus, 1986.  
Spanish-Portuguese

Lloyd T. Inui (1965) Professor Emeritus, 1992.  
Asian and Asian American Studies

Cathern M. Irwin (1961) Associate Professor Emeritus, 1983.  
Health Science

Willard D. James (1967) Professor Emeritus, 1987.  
Mathematics and Computer Science

Hilton F. Jarrett (1966) Professor Emeritus, 1983.  
Psychology

Kenneth D. Jenkins (1970) Professor Emeritus, 1997.  
Biological Sciences

Owen O. Jenson (1966) Professor Emeritus, 1994.  
Speech Communication

Patricia E. Jersin (1965) Professor Emeritus, 1991.  
Teacher Education

Alan W. Johnson (1968) Associate Director  
International Education Center Emeritus, 1980.

Richard J. Johnson (1959) Professor Emeritus, 1992.  
Instructional Systems Technology

Rita H. Jones (1964) Professor Emeritus, 1996.  
Teacher Education

George V. Kacewicz (1966) Professor Emeritus, 1986.  
Political Science

Stanley Kahan (1961) Professor Emeritus, 1994.  
Theatre Arts

Gene E. Kalbus (1957) Professor Emeritus, 1994.  
Chemistry and Biochemistry

Irene Kanasi (1959) Humanities Catalog Librarian Emeritus, 1977.

Elizabeth S. Kaufman (1963) Professor Emeritus, 1989.  
Nursing

Elizabeth Kazan (1955) Professor Emeritus, 1983.  
Biological Sciences

Michael L. Kearney (1960) Professor Emeritus, 1996.  
Finance, Real Estate and Law

Maxine K. Keenan (1971) Associate Professor Emeritus, 1981.  
Home Economics

Mary F. Kefgen (1958) Professor Emeritus, 1987.  
Home Economics

L. Boyd Kendall (1969) Professor Emeritus, 1979.  
Electrical Engineering

Harvey L. Kendall (1966) Professor Emeritus, 1990.  
German, Russian and Classics

Celeste K. Kennedy (1970) Associate Professor Emeritus, 1992.  
Dance

John P. Kenney (1966) Professor Emeritus, 1983.  
Criminal Justice

Gretha Kershaw (1966) Professor Emeritus, 1983.  
Anthropology

Eugene E. Kessler (1969) Associate Professor Emeritus, 1986.  
French-Italian

Earl C. Kidd (1952) Professor Emeritus, 1973.  
Men's Physical Education

Julie Van N. Kierbow (1957) Professor Emeritus, 1978.  
Chemistry

Juhee Kim (1966) Professor Emeritus, 1997.  
Biological Sciences

John C. Kimura (1967) Professor Emeritus, 1991.  
Geography

Ronald L. King (1964) Professor Emeritus, 1991.  
Information Systems

Kephas A. Kinsman (1949) Professor Emeritus, 1972.  
Secondary Education

James J. Kirkpatrick (1967) Professor Emeritus, 1986.  
Management/Human Resources Management

Carl E. Klafs (1956) Professor Emeritus, 1976.  
Men's Physical Education

Paul L. Kleintjes (1954) Professor Emeritus, 1979.  
Engineering Technology

Byron C. Kluss (1959) Professor Emeritus, 1991.  
Biological Sciences and Gerontology

I. Aileen Poole Koehler (1959) Professor Emeritus, 1974  
Educational Psychology

Margaret L. Koehler (1970) Professor Emeritus, 1988.  
Nursing

Albert H. Koppenhaver (1969) Professor Emeritus, 1994.  
Teacher Education

Lloyd A. Kramer (1973) Associate Director Library Emeritus, 1986.

Joseph H. Krause (1955) Professor Emeritus, 1996.  
Art

Henry J. Krauser (1970) Associate Professor Emeritus, 1992.  
Engineering Technology

Ronald A. Kroman (1959) Professor Emeritus, 1990.  
Biological Sciences

Stephen Kulik (1959) Professor Emeritus, 1972.  
Mathematics

Chester R. Kyle (1959) Professor Emeritus, 1984.  
Mechanical Engineering

Hans Lampl (1965) Professor Emeritus, 1983.  
Music

Mary J. Lass (1966) Professor Emeritus, 1994.  
Teacher Education

Irvin T. Lathrop (1959) Professor Emeritus, 1988.  
Industrial Education

Arthur C. Laufer (1957) Professor Emeritus, 1983.  
Management/Human Resources Management

Alvin H. Lawson (1962) Professor Emeritus, 1990.  
English

Joseph A. Lea (1968) Associate Professor Emeritus, 1997.  
College of Education

Dorothy Leach (1968) Counselor Emeritus, 1987.

Richard E. Lee (1955) Professor Emeritus, 1983.  
English

Gordon Leis (1966) Professor Emeritus, 1988.  
Sociology

Mary Jane Leland (1959) Professor Emeritus, 1986.  
Art

John M. Lenoir (1974) Professor Emeritus, 1984.  
Chemical Engineering

Aren A. Lewis (1967) Professor Emeritus, 1982.  
Accounting

Rodney C. Lewis (1958) Professor Emeritus, 1973.  
Electrical Engineering

Dorothy Libby (1967) Associate Professor Emeritus, 1988.  
Anthropology



Van T. Lieu (1967) Professor Emeritus, 1996.  
 Chemistry and Biochemistry  
 John R. Lincoln (1968) Professor Emeritus, 1994.  
 Art  
 John R. Lindquist (1966) Career Counselor Emeritus, 1987.  
 Ruth D. Lindsey (1976) Professor Emeritus, 1988.  
 Physical Education and Gerontology  
 Alexander Lipski (1958) Professor Emeritus, 1984.  
 History, Religious Studies  
 Robert T. Littrell (1957) Institutional Studies Emeritus, 1987.  
 Lucille Logan (1964) Assistant Professor Emeritus, 1975.  
 Biological Sciences  
 Donna M. Longstreet (1968) Senior Assistant Librarian Emeritus, 1991.  
 Eileen E. Lothamer (1966) Professor Emeritus, 1986.  
 English  
 Louise C. Lubbe (1956) Professor Emeritus, 1979.  
 English  
 W. William Lumsden, Jr. (1958) Professor Emeritus, 1983.  
 Geological Sciences  
 Walter J. Lyche (1957) Associate Professor Emeritus, 1974.  
 Mathematics  
 M. Joan Lyon (1958) Professor Emeritus, 1992.  
 Physical Education  
 Richard E. Lyon (1958) Professor Emeritus, 1983.  
 English  
 David E. MacArthur (1964) Professor Emeritus, 1986.  
 Theatre Arts  
 B. David Macon (1957) Associate Professor Emeritus, 1986.  
 Industrial Education  
 Jerome H. Manheim (1971) Professor Emeritus, 1988.  
 Mathematics and Computer Science  
 R. Monteen Manning (1959) Head Education-Curriculum Librarian Emeritus, 1973.  
 Greayer Mansfield-Jones (1962) Professor Emeritus, 1992.  
 Biological Sciences  
 Anthony Mardellis (1956) Professor Emeritus, 1990.  
 Mathematics  
 Kenneth L. Marsi (1961) Professor Emeritus, 1996.  
 Chemistry and Biochemistry  
 Howard S. Martin (1965) Professor Emeritus, 1991.  
 Radio, Television and Film  
 John M. Martin (1955) Professor Emeritus, 1982.  
 Art  
 Frederic J. Masback (1964) Professor Emeritus, 1989.  
 English  
 Phyllis F. Maslow (1975) Professor Emeritus, 1990.  
 Educational Psychology and Administration  
 Charles F. Mason (1964) Professor Emeritus, 1979.  
 Psychology  
 George E. Massey (1959) Professor Emeritus, 1983.  
 Philosophy  
 Joseph A. Mastropalo (1968) Professor Emeritus, 1994.  
 Physical Education  
 James B. Maue (1961) Professor Emeritus, 1983.  
 Philosophy  
 Kenneth E. Maxwell (1963) Professor Emeritus, 1973.  
 Biological Sciences  
 Wendell H. McCulloch (1974) Professor Emeritus, 1997.  
 Finance, Real Estate and Law  
 Gloria McCullough May (1969) Professor Emeritus, 1992.  
 English  
 Darwin L. Mayfield (1956) Professor Emeritus, 1990.  
 Chemistry  
 R. Clyde McCone (1961) Professor Emeritus, 1980.  
 Anthropology  
 John J. McConnell (1953) Professor Emeritus, 1986.  
 Physical Education  
 John M. McFaul (1963) Professor Emeritus, 1988.  
 History  
 William H. McGowan (1967) Professor Emeritus, 1996.  
 Philosophy  
 Edward B. McLeod, Jr. (1965) Professor Emeritus, 1986.  
 Mathematics and Computer Science  
 Flora A. Meisenheimer (1973) Associate Professor Emeritus, 1991.  
 Nursing  
 Maxine O. Merlino (1952) Professor Emeritus, 1975.  
 Art  
 Vernon A. Metzger (1949) Professor Emeritus, 1982.  
 Management/Human Resources Management  
 Larry L. Meyer (1978) Professor Emeritus, 1992.  
 Journalism  
 Harold T. Miller (1958) Associate Professor Emeritus, 1971.  
 Civil Engineering  
 John Minar (1968) Professor Emeritus, 1989.  
 Recreation and Leisure Studies  
 Mabel S. Moore (1967) Associate Professor Emeritus, 1983.  
 Home Economics  
 Tom D. Morgan (1967) Professor Emeritus, 1995.  
 Physical Education  
 Frank S. Morris (1969) Associate Professor Emeritus, 1992.  
 Teacher Education  
 Gene P. Morris (1967) Associate Professor Emeritus, 1997.  
 Finance, Real Estate and Law  
 C. Douglas Moryl (1963) Professor Emeritus, 1991.  
 Art  
 Elton L. Mosher (1965) Assistant Librarian Emeritus, 1987.  
 M. Gamal Mostafa (1968) Professor Emeritus, 1987.  
 Civil Engineering  
 Julien Musafia (1959) Professor Emeritus, 1983.  
 Music  
 Charles L. Myers (1956) Professor Emeritus, 1986.  
 Teacher Education  
 Dale E. Nelson (1956) Professor Emeritus, 1986.  
 Information Systems  
 Doris Nelson (1967) Professor Emeritus, 1987.  
 English  
 John A. Nelson, Jr. (1971) Dean, Professor Emeritus, 1983.  
 School of Education, Educational Psychology and Administration  
 Theodore E. Nichols (1956) Professor Emeritus, 1984.  
 History  
 Robert L. Nicholson (1957) Professor Emeritus, 1983.  
 Industrial Education  
 Jerome A. Nielsen (1968) Associate Professor Emeritus, 1988.  
 Physical Therapy  
 Frank Noffke (1964) Counselor Emeritus, 1981.  
 John E. Nygaard (1963) Professor Emeritus, 1990.  
 Psychology  
 Leonard Olguin (1974) Professor Emeritus, 1996.  
 Teacher Education  
 Hazel A. Oliver (1960) Senior Assistant Librarian Emeritus, 1980.  
 R. Warner Olsen, Jr. (1960) Senior Assistant Librarian Emeritus, 1992.  
 Douglas H. Orgill (1951) Professor Emeritus, 1983.  
 English  
 Russel E. Orpet (1959) Professor Emeritus, 1992.  
 Educational Psychology and Administration  
 Clyde E. Osborne (1975) Assistant Professor Emeritus, 1977.  
 Chemistry  
 Carolyn M. Owen (1970) Professor Emeritus, 1986.  
 Educational Psychology and Administration  
 Frank F. Paal (1968) Professor Emeritus, 1992.  
 Electrical Engineering  
 Feliksas Palubinskas (1965) Professor Emeritus, 1988.  
 Marketing  
 Anna M. Parmley (1969) Associate Professor Emeritus, 1988.  
 Biological Sciences  
 William Patterson (1957) Professor Emeritus, 1983.  
 Physical Education  
 Carl Payne (1968) Professor Emeritus, 1990.  
 Information Systems  
 Fernando Peñalosa (1970) Professor Emeritus, 1990.  
 Sociology  
 Wanda L. Pentecost (1963) Professor Emeritus, 1987.  
 Nursing and Gerontology  
 Louis E. Perlgut (1965) Professor Emeritus, 1982.  
 Chemistry  
 Leland M. Perry (1956) Professor Emeritus, 1990.  
 Teacher Education  
 Robert A. Pestolesi (1955) Professor Emeritus, 1986.  
 Physical Education  
 Paul G. Petersen (1962) Professor Emeritus, 1985.  
 Psychology  
 Audrey Buckland Peterson (1966) Professor Emeritus, 1983.  
 English  
 Milton A. Petty (1969) Associate Professor Emeritus, 1977.  
 Biological Sciences  
 Alvin A. Pine (1962) Professor Emeritus, 1996.  
 Art  
 Ferdinand J. Plourde, Jr. (1966) Associate Professor Emeritus, 1994.  
 English  
 Dora Beale Polk (1968) Professor Emeritus, 1987.  
 English  
 Frank M. Pooler (1959) Professor Emeritus, 1988.  
 Music  
 Donald F. Popham (1956) Professor Emeritus, 1986.  
 Teacher Education  
 Richard E. Porter (1970) Professor Emeritus, 1996.  
 Speech Communication  
 Richard C. Potter (1967) Dean, Professor Emeritus, 1983.  
 School of Engineering, Mechanical Engineering  
 J. Richard Powell (1954) Professor Emeritus, 1984.  
 Economics  
 James G. Powell (1961) Professor Emeritus, 1991.  
 Speech Communication  
 Melchior D. Powell (1973) Professor Emeritus, 1992.  
 Public Policy and Administration  
 Paul E. Powell (1955) Professor Emeritus, 1981.  
 Industrial Education  
 Alan R. Probst (1968) Associate Professor Emeritus, 1980.  
 Health Science  
 Jane F. Purcell (1964) Associate Professor Emeritus, 1980.  
 Art

Mary-Joe Purcell (1959) Professor Emeritus, 1987.  
English

Elisabeth M. Quillen (1964) Professor Emeritus, 1985.  
French-Italian

Michael T. Quinn (1970) Professor Emeritus, 1994.  
Management/Human Resources Management

Louis E. Quinones (1965) Associate Professor Emeritus, 1992.  
Technology Education

Bonnie J. Rader (1970) Professor Emeritus, 1990.  
Home Economics

Walter J. Raine (1968) Professor Emeritus, 1983.  
Psychology

Dennis G. Rainey (1956) Professor Emeritus, 1988.  
Biological Sciences

Robert W. Ramsey (1957) Professor Emeritus, 1990.  
Art

Clare G. Rayner (1957) Professor Emeritus, 1986.  
Music

Don F. Reed (1957) Associate Professor Emeritus, 1980.  
Physical Education

Willard H. Reed (1962) Professor Emeritus, 1983.  
Civil Engineering

C. Patricia Reid (1951) Professor Emeritus, 1974.  
Women's Physical Education

Donald J. Reish (1958) Professor Emeritus, 1988.  
Biological Sciences

William M. Resch (1964) Professor Emeritus, 1995.  
Psychology

Henry Reyna (1970) Counselor Emeritus, 1987.

Hans P. Ridder (1964) Associate Professor Emeritus, 1991.  
Political Science

Charles A. Roberts, Jr. (1956) Professor Emeritus, 1986.  
Physics and Astronomy

Johanna W. Roden (1962) Professor Emeritus, 1991.  
German and Russian

Clara G. Rodney (1968) Professor Emeritus, 1983.  
Teacher Education

Mildred S. Rodriguez (1974) Professor Emeritus, 1988.  
Home Economics

Fred Rogers (1959) Associate Professor Emeritus, 1992.  
Speech Communication

Howard C. Rolfe (1960) Professor Emeritus, 1980.  
Elementary Education

Harry G. Romig (1966) Professor Emeritus, 1972.  
Operations Research and Statistics

Ailee W. Rose (1951) Professor Emeritus, 1974.  
English

Kay L. Roskam (1974) Professor Emeritus, 1994.  
Music

Arlene A. Roster (1952) Professor Emeritus, 1975.  
Elementary Education

Robert D. Routh (1967) Professor Emeritus, 1983.  
Industrial Education

Kenneth W. Rugg (1964) Professor Emeritus, 1989.  
Theatre Arts

Ruth L. Russell (1963) Professor Emeritus, 1994.  
Biological Sciences

Bruce Ryan (1978) Professor Emeritus, 1997.  
Communicative Disorders

James E. Ryan (1954) Professor Emeritus, 1983.  
Industrial Education

Eva Sakamoto (1967) Assistant Professor Emeritus, 1982.  
Nursing

Merna A. Samples (1967) Professor Emeritus, 1981.  
Home Economics

William F. Sater (1967) Professor Emeritus, 1995.  
History

Janet B. Sawyer (1957) Professor Emeritus, 1986.  
English

Richard Scalettar (1968) Professor Emeritus, 1992.  
Physics and Astronomy

Frederick H. Scantling (1966) Associate Professor Emeritus, 1980.  
Geography

Joan M. Schlaich (1965) Professor Emeritus, 1996.  
Dance

Alfred I. Schmidt (1967) Associate Professor Emeritus, 1993.  
Educational Psychology and Administration

Milton E. Schmidt (1959) Professor Emeritus, 1979.  
Industrial Education

John H. Schmitt (1974) Professor Emeritus, 1989.  
Spanish/Portuguese

Doris D. Tabor Schroeder (1967) Professor Emeritus, 1987.  
Teacher Education

Cramer W. Schultz (1964) Professor Emeritus, 1991.  
Physics and Astronomy

James W. Schultz (1963) Associate Professor Emeritus, 1980.  
Physical Education

Josephine B. Schultz (1951) Professor Emeritus, 1977.  
Art

Arnold T. Schwab (1961) Professor Emeritus, 1980.  
English

Bruce L. Scott (1965) Professor Emeritus, 1996.  
Physics and Astronomy

Joseph F. Seewerker (1967) Professor Emeritus, 1992.  
Computer Engineering and Computer Science

Elbert W. Segelhorst (1964) Professor Emeritus, 1992.  
Economics

Thomas M. Serrett (1963) Assistant Librarian Emeritus, 1980.

Norman E. Sexauer (1967) Professor Emeritus, 1992.  
Mathematics

John W. Shainline (1966) Vice President for Student Services Emeritus, 1990.

Peter L. Shaw (1974) Professor Emeritus, 1994.  
Public Policy and Administration

Alfred W. Sheets (1959) Professor Emeritus, 1975.  
Sociology

Gail Shoup (1969) Professor Emeritus, 1989.  
Theatre Arts

Martha A. Siegel (1975) Professor Emeritus, 1994.  
Nursing

Robert M. Simmons (1959) Professor Emeritus, 1983.  
Management/Human Resources Management

Donald H. Simonson (1956) Professor Emeritus, 1980.  
Chemistry

Gene R. Simonsen (1958) Professor Emeritus, 1990.  
Economics

Sidney B. Sims, Jr. (1960) Senior Assistant Librarian Emeritus, 1994.

Lorelei P. Sinclair (1966) Assistant Librarian Emeritus, 1991.

A. Keith Skarsten (1956) Professor Emeritus, 1982.  
English

Elbert L. Sleeper (1957) Professor Emeritus, 1992.  
Biological Sciences

Alton H. Smith (1957) Professor Emeritus, 1992.  
Mathematics

Donald H. Smith (1960) Professor Emeritus, 1986.  
Industrial Education

Earl M. Smith (1968) Professor Emeritus, 1991.  
Technology Education

Peggy J. Smith (1968) Professor Emeritus, 1992.  
Sociology

Robert J. Smith (1966) Professor Emeritus, 1992.  
Management/Human Resources Management

Colleen Sparks (1978) Professor Emeritus, 1997  
Nursing

Doris S. Specht (1985) Head, Humanities Librarian Emeritus, 1973.

Richard Spiller (1969) Professor Emeritus, 1997.  
Marketing

Graham K. Spring (1966) Associate Professor Emeritus, 1976.  
German, Russian and Classics

Russel N. Squire (1958) Professor Emeritus, 1971.  
Music

Meyer L. Stein (1974) Professor Emeritus, 1989.  
Journalism

George D. Stephens (1951) Professor Emeritus, 1974.  
English

Lee B. Stephens, Jr. (1962) Professor Emeritus, 1983.  
Biological Sciences

Charles E. Stetler (1967) Professor Emeritus, 1992.  
English

Perri J. Stinson (1969) Professor Emeritus, 1988.  
Information Systems

Harry E. Stiver, Jr. (1964) Professor Emeritus, 1983.  
Theatre Arts

Lavonne L. Stock (1959) Professor Emeritus, 1980.  
Physical Education

Robert E. Strain (1956) Professor Emeritus, 1978.  
Economics

Gerald B. Strickler (1958) Professor Emeritus, 1986.  
Philosophy

Paul W. Stroud (1957) Professor Emeritus, 1980  
Music

Vivian M. Sucher (1962) Professor Emeritus, 1986  
Nursing and Gerontology

Roy A. Sugimoto (1969) Associate Professor Emeritus, 1988.  
Teacher Education

Neil V. Sullivan (1972) Professor Emeritus, 1986.  
Educational Psychology and Administration

Sabri Sungu (1961) Professor Emeritus, 1983.  
Mechanical Engineering

Robert J. Swan (1964) Professor Emeritus, 1986.  
Educational Psychology and Administration

Frank E. Swatek (1956) Professor Emeritus, 1992.  
Biological Sciences

Frederick M. Swensen (1961) Professor Emeritus, 1990.  
French/Italian

Richard H. Swift (1958) Professor Emeritus, 1980.  
Art

Kenneth S. Teel (1969) Professor Emeritus, 1988.  
Management/Human Resources Management

Richard J. Tewles (1967) Professor Emeritus, 1991.  
Finance, Real Estate and Law

A. G. Tharp (1959) Professor Emeritus, 1987.  
Chemistry

Lindsay Thomas, Jr. (1961) Professor Emeritus, 1992.  
French and Italian

Charles M. Thompson (1956) Professor Emeritus, 1983.  
Art

Charles H. Tilden (1952) Professor Emeritus, 1976.  
Educational Foundations: Counselor

Talmadge C. Tillman, Jr. (1968) Professor Emeritus, 1991.  
Accountancy

F. Alan Timmons (1954) Professor Emeritus 1980.  
Instructional Media

John A. Torney, III (1957) Professor Emeritus, 1986.  
Health Science

Leonard Torres (1956) Professor Emeritus, 1988.  
Industrial Education

William J. Traynor (1973) Professor Emeritus, 1992.  
Management/Human Resources Management

John Trevennen, Jr. (1952) Information Desk Librarian Emeritus, 1978.

Thomas Trombetas (1961) Professor Emeritus, 1989.  
Political Science

Robert G. Trout (1961) Professor Emeritus, 1991.  
Technology Education

Ching H. Tsao (1965) Professor Emeritus, 1986.  
Mechanical Engineering

Robert E. Tumeity (1974) Professor Emeritus, 1992.  
Health Care Administration

Theresa G. Turk (1970) Professor Emeritus, 1995.  
Sociology

Herbert H. Tyrnauer (1961) Professor Emeritus, 1995.  
Design

Paul S. Ullman (1958) Professor Emeritus, 1994.  
Sociology

Alexander D. Urquhart (1953) Professor Emeritus, 1982.  
Political Science

Hans H. Vander Meyden (1961) Associate Professor Emeritus, 1983.  
Mechanical Engineering

Marilyn Vanderwarf (1957) Associate Professor Emeritus, 1983.  
Home Economics

James J. Van Eimeren (1961) Professor Emeritus, 1994.  
Art

Georgie B. Vaughn (1960) Senior Associate Librarian Emeritus, 1981.

Joseph Verdina (1959) Professor Emeritus, 1987.  
Mathematics and Computer Science

Charles T. Walker (1964) Professor Emeritus, 1991.  
Geological Sciences

(Milton) Glenn Walker (1964) Professor Emeritus, 1988.  
Sociology

William J. Wallace (1963) Professor Emeritus, 1970.  
Anthropology

Eugene C. Wallin (1956) Professor Emeritus, 1990.  
Art

Dorothy L. Walsh (1956) Professor Emeritus, 1970.  
Nursing

Barbara A. Ward (1968) Associate Professor Emeritus, 1980.  
Instructional Systems Technology

Virginia G. Warren (1973) Dean, Professor Emeritus, 1992.  
College of Humanities, Communicative Disorders, and Gerontology

Stuart L. Warter (1965) Professor Emeritus, 1997  
Biological Sciences

Harold W. Washburn (1965) Professor Emeritus, 1972.  
Electrical Engineering

Kenneth C. Weisbrod (1964) Associate Dean Emeritus, 1980.  
Counseling and Testing

Robert G. Wells (1963) Professor Emeritus, 1985.  
Journalism

Stephen G. Werlick (1964) Professor Emeritus, 1995.  
Art

David B. Whitcomb (1967) Counselor Emeritus, 1987.  
Susanne Whitcomb (1973) Professor Emeritus, 1987.  
School of Business Administration

Richard H. Wilde (1951) Professor Emeritus, 1983.  
History

Betty Williams (1989) Professor Emeritus, 1996.  
Nursing

David A. Williams (1965) Professor Emeritus, 1980.  
History

John B. Williams (1966) Professor Emeritus, 1992.  
English

Luster J. Williams (1956) Professor Emeritus, 1983.  
English

R. Ora Williams (1968) Professor Emeritus, 1988.  
English

Stanley W. Williams (1952) Professor Emeritus, 1983.  
Educational Psychology and Administration

James N. Wilson (1950) Professor Emeritus, 1979.  
Geography

Suzanne M. Wilson (1958) Professor Emeritus, 1980.  
English

Robert E. Winchell (1966) Professor Emeritus, 1995.  
Geological Sciences

Robert W. Winchell (1961) Professor Emeritus, 1980.  
Electrical Engineering

Robert W. Winslow (1952) Professor Emeritus, 1980.  
Music

Herbert A. Winter (1959) Associate Professor Emeritus, 1988.  
French/Italian

Stanley Wolf (1979) Professor Emeritus, 1997.  
Electrical Engineering

Marjorie E. Wood (1968) Professor Emeritus, 1991.  
Biological Sciences

Robert W. Wuesthoff (1959) Professor Emeritus, 1989.  
Physical Education

Robert C. Wylder (1953) Professor Emeritus, 1979.  
English

Frank W. Wylie (1988) Professor Emeritus, 1992.  
Journalism

Alva F. Yano (1963) Professor Emeritus, 1992.  
Physics and Astronomy

Jo Ann R. Yates (1968) Professor Emeritus, 1986.  
Communicative Disorders

Bing C. Yen (1964) Professor Emeritus, 1992.  
Civil Engineering

Dale Yoder (1966) Professor Emeritus, 1975.  
Management

James L. Young (1963) Assistant Professor Emeritus, 1974.  
Engineering Technology

Fathi S. Yousef (1972) Professor Emeritus, 1997.  
Speech Communication

Pierre Yperman (1963) Associate Professor Emeritus, 1992.  
French and Italian



# GENERAL REGULATIONS AND PROCEDURES

## Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this catalog, students and others who use this catalog should note that laws, rules, and policies change from time to time and that these changes may alter the information contained in this publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University, by the Chancellor or designee of The California State University, or by the President or CSULB designee. Further, it is not possible in a publication of this size to include all of the rules, policies and other information which pertain to the student, the institution, and The California State University. More current or complete information may be obtained from the appropriate department, college, or administrative office.

Nothing in this catalog shall be construed as, operate as, or have the effect of an abridgment or a limitation of any rights, powers, or privileges of the Board of Trustees of The California State University, the Chancellor of The California State University, or the President of the campus. The Trustees, the Chancellor, and the President are authorized by law to adopt, amend, or repeal rules and policies which apply to students. This catalog does not constitute a contract or the terms and conditions of a contract between the student and CSULB or The California State University. The relationship of the student to the institution is one governed by statute, rules, and policy adopted by the Legislature, the Trustees, the Chancellor, the President, and their duly authorized designees. Information concerning grievance procedures for students who feel aggrieved in their relationships with the university, its policies, practices and procedures, or its faculty and staff may be obtained from Leslie Nix-baker, Director of Employee Relations, SSA 300, (562) 985-1742, or from Steve Katz, Director of Judicial Affairs, SSA 377, (562) 985-5270.

The Federal Military Selective Service Act (the "Act") requires most males residing in the United States to present themselves for registration with the Selective Service System within thirty days of their eighteenth birthday. Most males between the ages of 18 and 25 must be registered. Males born after December 31, 1959 may be required to submit a statement of compliance with the Act and regulations in order to receive any grant, loan, or work assistance under specified provisions of existing federal law. In California, students subject to the Act who fail to register are also ineligible to receive any need-based student grants funded by the state or a public postsecondary institution.

Selective Service registration forms are available at any U.S. Post Office, and many high schools have a staff member or teacher appointed as a Selective Service Registrar. Applicants for financial aid can also request that information provided on the Free Application for Federal Student Aid (FAFSA) be used to register them with the Selective Service. Information on the Selective Service System is available and the registration process may be initiated online at <http://www.sss.gov>.

Information concerning the academic programs of CSULB may be obtained from the Academic Vice President, SSA 309, at (562) 985-4128 and may include:

1. the current degree programs and other educational and training programs;
2. the instructional, laboratory, and other physical plant facilities which relate to the academic program;
3. the faculty and other instructional personnel;
4. data regarding student retention at CSULB and, if available, the number and percentage of students completing the program in which the student is enrolled or has expressed interest; and
5. the names of associations, agencies, or governmental bodies which accredit, approve, or license the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the institution's accreditation, approval, or licensing.

## Election of Regulations for Degree Requirements

Undergraduate students acquire "catalog rights" with respect to the requirements for a degree program by maintaining "attendance" continuously. This means that, if continuous attendance is maintained and the degree objective is not changed, students may choose to graduate under the requirements for the degree in effect 1) at the time they began the study in a California community college or another campus of The California State University, 2) at the time they entered CSULB, or 3) at the time of graduation from CSULB. Substitutions for discontinued courses may be authorized or required by the Dean of the cognizant College. Students who change their major, including changing from "undeclared" status to a defined degree objective, are governed by the degree major requirements in effect at the time of the change or declaration of major. Students who change from one option to another within the same degree program are not. Students who change majors are advised that some courses counted for General Education or double counted for General Education and the major may be unacceptable for General Education in terms of the new major. These students should check with the Academic Advising Center.

The term "attendance" means, literally, attendance in a course for at least one semester (or quarter) unit credit in at least one semester (or two quarters) in a calendar year, culminating in a record of enrollment on the student's official transcript. For the purpose of establishing catalog rights, the course must be at the baccalaureate or graduate level in a California community college, a California State University, or a University of California campus.

Once "catalog rights" are established, absence related to an approved medical, military or academic leave or for attendance at another accredited institution of higher education shall not be considered an interruption of attendance, provided that the absence does not exceed two years. Please see Educational Leave later in this section.

For all students, a failure to remain in continuous attendance will mean that the student must meet the regulations current at the time of resuming the degree program or those applicable at the time of graduation. In addition, for graduate students, a failure to maintain continuous attendance means the automatic revocation of "candidacy" for the degree (advancement to candidacy) and of "catalog rights."

### Academic Calendar

Fall and Spring Semesters: California State University, Long Beach operates on the semester system. Normally, Fall Semester classes begin in late August. The last day of instruction usually comes midway in December; this allows for a week of final examinations prior to the Winter Recess, which begins about the 20th of December. The Spring Semester usually begins in the last week of January and ends in mid-May in time for a five-day final examination period and a week of commencement exercises just before or after Memorial Day. The two regular semesters are the only periods during which a student may establish residency in the University.

### Summer, Winter, and Extended Education Sessions

Summer Sessions courses are offered during three sessions extending through the months of June, July and August. Winter Session is a three-week session beginning in early January. Courses published in the Summer and Winter schedules count as regular academic credit (offered during "Special Sessions"), not extension credit, except where specifically indicated. Instruction is also provided during the fall and spring semesters through the Office of University College and Extension Services in various formats (including "Special Sessions").

### Student Load

Undergraduate students who carry 12 units or more in a fall or spring semester are classified as full-time students. Those who carry fewer than 12 units are part-time students. To be full-time, graduate students must carry at least 9 units.

#### Maximum suggested unit load

Graduates .....	16 units
First Semester Freshmen .....	17 units
Students on Academic Probation .....	15 units
All Other Students .....	18 units

Summer and Winter Sessions: One unit per week of attendance. Exceptions to these limits may be made only on the basis of proven academic ability and the feasibility of the student's schedule. Permission must be obtained (prior to registration) from appropriate authorities: in the regular semester, from the student's major department, in summer and winter sessions, from the College Dean who governs the student's major. (Unclassified majors must consult the Academic Advising Center.)

#### Student Levels

Freshman .....	0.1 to 29.9 units
Sophomore .....	30.0 to 59.9 units
Junior .....	60.0 to 89.9 units
Senior .....	90.0 or more units
Postbaccalaureate .....	holding a baccalaureate or equivalent degree

The faculty recognizes that it is frequently necessary for students to hold part-time positions while attending the University. It advises that good judgment be demonstrated by students enrolling under these conditions. Students whose outside employment could be expected to interfere with the normal unit load should reduce their academic program accordingly. It is suggested students plan a schedule spending three hours time per week for each unit taken. This may be considered sufficient time to enable a student to do satisfactory work. Students who desire to achieve "A" or "B" grades may wish to spend proportionately more time in their studies. A student's employment and college time combined should not exceed 60 hours weekly. Students who make no allowances for their employment and outside obligations in planning their college programs will bear full responsibility for the resulting level of scholarship.

Veterans should inquire at the Veteran's Affairs Office (SSA 226) about unit load requirements for state and federal benefits.

For more information about graduate student load, see regulations governing Master's Degrees in this Catalog.

Undergraduate international students on non-immigrant visas must carry and complete a minimum of 12 units per semester unless a reduced load is authorized by the student's advisor and the Center for International Education. Reduced unit loads may be granted for substantial academic reason or compelling personal reasons beyond the control of the student. Failure to secure such authorization results in violation of student status under Immigration and Naturalization Service (INS) and State Department regulations, warranting discontinuance of enrollment.

### Class Attendance

Students are expected to attend classes regularly because classroom work is one of the necessary and important means of learning and of attaining the educational objectives of the institution.

Students who fail to attend all sessions of a class during the first week of the semester may be removed from the class roster by the instructor and replaced with students on a waiting list. Students thus replaced must officially withdraw from the course, as removal from the class roster by the instructor does not constitute official withdrawal.

Students should not miss classes except for valid reasons, such as illness, accidents, or participation in officially approved University activities. When students are absent from classes, it is their responsibility to inform instructors of the reason for the absence and to arrange to make up missed assignments and class work insofar as this is possible.

Students who expect to be absent from the University for two weeks or more for any valid reason, and who have found it difficult to inform their instructors, should notify the academic department office. The department office will notify the student's instructors of the nature and duration of the extended absence. It remains the responsibility of the student to arrange with instructors to make up any academic work missed. Students who miss classes at the beginning of the semester risk being dropped by their instructor.

## Visitors to Classes

Only students registered for the class either as regular students or as auditors, the instructor, and invited guests of the instructor may attend classes at CSULB. Persons wishing to become guests of the instructor should seek the instructor's permission prior to the scheduled beginning of the class session.

## Course Listings

Courses are listed in this catalog by department, the departments and programs being arranged alphabetically. Each listing gives the course number, title, semester units in parentheses, semester or session offered, and the course description, which includes prerequisites and other restrictions.

An asterisk (\*) preceding the course title indicates that the course is acceptable as elective credit for the master's degree.

## Course Numbers

Any course numbers beginning with zero do not count toward any degree program. However, for purposes of qualifying for financial aid, the unit value assigned to those courses will count for the semester in which those courses were taken. Lower-division courses are numbered from 100 through 299. These courses are designed primarily for Freshmen and Sophomores. They provide breadth of understanding and the foundation for the more specialized work in upper-division, advanced courses. Approved General Education courses are listed in the Schedule of Classes and are offered at both the lower-division and upper-division levels; no upper-division General Education course may be used in a graduate degree program. Lower-division courses are open to Junior, Senior, and Graduate students; however, lower-division courses may not be applied to any graduate degree program.

Upper-division courses are numbered from 300 through 499. These courses are open to students who have completed the prerequisites to the course, if any, stated in the course description and other departmental regulations given in this catalog. A "Prerequisite" is a completed course or other measure of academic preparation which provides a foundation for the more advanced course.

Freshmen and Sophomores wishing to enroll in upper-division courses which indicate no prerequisites should consult with the course instructor or other knowledgeable advisor prior to enrollment. These courses are presented to meet the expectations of academically advanced students. Freshmen and Sophomores should not attempt courses with numbers preceded by an asterisk.

Certain 400-level courses are double-numbered with 500-level courses. In these courses the expectations of graduate students, who must enroll in the 500-level course, are greater than the expectations of undergraduates. Grading scales are different for the 500-level course and additional work is required of graduate students. A student may not earn credit for both the 400- and 500-level versions of a course.

Graduate-level courses are numbered from 500 to 799. Courses numbered 500-599 may be opened to second-semester senior students upon favorable petition. Courses numbered from 600 to 799 are open only to graduate students.

Included with some of the course numbers is a supplementary letter, or suffix, such as L for "laboratory" or A and B for a year-long sequence. "A-B" means that the courses must be taken in alphabetical sequence; "A,B" designates related courses which need not be taken in sequence. The student is given degree credit for each part of the sequence satisfactorily completed, whether or not the remaining part of the sequence is completed. The "semester or session offered" information is presented as a long-range planning guide. Funding, student demand, and instructor availability may require that a course be offered in a different semester or session or be postponed until a later academic year. F indicates Fall Semester, S indicates Spring Semester, W indicates Winter Session, and SS indicates Summer Session. The Schedule of Classes appropriate to the semester or session in question should be consulted for actual course scheduling information. Courses offered only in alternate years are so designated. Many of the courses offered during the fall and spring semesters are also offered during the summer session.

The University reserves the right to make changes in course offerings without notice.

Courses offered through Extended Education conferring Continuing Education Unit credit (CEU) carry no degree credit. Courses in Extended Education with numbers beginning with an "X" followed by a number in the 100-series through the 600-series do confer degree credit, subject to the limitations on transfer credit (see below).

## Course Subject Abbreviations

The following course subject abbreviations are employed in the CSULB Catalog, the Schedule of Classes, student study lists, academic planning guides, evaluation materials, and transcripts.

Abbreviation	Definition
ACCT	Accountancy
AE	Aerospace Engineering
AIS	American Indian Studies
ALI	American Language Institute
ALP	American Language Program
AMST	American Studies
ANTH	Anthropology
A/P	Anatomy and Physiology
ART	Art
ASAM	Asian American Studies
A/ST	Asian Studies
ASTR	Astronomy
BIOL	Biology
B/ST	Black Studies
CBA	College of Business Administration
C D	Communicative Disorders
C E	Civil Engineering
CECS	Computer Engineering and Computer Science
CEM	Construction Engineering Management
CH E	Chemical Engineering
CHEM	Chemistry
CHIN	Chinese
CHLS	Chicano and Latino Studies
C/LA	College of Liberal Arts
CLSC	Classics

C/LT	Comparative Literature
COMM	Communication Studies
COTA	College of the Arts
CRIM	Criminal Justice
C/ST	Computer Studies
DANC	Dance
DESN	Design
ECON	Economics
EDAD	Educational Administration
EDEL	Elementary Education
EDMS	Education Middle School
ED P	Educational Psychology
EDSE	Secondary Education
EDSS	Single-Subject Education
E E	Electrical Engineering
ENGL	English
ENGR	Engineering
EOP	Equal Opportunity Program
E/ST	Environmental Studies
E T	Engineering Technology
FCS	Family and Consumer Sciences
FEA	Film and Electronic Arts
FIN	Finance, Real Estate and Law
FREN	French
GBA	Graduate Business Administration
GEOG	Geography
GEOL	Geology
GERM	German
GERN	Gerontology
GK	Greek
GS	Graduate Studies
HCA	Health Care Administration
HDEV	Human Development
HHS	Health and Human Services
HIST	History
HRM	Human Resources Management
H SC	Health Science
INTL	International Education
I S	Information Systems
I/ST	International Studies
ITAL	Italian
JAPN	Japanese
JOUR	Journalism
KPE	Kinesiology and Physical Education
LAT	Latin
LI	Library Education
LING	Linguistics
M E	Mechanical Engineering
MGMT	Management
MATH	Mathematics
MICR	Microbiology
MKTG	Marketing
M S	Military Science
MUS	Music
NRSG	Nursing
NSCI	Natural Sciences
OCST	Occupational Studies
OSS	Ocean Studies
PHIL	Philosophy
PHSC	Physical Science
PHYS	Physics
POSC	Political Science
PPA	Public Policy and Administration
PSY	Psychology
P T	Physical Therapy

REC	Recreation
R/ST	Religious Studies
RUSS	Russian
SAR	Sports, Athletics and Recreation
SCED	Science Education
SI	Supplemental Instruction
SOC	Sociology
SPAN	Spanish
S W	Social Work
THEA	Theatre Arts
UNIV	University
UHP	University Honors Program
U/ST	Urban Studies
W/ST	Women's Studies

## Academic Credit

### Course Credit Units

Each course has a specific credit unit value which is indicated in parentheses following the course title. In typical lecture and discussion classes, the number of course credit units is equal to the number of class hours per week. Thus, in a typical fifteen-week semester a one-unit class meets for a total of fifteen hours during the fifteen weeks while a three unit class will meet forty-five hours during the same period. A typical lecture class may be scheduled to meet once, twice, or three times a week. Any course numbers beginning with zero do not count toward any degree program. However, for purposes of qualifying for financial aid, the unit value assigned to those courses will count for the semester in which those courses were taken.

In other types of instruction, principally laboratories and activities of other kinds, the number of class hours per week is greater than the number of course credit units, depending on the mode of instruction. Courses with variant or mixed modes of instruction are noted in the course description and the Schedule of Classes. Summer Session classes require the same total amount of class time, compressed into a six week session.

The instructional "hour" is fifty minutes long, allowing for transit between classes and rest breaks within multi-hour classes. In most classes the student is expected to allow two hours per week of study time beyond class time for each unit of credit. Thus, a three-unit lecture-discussion course normally demands a commitment of nine hours per week averaged over the semester.

### Credit for Activity Courses

Activity courses provide practice in areas such as music, physical education and Sports Athletics and Recreation. Students may apply to the degree no more than eight units each of activity course credit in music and physical education and no more than four units of activity course credit in SAR to total no more than 20 units in all areas.

### Independent Study Courses

Each student enrolled in a supervised independent study, research, or reading course (excluding thesis courses) must have an agreement on file in the department office where the course is offered. The agreement is to be made between the student and the instructor at the beginning of the course and must include the following: a description of the work to be accomplished, specific information on the tasks required, the



nature of the final report, and the basis for determining the final grade. The agreement must be signed by both the instructor and the student.

### Credit for Cross-Listed Courses

Certain interdisciplinary courses are listed in this catalog under more than one department. Normally, students will receive credit for such a cross-listed course in the department under which they register for it. They may, however, have the Registrar indicate that this course may be credited to a different department which also lists it, provided that they make this request no later than the end of the semester preceding anticipated graduation.

### Repeatable Courses

A student may repeat for additional units or credit toward a baccalaureate or graduate degree any course specified as repeatable in the catalog up to the limits specified. Each department determines the unit limits and any other limitations for courses that may be repeated. In general, except for activity courses, a student may not repeat a course having the same content as the one for which credit was initially received.

### Repetition of Courses for Satisfactory Grade

Undergraduate students and postbaccalaureate students who are pursuing a second (or subsequent) baccalaureate degree may repeat, for the purpose of excluding the grade from grade-point determination, an undergraduate course taken at California State University, Long Beach in which a grade of D, F, or U was received. Postbaccalaureate students pursuing credential programs, certificate programs, master's degrees or those who have no specific objective are not eligible for the Repeat and Delete policy.

Eligible students may repeat a course once for the purpose of deleting a grade, without prior departmental approval, if both courses were taken at CSULB. The deletion is automatically calculated at the end of the semester in which the course was repeated. Although the first grade will remain on the permanent record, the grade and grade-points of the repeated course on the second attempt will be those used in determining the grade-point average and units earned, provided the second grade was "C" or better. Students are not prohibited from continuing to repeat a course in which the grade is unsatisfactory (D, F, U), but all grades earned subsequent to the first repeat will remain in the grade-point determination, and the units earned in the course will be applied to the degree only once. While there is no time limit for repeating a course, the student's permanent record may not be altered after a degree has been granted.

If students wish to exclude from grade-point determination a grade of D, F, or U in a course taken at another institution, they may do so by enrolling in an equivalent course at CSULB. A petition must be filed in the Office of Enrollment Services. The Department in which the course is taught must indicate on the petition which particular course may be repeated to delete the previous grade. An official transcript from the institution where the original course was taken must accompany the petition. Only one repeat is allowed for the purpose of deleting a grade, and the repeated grade and grade points will be used in the overall grade-point determination, provided the second grade was "C" or better.

A grade received in a course taken at another institution may not be used to delete a grade in an equivalent course taken at CSULB.

### Transfer Credit

Students who were in good standing at another accredited institution may, within maximums, transfer credit for baccalaureate or graduate degree course work. Course equivalency for major requirements must be determined; students are cautioned that the University is under no obligation to accept transferred courses for subject credit in addition to unit credit for admission. Normally, however, there is a probability that courses in the accepted core of a discipline will be exchangeable between universities. Policy regarding transfer of courses from California community colleges differs in some respects.

### Transfer of Undergraduate Credit From Accredited Community Colleges

A maximum of 70 semester units earned in a community college may be applied toward the baccalaureate degree, with the following limitations and stipulations:

1. No upper-division credit may be allowed for courses taken in a community college;
2. No credit may be allowed for professional courses in education taken in a community college, other than introduction to education courses;
3. Individual program regulations for specific transfer limitations should be consulted.
4. Students who transfer general education certification are still required to complete at least 9 units of upper-division courses at the campus conferring the degree.

### Extension Credit

A maximum of 24 semester units credit for courses taken by correspondence or through extension (including Open University) may be accepted towards a baccalaureate degree. Courses taken as "Special Sessions" offerings are not counted in this 24-unit total. Correspondence and extension credit must be accepted for degree purposes by the institution in which the work was taken. Extension credit may not be used to fulfill the minimum 30-unit residence requirement.

### Credit for Noncollegiate Instruction

CSULB grants undergraduate degree credit for successful completion of noncollegiate instruction, either military or civilian, appropriate to the baccalaureate, that has been recommended by the Commission on Educational Credit and Credentials of the American Council on Education. The number of units allowed are those recommended in the Guide to the Evaluation of Educational Experience in the Armed Service and the National Guide to Educational Credit for Training Programs. Students must provide acceptable documentation of the training to the Office of Enrollment Services.

### International Program Credit

Course credits earned in universities abroad may be accepted for degree credit at CSULB subject to evaluation by the cognizant department or program upon admission of the student to the University. CSULB students who desire, subsequently, to take courses at a foreign university for degree credit must have each such course approved in advance in writing by the Chair of the appropriate department or program.

The Center for International Education administers many international education and exchange programs. Students fully accepted into one of these programs may, in most cases, continue CSULB residency while studying in the approved foreign institution. Some courses taken through these programs do not have to be approved in advance.

### Acceleration of University Studies

The University provides several means by which students may accelerate their studies; these are discussed below. Each of the following options may be subject to restrictions and regulations within individual academic programs. Therefore, students interested in any of these options should consult with the Chair of the concerned department.

### Advanced Placement

California State University, Long Beach grants credit toward its undergraduate degrees for successful completion of examinations of the Advanced Placement Program of the College Board. Students who present scores of three or better will be granted up to six semester units (nine quarter units) of college credit for each AP course.

Applicants to CSULB who wish to obtain Lower Division course credit for completed International Baccalaureate Higher Level courses must submit an official IB transcript. Course equivalency for Higher Level courses completed is determined by the faculty of the appropriate department subsequent to careful review of course syllabi.

For questions or information, please call Enrollment Services at (562) 985-5471 or consult your department.

### Unit Credit by Examination

California State University, Long Beach grants credit to those students who pass examinations that have been approved for credit system-wide. These are: the CSU English Equivalency Examination; the College Level Entrance Program (C.L.E.P.) general examination in Mathematics; the C.L.E.P. Subject Examinations in College Algebra and Trigonometry, in Calculus and Analytic Geometry, in Statistics, in General Chemistry, and in German; the College Entrance Examination Board (C.E.E.B.) Advanced Placement examinations; and the American Chemical Society Cooperative Examination.

Students may also challenge some courses by taking examinations developed at the campus. Credit shall be awarded to those who pass them successfully. Credits earned in this manner will be recorded as "CR" (credit) on the student's transcript and will be counted toward the total number of units required for the degree although they will not be included in calculation of the grade-point average. Credit by examination may not be used to fulfill the minimum residence requirement.

Students must be enrolled in the University and in the course for which they wish to receive credit by examination. Enrollment is by permission of the department and is only available during the academic semester in which the course is being offered. Students must secure a signed and dated approval form from the department prior to enrolling in the course. Students must provide the instructor with a copy of the signed and dated approval form at the first class meeting. The instructor will ensure that the examination is conducted, scored, and the results reported prior to the end of the third week of classes. Students who pass the examination will

receive a grade of "CR." Students who do not pass the examination have two options:

1. continue in the course as a regular student; or
2. withdraw from the course.

The University sets no maximum on the number of credits a student may receive by examination. However, not all courses are available for credit by examination. Information about courses for which credit by examination is not permitted is available in the Department Office, in the College Office, and the Office of Enrollment Services. A student may not receive credit by examination:

1. for an activity course;
2. for any course which is a prerequisite to one for which credit has already been received (see department for possibility of course waiver);
3. to remove a grade of "F," "U," "NC";
4. to satisfy the courses required for a master's degree;
5. for any course in which the content or methodology is such that an examination does not appropriately measure competence.

Application forms to apply for credit by examination are available in the Office of Enrollment Services. Procedures and criteria for requesting unit credit by examination in a given course are available in the appropriate department office.

### Substitution of Courses

Students who believe that a course they have taken (or intend to take) may be appropriate to their program and that this course could substitute for a specified course requirement may request that a substitution of courses be indicated on the departmental program planning guide, filed prior to graduation. Course substitutions are normally limited to cases where the required course cannot be offered or where the student has taken a similar but not identical course elsewhere.

### Waiver of Course Requirement

In addition, students who believe that previous training has sufficiently prepared them in a certain area may request a waiver of a specific course requirement (subject credit only). Requests for waiver of course requirements can be made on an application form available in the department office. The student will be required to justify the request in a way acceptable to the department. A waiver of specific course requirements does not reduce the total number of credits required for the major or the degree.

### Graduate Credit Earned as a Senior

Graduate credit usually may not be earned in advance of the baccalaureate degree. However, based upon faculty recommendation, academic performance (in general a grade-point average of 3.0 (B) in the major), and promise of academic achievement in post-graduate study, seniors may be granted approval to earn a maximum of 12 units of course work in the 400 and 500 levels designated as acceptable for graduate credit and taken at this university towards their prospective graduate programs. Approval is subject to the following conditions: (a) the course work must be in addition to that required for the undergraduate major; and (b) the undergraduate student must have a "Petition to Earn Graduate Credit in the Senior Year" approved by the departmental graduate advisor and the department chair prior to enrollment.

In those areas in which graduate credit is for a credential only, the petition must be submitted to the appropriate department in the College of Education. Petitions submitted after completion of course(s) will not be approved.

### Senior Enrollment in Graduate Courses for Undergraduate Credit

Under special conditions, seniors who have an overall 3.0 grade-point average or better and who have adequate undergraduate preparation in the subject may enroll in up to 12 units in the 500-599 series to fulfill the elective requirements of the bachelor's degree. The course work may not be applied to the units of 500-600 level course work required by the department or College for the master's degree. The student must have a "Petition to Earn Credit Toward a Bachelor's Degree for a 500-Level Course Taken in the Senior Year" approved by the instructor and department chair before registration in the class(es) is permitted.

## Grades and Grading Procedures

### Definitions

The following definitions apply to grades assigned in all undergraduate and graduate courses.

- A — Performance of the student has been at the highest level, showing sustained excellence in meeting all course requirements and exhibiting an unusual degree of intellectual initiative.
- B — Performance of the student has been at a high level, showing consistent and effective achievement in meeting course requirements.
- C — Performance of the student has been at an adequate level, meeting the basic requirements of the course.
- D — Performance of the student has been less than adequate, meeting only the minimum course requirements.
- F — Performance of the student has been such that minimal course requirements have not been met.

CR/NC — In addition to the standard grades, the University permits students to select evaluation on a "Credit" or "No Credit" basis. These grades are defined as follows:

A CR is equivalent to an A, B, or C, and NC is equivalent to a D, F, or U. Exceptions: A grade of CR reflects work at the level of B or better, and a grade of NC reflects work at the level of C, D, or F: 1) in certain professional preparation courses, providing that the students are notified of such a policy both in class materials and, as soon as practicable, in the catalog course description; and 2) for graduate students in all courses at the 300, 400, 500 and 600 levels.

Special regulations and procedures governing the CR/NC grading system are described in the next subsection of this catalog.

AU — Audit. Enrollment as an auditor is subject to permission of the instructor; provided that enrollment in a course as an auditor shall be permitted only after students otherwise eligible to enroll on a credit basis have had an opportunity to do so. Auditors are subject to the same fee structure as credit students and regular class attendance is expected. It is the responsibility of the student to request from the instructor what is meant by regular class attendance. A grade of AU is posted to the

student's permanent academic record unless the student fails to attend a sufficient number of class meetings. In these cases, the instructor will request that the student be administratively withdrawn from the course. Once enrolled as an auditor, a student may not change to credit status unless such a change is requested prior to the last day to add classes. A student who is enrolled for credit may not change to audit after the third week of instruction.

SP — Satisfactory Progress. This symbol is used in connection with courses requiring multiple enrollment, i.e., that extend beyond one academic term. It indicates that work is in progress and has been evaluated and found to be satisfactory to date, but that assignment of a final grade must await completion of additional work. Reenrollment is permitted prior to assignment of a final grade provided the cumulative units attempted do not exceed the total number applicable to the student's educational objective. Work is to be completed within one year of the date of the initial enrollment except for graduate degree theses. If the SP symbol is not replaced by a terminal grade within the specified time period or prior to the student's declared graduation date, it will be changed to a W.

I — Incomplete. The symbol "I" indicates that a portion of required course work (normally not more than one third) has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified, reasons and that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the attention of the instructor and to determine from the instructor the remaining course requirements which must be satisfied to remove the Incomplete. A final grade is assigned when that work has been completed and evaluated.

An "I" must normally be made up within one calendar year immediately following the end of the term during which it was assigned, whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an "I" being counted as a failing grade for grade-point average computation, except as noted in item 3), below.

An extension of time may be granted for contingencies such as military service or documented serious health or personal problems.

The conditions for removal of the incomplete shall be reduced to writing by the instructor on a "Requirements for Assigning an Incomplete Grade" form. This form shall include a statement of:

1. all work completed in the course, the grades assigned for that work, and the percentages of the final grade accounted for by each item;
2. the work not completed and the percentage that each uncompleted assignment will count toward the final grade; and
3. the final grade the instructor will assign if the course requirements are not completed within one calendar year, or a shorter period as specified on the form, immediately following the term in which the "I" was assigned, without respect to continuous enrollment of the student during this period.

A copy of the agreement is to be given to the student, a copy is to be retained in the department office, and a copy is to be filed with the Office of Enrollment Services at the time final grades are submitted. Normally, the student should sign the "Incomplete form." If the student is eligible for an Incomplete, a faculty member may assign an "I" even when the student cannot be present to sign the form. In such a case, the instructor will forward to the student a copy of the form via the department office. When the work agreed upon has been completed and evaluated, a final grade will be assigned by an instructor. If an incomplete is assigned without an incomplete contract attached, or with a contract which is not filled in acceptably, the symbol of RD will be assigned to the student. The "Requirements for Assigning an Incomplete Grade" form will be considered unacceptable if:

1. more than one third of the work remains to be completed, and no justification has been provided;
2. the work required to complete the course has not been specified;
3. the faculty member failed to sign the form; or
4. the percentage fields have not been filled in.

Notice of the missing form, or a copy of the unacceptable form will be sent to the department chair with the request that the chair work with the faculty member to provide the information necessary to assign the grade of incomplete.

U — Unauthorized Withdrawal. The symbol "U" indicates that an enrolled student did not withdraw from the course but failed to complete course requirements. It is used when, in the opinion of the instructor, completed assignments or course activities or both were insufficient to make normal evaluation of academic performance possible (letter grades A-F or an Incomplete). For purposes of grade-point average this symbol is equivalent to an "F." A student who receives a "U" cannot complete additional work and have the "U" changed to a letter grade. In courses which are graded Credit/No Credit or in cases where the student has elected Credit/No Credit evaluation, use of the symbol "U" is inappropriate and "NC" will be used instead. Students who receive "U"s in their first semester of enrollment at CSULB will have those "U"s automatically changed to "W"s. In such cases the student will be notified that this policy applies for that first semester at CSULB only.

W — Withdrawal. The symbol "W" is used to signify that a student formally withdrew from the course; no reference or implication of passing or failing progress at the time of withdrawal is made or implied.

The symbol "W" indicates that the student was permitted to drop a course after the second week of instruction with the approval of the instructor and appropriate campus official. It carries no connotation of quality of student performance and is not used in calculating grade point average.

Students are held responsible for completion of every course in which they register OR FOR WITHDRAWING DURING THE FIRST TWO WEEKS OF CLASSES FROM COURSES WHICH THEY DO NOT INTEND TO COMPLETE. Application for withdrawal from the University or from a class must be officially filed by the student at the

Admissions and Records Office whether the student has ever attended the class or not; otherwise, the student will receive a grade of "U" (unauthorized incomplete) in the course. Application for withdrawal is made at the Admissions and Records Office. (See also the California State University policy on "Return of Fees.")

1. Withdrawal during the first two weeks of instruction:

Students may withdraw during this period and the course will not appear on their permanent records. To do this a student must file a Complete Withdrawal Application to drop all classes or a Change of Program Form for a specific class or classes. Fees are not refundable after the second week of classes.

2. Withdrawal after the second week of instruction and prior to the final three weeks of instruction:

Withdrawal during this period are permissible only for serious and compelling reasons. The procedure for withdrawal during this period are the same as in item 1, except that the approval signatures of the instructor and department chairperson are required. The request and approvals shall state the reasons for the withdrawal. Students should be aware that the definition of "serious and compelling reasons" as applied by faculty and administrators may become narrower as the semester progresses. Copies of such approvals are kept on file in the Admissions and Records Office.

3. Withdrawal during the final three weeks of instruction:

Withdrawal during the final three weeks of instruction are not permitted except in cases such as accident or serious illness where the circumstances causing the withdrawal are clearly beyond the student's control and the assignment of an Incomplete is not practical. Ordinarily, withdrawal in this category will involve total withdrawal from the campus except that a Credit / No Credit grade or an Incomplete may be assigned for courses in which sufficient work has been completed to permit an evaluation to be made. Request for permission to withdraw under these circumstances must be made in writing on forms available in the Office of Admissions and Records. The requests and approvals shall state the reasons for the withdrawal. These requests must be approved by the instructor, department chairperson and dean of the school. Copies of such approvals are kept on file in the Office of Admissions and Records.

4. Medical Withdrawal:

A student who becomes seriously ill or injured, or is hospitalized and hence is unable to complete the academic term may withdraw without academic penalty. A Physician's Statement for medical withdrawal, obtainable from the Student Health Service, must be completed by the student's attending physician and submitted to the Medical Director. Additional evaluation by the Director of Financial Aid may be required for those students receiving financial aid. The Student Health Service, upon approval of such a request, will forward its recommendation to the Office of Admissions and Records.

#### 5. Instructor Withdrawal:

An instructor may withdraw a student who has never attended a class by completing an "Instructor Drop Card" and submitting it to the Office of Admissions and Records along with the Enrollment Verification List at the end of the third week of classes. Students, however, should not rely on the instructor to do this and should officially withdraw from classes themselves to avoid assignment of a "U" in the course.

An instructor may also withdraw a student who has enrolled in a course requiring "permission of the instructor" or completion of prerequisites if the student has not properly secured this permission or satisfactorily completed the prerequisites before enrolling.

**RD — Report Delayed.** This symbol is used exclusively by the Registrar to permit processing of all final grades when the grades for an entire class section have not been reported by the instructor. The symbol does not imply any academic evaluation.

If an instructor fails to report a grade for an individual student, the Registrar will assume that an "I" could not be assigned and so will enter a symbol "U," discussed above.

#### Course Grading — Option Policy

The faculty determine in advance which courses may be taken for traditional (A-F) grade only, CR/NC only, or either. When a course is designated for CR/NC grading only or for traditional grading only, mention of this fact should be incorporated in the catalog course description. Any undergraduate course may be designated for or closed to the option of CR/NC grading whether or not the course is a requirement for an undergraduate degree major, minor, certificate, credential or concentration.

No course in which a grade of CR has been assigned may be used to fulfill the requirements for a master's degree, except that the grade of CR may be permitted for master's theses or projects (to a maximum of six units) when the individual department has specifically designated CR/NC grading for the thesis/project course in the department, and for fieldwork, practicum, and/or internship courses. The option of CR/NC grading for graduate students in undergraduate courses is subject to specific regulations of the individual departments regarding their graduate students and regarding the authorization for this option intrinsic to the approved course. Otherwise, no limitation exists as to the number of courses taken by graduate students under this policy.

An undergraduate student may elect CR/NC grading in no more than a total of 24 units, of which no more than 12 may be upper-division units. No more than eight units per semester may be taken for CR/NC grades. Courses graded CR/NC taken at another institution, course credit earned by examination, and courses in which CR/NC grading is the only form of grading are exempt from these limitations.

#### Assignment and Change of Grades

##### General

1. University policy requires that final grades shall be based on at least three, and preferably four or more, demonstrations of competence by the student.
2. In no case shall the grade on the final examination count for more than one-third of the course grade.

3. Instructors are expected to keep a record of students' scores on each of the demonstrations of competence on which the final grade is based.
4. Students have a right to be informed promptly of their scores and to review each of their demonstrations of competence with their instructors.
5. Instructors are expected to provide students with an opportunity for demonstration of competence, relevant to the determination of their final grade in the course, as early as is reasonable and no later than the mid-point of the semester or summer session.
6. Instructors are further expected to make clear to their students during the first week of instruction what grading policies and practices will be employed in the class and what rules will apply to withdrawals.
7. If materials submitted for a demonstration of competence are not returned, these materials will be retained for one semester by the instructor or, should the instructor be absent during that term, retained in the department office. A qualified instructor may be appointed by the chair, in the absence of the original instructor, to review the demonstration of competence with the student.

#### Final Examinations

It is the policy in most courses to have several examinations during the semester and a final examination. Final examinations are required in all courses for all students, except in certain activity courses or when the Dean of the College authorizes an exception. The schedule of final examinations is given in the Schedule of Classes. Permission to take a final examination at a time other than that regularly scheduled must be secured from the instructor at least one week in advance of any change. The instructor may not change the scheduled time for the final examination without authorization from the Dean of the College.

#### Final Grade Reports

Within approximately three weeks after the end of the term, reports of final grades are mailed to each student at the end of each semester or session.

#### Student Grade Record

A record is kept and grade or administrative symbol notations are indicated for all enrollments beyond the fourth week of instruction. The Registrar will eradicate originally awarded grades from official transcripts but note that there was a grade adjustment made when the following grade changes are made:

1. Grade change due to a clerical error on the part of the instructor of record;
2. Grade change due to a favorable grade appeal;
3. Grade change due to a resolution of RD (report delayed) grade.

The Registrar will not eradicate original grades from student transcripts when the following situations occur:

1. Resolution (make-up) of an incomplete;
2. Repetition of a course.

The Registrar will indicate some grade or administrative symbol for any student enrolled in a course beyond the fourth week.

## Change of Grade

Grades reported to the Office of Admissions and Records are considered to be official and final grades. Changes to final grades can be made only on the authority of the instructor and only on the basis of

1. a computational or recording error, or
2. the evaluation of additional assignments or examinations ONLY when an Incomplete has been previously recorded, except
3. when the dean of the College acts on behalf of the chair of a college-level grade appeal committee as the result of a grade appeal. (See the section on Grade Appeals.)

Original grades are eradicated and new grades substituted when the change is due to a computational or recording error on the part of the instructor of record, when the grade change is the result of a grade appeal, or when the Registrar receives a late report of grades for which the symbol RD was substituted pending receipt. Original grades are not eradicated when the change of grade is the result of the resolution of an Incomplete or of the repetition of a course. Records are kept and grade or administrative symbol notations are indicated for all enrollments beyond the fourth week of instruction.

Except for changes of grades resulting from grade appeals processes, all changes of grades must be filed within one year from the date of the filing of the first grade, without respect to continuous enrollment of the student. Only as the result of a grade appeal will a grade be changed after the award of a degree or credential.

All requests for changes of grade shall carry the recommendation of the instructor (except as provided for in the Grade Appeals Procedures), the department chair, and the approval of the dean of the college.

## Grade Appeals

Students have the right to formally appeal the final grade, but only the final grade, in a course. Appeals are limited to situations in which the student believes the grade was "prejudicially," "capriciously," or "arbitrarily" assigned. The appeal must be initiated within the first regular semester after assignment of the grade. It must first be directed to the instructor of the course, orally or in writing. If further action is necessary, the student should appeal in writing to the department chair or to the designated department representative who deals with grade appeal matters. If the issue continues to remain unresolved, the written appeal can be directed to the Grade Appeals Committee of the college in which the course was taken. Information about college grade appeals committees and the University policy (P.S. 94-07) can be obtained from the office of the college dean.

## Academic Appeals

Students may petition for exception to academic policy. Typically, exception requests involve issues such as enrollment corrections, record errors, General Education substitutions or waivers, exceptions to the repeat/delete policy, retroactive medical withdrawals and academic renewal.

Students can obtain the "Petition for Exception to Academic Policy" forms in Enrollment Services, SSA Room 123, or the Academic Advising Center, Library East Room 125. This written appeal will be directed to the Academic Appeals Committee. Petitions must be filed with Enrollment Services, SSA Room 123.

## Educational Leave

Any registered student, undergraduate or graduate, in good academic standing may request an Educational Leave. Students requesting an Educational Leave must complete an Educational Leave Form, in advance, including an explanation of their reasons for seeking the leave and a statement of when they intend to resume academic work. The completed form is to be submitted for approval to the student's department chair (undergraduate) or graduate advisor.

The minimum initial leave will be one full semester; the maximum will be one calendar year. A student may request, in writing, in advance, an extension of leave. Under no circumstances will the total number of approved educational leaves exceed two, nor will the duration of approved educational leaves extend beyond two calendar years.

Students returning from an approved one semester educational leave are not required to submit an application form. Students on leave longer than one semester must apply for readmission to the university. Students returning from an absence for which an educational leave was appropriate but not approved in advance must reapply for admission and pay the reapplication fee.

Graduate students who plan to enroll for credit at another institution of higher education during the leave period must obtain prior approval for the transfer of course credit to the student's program from the department graduate advisor, department chair, and the College Dean or designee.

The period of an educational leave is counted in the calculation of elapsed time under the regulations governing the maximum period for completion of degree requirements. (See Baccalaureate and Graduate sections of this Catalog).

For the period of an educational leave the student's rights under the "Election of Regulations" rule are preserved, maintaining the right of the student to elect regulations as if he or she had maintained continuous attendance.

An educational leave presupposes no expenditure of University resources or faculty and staff time in behalf of the student during the period of the leave. In addition, no computer facilities, no library privileges, and no student services are available to a student on educational leave.

## Change of Major or Other Objective

Students declaring a major for the first time or changing from one degree program or degree option program to another must complete and submit an approved Change of Major form. These are available in most department offices and in the Office of Enrollment Services.

Students who are candidates for a certificate or credential program must also file an application card. (Please see Election of Regulations in this section of the Catalog.)

The evaluation of credits transferred to the University is based in part upon the objective indicated on the application for admission. Students should be aware, therefore, that under some circumstances transfer courses accepted for one purpose may not be acceptable for other purposes. Graduation checks needing to be redone may carry a special fee.

## Graduation Check

Seniors and graduate students who expect to receive degrees at the end of any semester or summer session must complete the Request to Graduate form and/or Credential form

well in advance. The appropriate request for Spring or Summer candidates must be filed by the preceding September 15; for Fall candidates, by the preceding February 1, at the Office of Enrollment Services. The names of Candidates who file within these deadlines will appear in the Commencement Program published each Spring. Credential students should apply in the Credential Processing Office, located in the Graduate School of Education, or the Office of Enrollment Services by February 1 for December completion and by October 1 for Spring and Summer sessions.

### Graduation with Honors

The following grade-point average criteria are used to identify undergraduate students eligible for the honors specified:

1. 3.95 to 4.00 graduated Summa Cum Laude
2. 3.80 through 3.94 graduated Magna Cum Laude
3. 3.50 through 3.79 graduated Cum Laude

An undergraduate student may be considered eligible for honors at graduation provided that a minimum of 45 units are earned at California State University, Long Beach. For the first baccalaureate degree the GPA will be determined from units earned at CSULB plus transferred units.

With the approval of the Dean of the College, departments may elect to award department honors to as many as three of their graduates according to criteria other than GPA.

University honors will be noted on the diploma and transcript. Department honors will be noted on the transcript only.

### Honor Lists

Undergraduate students exhibiting outstanding scholastic achievement are honored by being included on the President's or Deans' Honor List.

### President's List

Students will be placed on the President's List to honor them for academic achievement each semester in which they complete 12 or more graded course units with a semester GPA of 3.75 - 4.0. A certificate will be issued for each semester in which the student receives this honor.

### Deans' List

Students will be placed on the Deans' List to honor them for academic achievement each semester in which they complete 12 or more graded course units with a semester GPA of 3.5 - 3.74. A certificate will be issued for each semester in which the student receives this honor.

### Graduation Rates

Under the federal Student Right-To-Know law, institutions of higher education are required to disclose information to prospective and current students about institutional graduation rates. The main purpose of the contextual information is to communicate to students more about what we know has guided time and persistence to degree.

Under the state Master Plan for Higher Education, the CSU draws its first-time freshmen from the top one-third of California's high school graduates. Since 1960, the CSU has awarded more than 1.2 million bachelor's degrees in hundreds of program areas.

The number of course credit units required to complete major programs varies. Many programs in the humanities, for example, require the minimum 124 semester, or 180 quarter

units for graduation, while it often takes 140 semester, or 210 quarter units to complete engineering programs.

Most undergraduate programs can be completed in four years. But earning a bachelor's degree in four years takes much more than a statement of intent. Because undergraduate degree programs require 124 to 140 semester units, students who wish to finish college in four years must attend school every semester and earn an average of 15.5 to 17.5 units per term. Rules of thumb translate these unit loads into 46.5 to 52.5 hours per week in class and study. In addition, four-year students must plan with academic advisers a schedule of courses that will enable them to progress through major sequences, while interweaving appropriate breadth courses in general education. The rewards in making college attendance one's highest priority are at least two-fold: (1) lower total out-of-pocket college costs and (2) earlier entry into career tracks and the postbaccalaureate educational pipeline.

From the early '70s to the early '80s, the portion of CSU students balancing work and education increased substantially. The number of CSU students taking fewer than 15 units per term increased, and over one-fourth of CSU graduates have "stopped out" for at least one-term before they earn their degrees. More than any other senior institution in California, the CSU has maintained access for students who need to juggle academic life with work and family obligations. The CSU furthermore continues to seek improved ways to provide high-quality instructional opportunities that better fit the time-to-degree that CSU's non-traditional students require.

Across the CSU system, the average time-to-degree for first-time freshmen who fulfilled the University's eligibility requirements and enrolled full-time in their term of entry (that is, according to the federal definition, enrolled in at least 12 units) has been on a plateau of about 5.2 years for several years.

For regular, full-time first-time freshmen who eventually will receive a CSU baccalaureate, most will have it conferred within 6 years after matriculating at a CSU campus. For example, by Fall 1990, or six years after entering the CSU, 45.5 percent of the Fall 1984 entering freshman class had earned the bachelor's degree, with all but 3.6 percent receiving the degree at the CSU campus of first attendance. Prior athlete graduation rate information may be obtained by contacting the University Athletic Director's Office.

Two years later in Fall 1992, the CSU graduation rate climbed to 55.8 percent. Just about nine of ten graduates earned their degree at the CSU campus where they began their university career. In Fall 1992, 3.8 percent of the Fall 1984 entering freshman class were still enrolled as undergraduates. Historical trends indicated that most of these non-traditional students eventually will earn bachelor's degrees at CSU campuses. The CSU graduation rate, then, is expected eventually to reach 59.6 percent. A graduation rate of nearly 60 percent is on par with the best of peer state universities and colleges.

The tables above show persistence and graduation rates for first-time freshmen entering CSULB at different times. Table 1 indicates that the one-year continuation rate of full-time, regularly admitted first-time freshmen who matriculated at CSULB in fall between 1993 and 1995 ranged between 78.9 percent to 82.3 percent, or greater than 80 percent on average.

GRADUATION AT CALIFORNIA STATE UNIVERSITY, LONG BEACH  
For CSULB the following statistics apply:

TABLE 1  
One-Year Continuation Rates for Fall 1994, 1995 and 1996 Regularly Admitted First-Time Freshmen  
Who Attempted At Least 12 Units in Their First Term of Enrollment

CSULB Fall Term	Enrolled	Re-Enrolled One Year Later	Continuation Rate
1994	1,597	1,287	80.6%
1995	1,609	1,270	78.9%
1996	1,983	1,608	81.1%

TABLE 2  
Six-Year Graduation and Persistence Rates for Fall 1991 Regularly Admitted First-Time Freshmen  
Who Attempted At Least 12 Units in Their First Term of Enrollment

CSULB Fall Term	Graduation by Spring 1996	Persistence/Enrollment by Spring 1996	Projected Graduation Rate*
1991	29.9%	17.7%	47.5%

TABLE 3  
Eight-Year Graduation Rates and Persistence Rates for Fall 1989 Regularly Admitted First-Time Freshmen  
Who Attempted At Least 12 Units in Their First Term of Enrollment

CSULB Fall Term	Graduation by Spring 1996	Persistence/Enrollment by Spring 1996	Projected Graduation Rate*
1989	46.2%	4.8%	51.0%

\*Assumes all students enrolled in Spring, 1997 will eventually graduate.

Table 2 shows that nearly one out of three full-time, regularly admitted first-time freshmen (31.5%) who entered CSULB in 1990 obtained their baccalaureate degrees within six years and that more than 45 percent of these students are expected eventually to graduate.

Table 3 shows that nearly half (46.8%) of freshmen entering CSULB in 1988 completed their undergraduate studies within eight years and that a small percentage of students (4.0%) were still working toward completion of their degrees in spring 1996. More than half (50.8%) of these students are expected eventually to graduate.

## Scholastic Probation and Disqualification

### Academic Probation

Undergraduate students are placed on academic probation if at any time their cumulative grade-point average in all college work attempted or their cumulative GPA at California State University, Long Beach falls below 2.0 (C). Graduate students are placed on academic probation when their cumulative grade-point average falls below 3.0. Undergraduate students shall be removed from academic probation when their cumulative grade-point average in all college work attempted and their cumulative grade-point average at California State University, Long Beach is 2.0 (C) or higher. Students who remain on academic probation for more than two consecutive semesters are subject to academic disqualification. Exceptions may be

made for students actively participating in an intervention program.

#### Administrative — Academic Probation

An undergraduate or graduate student may be placed on administrative-academic probation by action of appropriate campus officials for any of the following reasons:

1. Withdrawal from all or a substantial portion of a program of studies in two successive semesters or in any three semesters;
2. Repeated failure to progress toward the stated degree objective or other program objective (when such failure appears to be due to circumstances within the control of the student);
3. Failure to comply, after due notice, with an academic requirement or regulation which is routine for all students or a defined group of students (example: failure to take placement tests, failure to complete a required practicum).

#### Academic Disqualification

Undergraduate students on academic probation are subject to academic disqualification:

1. As lower-division students (fewer than 60 semester hours of college work completed), if they fall 15 or more grade points below a 2.0 (C) average on all units attempted or on all units attempted at California State University, Long Beach;



2. As juniors (60-89 semester hours of college work completed), if they fall nine or more grade points below a 2.0 (C) average on all units attempted or on all units attempted at California State University, Long Beach;
3. As seniors (90 or more semester hours of college work completed), if they fall six or more grade points below a 2.0 (C) average on all units attempted or on all units attempted at California State University, Long Beach.
4. At any time, if the student remains on academic probation for more than 2 consecutive semesters (i.e., cumulative GPA remains below 2.0 at the end of 2 consecutive semesters).

In addition to the above disqualification standards applicable to students on probation, individuals not on probation may be disqualified when the following circumstances exist:

1. At the end of any semester the student has fewer cumulative grade points than cumulative units attempted, and;
2. The cumulative grade-point deficiency is so great that in view of the student's overall educational record it seems unlikely that the deficiency will be removed within a reasonable period.

### Disqualification From Impacted Programs

Students who fail to maintain an overall GPA of 2.0 will be immediately removed from an impacted major, placed in the undeclared category (Major Code 0000), or in a general category appropriate to the discipline. To be reinstated as majors in the impacted program, they must reapply at the time when change of major requests are normally accepted.

### Administrative — Academic Disqualification

Students who have been placed on administrative-academic probation may be disqualified from further attendance if:

1. The conditions for removal of administrative-academic probation are not met within the period specified;
2. The students become subject to academic probation while on administrative-academic probation;
3. The students become subject to administrative-academic probation for the same or similar reason for which they have been placed on administrative-academic probation previously, although not currently in such status.

For students who subsequently become eligible for Reinstatement (see below), disqualification under the provisions of the preceding paragraphs constitutes a break in "continuous enrollment" within a degree major program and, therefore, students disqualified may not elect regulations in effect prior to disqualification.

### Reinstatement

In order to be considered for reinstatement to the University, a disqualified student must demonstrate academic ability. This demonstration can be achieved by:

1. completing courses through University College and Extension Services and/or Summer Session programs at CSULB; or
2. completing classes at other academic institutions.

All classes taken, at CSULB or other academic institutions, must be applicable for degree credit. Grades earned at other institutions will not reduce the CSULB grade-point deficiency

or change the CSULB grade-point average. Grades earned elsewhere are only indicators of academic ability.

After reducing the grade-point deficiency and/or demonstrating academic ability at other institutions (see example, below), the student may petition the Academic Appeals Committee for reinstatement. The Academic Appeals Committee will only consider the petition for reinstatement of students who have remained outside of the university for at least one regular (Fall or Spring) semester after their dismissal.

Petition forms are available at the Office of Enrollment Services and must be filed by December 1 for the Spring semester or August 1 for the Fall semester. Petitions received after that date will be returned to the student to be submitted for consideration for a future semester.

### Academic Renewal

A student may petition to have all grades and units received during one or two semesters of undergraduate work disregarded in the computation of GPA and academic standing. The work so disregarded may have been taken at any collegiate-level institution but no work taken during the disregarded terms, even if satisfactory, may apply toward baccalaureate requirements. All grades and units attempted will remain on record. At least 5 calendar years must have elapsed since the work in question was completed and the student must have subsequently completed 15 semester units with a 3.0 GPA (or 30 semester units with a 2.5 or 45 semester units with a 2.0) at this University before filing a request for disregarding the course work.

Petitions for disregarding course work must be submitted to the Office of Enrollment Services. Final determination will be made by the Vice President for Academic Affairs in consultation with the University Academic Appeals Committee. The petitioning student must certify that the work to be disregarded was not reflective of his or her present level of academic performance. This certification must include a statement explaining the extenuating circumstances causing the substandard performance during the term in question. The student must also provide evidence that it would be necessary to complete additional units and enroll for one or more additional semesters in order to qualify for the baccalaureate degree if the request were not approved.

### Cheating and Plagiarism

#### Definition of Plagiarism

Plagiarism is defined as the act of using the ideas or work of another person or persons as if they were one's own, without giving credit to the source. Such an act is not plagiarism if it is ascertained that the ideas were arrived at through independent reasoning or logic or where the thought or idea is common knowledge.

Acknowledgment of an original author or source must be made through appropriate references, i.e., quotation marks, footnotes, or commentary. Examples of plagiarism include, but are not limited to, the following: the submission of a work, either in part or in whole, completed by another; failure to give credit for ideas, statements, facts or conclusions which rightfully belong to another; in written work, failure to use quotation marks when quoting directly from another, whether it be a paragraph, a sentence, or even a part thereof; close and lengthy paraphrasing of another's writing or programming. A

student who is in doubt about the extent of acceptable paraphrasing should consult the instructor.

Students are cautioned that, in conducting their research, they should prepare their notes by (a) either quoting material exactly (using quotation marks) at the time they take notes from a source; or (b) departing completely from the language used in the source, putting the material into their own words. In this way, when the material is used in the paper or project, the student can avoid plagiarism resulting from verbatim use of notes. Both quoted and paraphrased materials must be given proper citations.

### Definition of Cheating

Cheating is defined as the act of obtaining or attempting to obtain or aiding another to obtain academic credit for work by the use of any dishonest, deceptive or fraudulent means. Examples of cheating during an examination include, but are not limited to the following: copying, either in part or in whole, from another's test or examination; discussion of answers or ideas relating to the answers on an examination or test unless such discussion is specifically authorized by the instructor; giving or receiving copies of an examination without the permission of the instructor; using or displaying notes, "cheat sheets," or other information or devices inappropriate to the prescribed test conditions, as when the test of competence includes a test of unassisted recall of information, skill, or procedure; allowing someone other than the officially enrolled student to represent the same. Also included are plagiarism as defined and altering or interfering with the grading procedures.

It is often appropriate for students to study together or to work in teams on projects. However, such students should be careful to avoid the use of unauthorized assistance, and to avoid any implication of cheating, by such means as sitting apart from one another in examinations, presenting the work in a manner which clearly indicates the effort of each individual, or such other method as is appropriate to the particular course.

### Faculty Responsibilities

In cases where a student is suspected of cheating or plagiarism, the faculty member should arrange for an informal office conference with the student as soon as possible. The purpose of the informal conference is to bring the persons involved together to discuss the issues informally and to discuss courses of action. At the conference the student shall be notified by the faculty member of the charge and supporting evidence. For an incident which occurs during or as a part of a final examination, see below for administration of an Incomplete grade.

In cases where there is more than one individual suspected of cheating or plagiarism, the faculty member may decide to call the students to confer jointly as a group, or as individuals, or both. If the faculty member should decide to confer with the students as a group, the students will have the option to also confer with the instructor separately as individuals.

The faculty member will inform the student(s) that both students and faculty have the right to submit a request to the Academic Integrity Committee (discussed below) for a written opinion on whether the accusation is supported by the evidence. All notes and discussions between the student and the faculty member are confidential, except as may be relevant to

the Academic Integrity Committee or in subsequent campus disciplinary proceedings. Neither the faculty member nor the student should discuss a specific charge of cheating or plagiarism or any violations with reference to individuals in the classroom before other members of the class.

When the student cannot be contacted and therefore the informal conference cannot be held, as is sometimes the case after final examinations, a grade of "I" (Incomplete) may be assigned, but only if the instructor wishes an additional test of competence (see 4.1, above). The instructor will have the agreement form for assigning an "Incomplete" sent to the last known address of the student. The agreement form will state the following in the format indicated:

"Under the provisions of the CSULB Policy Statement on Cheating and Plagiarism, an additional test of competency related to the [syllabus name of suspect demonstration, e.g., Final Examination] is requested. [Explain what additional test of competency.] You may decline to do so. Please contact the instructor, the department office, or the Office of Judicial Affairs for information regarding the University policy on cheating and plagiarism."

The instructor will indicate on the agreement form the grade which will be assigned, normally 120 calendar days following mailing of the Incomplete Agreement, if the student does not respond or, responding, the student does not agree to an additional test of competence.

Charges of cheating or plagiarism cannot be brought against a student more than 120 calendar days after discovery that the work in question may have been plagiarized or that cheating may have taken place.

Notes and evidence will be kept by the department chair or program director for a minimum of five years after the case is settled.

### Academic Integrity Committee

The Chair of the Academic Senate and the Vice President for Academic Affairs jointly appoint an Academic Integrity Committee for the University. This Committee consists of one member from the student body, chosen by the Associated Students Government for a one-year term of office; three members of the full-time, tenured or tenure-track faculty, and one member of the Office of Academic Affairs, who will be Chair, voting only in case of ties.

The primary charge of the Committee is to receive the requests of students accused of cheating or plagiarism or the requests of faculty accusing specified student(s) of cheating or plagiarism. Following its review of the evidence, the Committee will report its opinion to the student(s) and to the faculty member involved on whether the accusation is supported by the evidence. This opinion may not be appealed. However, when new evidence appears to so warrant, a faculty member or student may ask, in writing, the Vice President for Academic Affairs or the Chair of the Academic Senate to request the Committee to reconsider a case.

The Academic Integrity Committee has readily available the rules and procedures governing its operations.

In all cases, a Report of the Committee is advisory to the student, with whom rests the presumption of innocence, and the faculty member, to whom the decision on the evidence and academic action is reserved.

A faculty member or student who requests a review of the evidence in a case of alleged cheating or plagiarism must make such a request to the Academic Integrity Committee in writing no later than 14 calendar days following the date of first notification of the student by the faculty member of the allegation. Except under extenuating circumstances, the student and faculty member will have no more than 14 additional calendar days to provide evidence to the Committee.

To preserve the rights of privacy, the Committee meetings are closed. The Committee may request additional information as may be appropriate to the development of its Report. The Committee is to provide a final Report within 21 calendar days of the submission of a request to it. Should additional time be required, the reasons are communicated to the Vice President for Academic Affairs and the Chair of the Academic Senate as well as the student(s) and faculty members involved.

### Academic Actions

One or more of the following academic actions are available to the faculty member who finds a student has been cheating or plagiarizing. These options may be taken by the faculty member to the extent that the faculty member considers the cheating or plagiarism to manifest the student's lack of scholarship or to reflect on the student's lack of academic performance in the course. These actions may be taken without a request for, or before the receipt of, a Report from the Academic Integrity Committee.

1. Review but no action;
2. An oral reprimand with emphasis on counseling toward prevention of further occurrences;
3. A requirement that the work be repeated;
4. Assignment of a score of zero (0) for the specific demonstration of competence, resulting in the proportional reduction of final course grade;
5. Assignment of a failing final grade;
6. Referral to the Office of Judicial Affairs for possible probation, suspension, or expulsion.

A student may appeal a final course grade, the computation of which included an examination or other test of competence in which a score of zero was assigned for cheating or plagiarism, but only on the grounds permitted in the University Policy Statement on Grade Appeals.

An appeal of the final grade may include as written testimony the Report of the Academic Integrity Committee.

### Policy for a Smoke-Free Campus Environment

California State University, Long Beach has a responsibility to provide employees and students with a safe working and learning environment. Given the fact that smoking is the most significant cause of premature and preventable death in the United States today, California State University, Long Beach is declared to be a "smoke-free" campus in accordance with the Governor's Executive Order D-62-87, Government Code Section 19262.

This "smoke-free" policy shall apply to all state-owned and University-operated facilities regardless of location. This policy does not include public performances in which smoking is an integral and necessary part of those performances. Smoking is prohibited in all indoor areas, including but not limited to: administrative offices, private offices, laboratories, classrooms,

conference rooms, auditoria, lounges, theatres, lobbies, hallways, stairwells, restrooms, libraries, clinics, waiting rooms, reception areas, university vehicles, machine shops, elevators, and food service areas. Where outdoor seating is provided adjacent to indoor food service facilities, non-smoking sections must be designated and posted.

For those employees and students who wish to stop smoking, California State University, Long Beach supports and assists their efforts by providing referrals to cessation programs. The Employee Assistance Program at the Student Health Center may be contacted for information and assistance. The Employee Assistance Coordinator may be reached by calling (562) 985-4771.

### Student Discipline

Inappropriate conduct by students or by applicants for admission is subject to discipline as provided in Sections 41301 through 41304 of Title 5, California Code of Regulations. These sections are as follows:

#### 41301. Expulsion, Suspension and Probation of Students

Following procedures consonant with due process established pursuant to Section 41304, any student of a campus may be expelled, suspended, placed on probation or given a lesser sanction for one or more of the following causes which must be campus-related:

1. Cheating or plagiarism in connection with an academic program at a campus;
2. Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus;
3. Misrepresentation of oneself or of an organization to be an agent of a campus;
4. Obstruction or disruption, on or off university property, of the campus educational process, administrative process, or other campus function;
5. Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his or her family or the threat of such physical abuse;
6. Theft of, or non-accidental damage to, campus property; or property in the possession of, or owned by, a member of the campus community;
7. Unauthorized entry into, unauthorized use of, or misuse of campus property;
8. On campus property, the sale or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis;
9. Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a campus function without prior authorization of the campus president;
10. Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function;
11. Abusive behavior directed toward, or hazing of, a member of the campus community;

12. Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by publication in the campus newspaper, or by posting on an official bulletin board designated for this purpose, and which order is not inconsistent with any of the other provisions of this Section;
13. Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section;
14. For purposes of this Article, the following terms are defined:
  - A. The term "member of the campus community" is defined as meaning California State University Trustees, academic, nonacademic and administrative personnel, students, and other persons while such other persons are on campus property or at a campus function;
  - B. The term "campus property" includes: (A) real or personal property in the possession of, or under the control of, the Board of Trustees of The California State University; and (B) all campus feeding, retail, or residence facilities whether operated by a campus or by a campus auxiliary organization.
  - C. The term "deadly weapons" includes any instrument or weapon of the kind commonly known as a blackjack, sling shot, billy, sand-club, sandbag, metal knuckles, any dirk, dagger, switchblade knife, pistol, revolver, or any other firearm, any knife having a blade longer than five inches, any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club;
  - D. The term "behavior" includes conduct and expression;
  - E. The term "hazing" means any method of initiation into a student organization or any pastime or amusement engaged in with regard to such an organization which causes, or is likely to cause, bodily danger, or physical or emotional harm, to any member of the campus community; but the term "hazing" does not include customary athletic events or other similar contests or competitions.
15. This Section is not adopted pursuant to Education Code Section 89031;
16. Notwithstanding any amendment or repeal pursuant to the resolution by which any provision of this Article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

#### 41302. Disposition of Fees; Campus Emergency; Interim Suspension

The President of the campus may place on probation, suspend or expel students for one or more of the causes enumerated in Section 41301. No fees or tuition paid by or for such students for the semester, quarter, or summer in which they are suspended or expelled shall be refunded. If the students are readmitted before the close of the quarter, or summer session in which they are suspended, no additional tuition or fees shall be required on account of the suspension.

During periods of campus emergency, as determined by the President of the individual campus, the President may, after consultation with the Chancellor, place into immediate effect emergency regulations, procedures, or measures deemed

necessary or appropriate to meet the emergency, to safeguard persons and property, and to maintain educational activities.

The President may immediately impose an interim suspension in all cases in which there is reasonable cause to believe that such an immediate suspension is required in order to protect lives or property and to insure the maintenance of order. A student so placed on interim suspension shall be given prompt notice of charges and the opportunity for a hearing within ten days of the imposition of interim suspension. During the period of interim suspension, the student shall not, without prior written permission of the President or designated representative, enter any campus of The California State University other than to attend the hearing. Violation of any condition of interim suspension shall be grounds for expulsion.

#### 41303. Conduct by Applicants for Admission

Notwithstanding any provision to the contrary, admission or readmission may be qualified or denied to any persons who, while not enrolled as students, commit acts which, were they enrolled as students, would be the basis for disciplinary proceedings pursuant to Sections 41301 or 41302. Admission or readmission may be qualified or denied to any persons who, while students, commit acts which are subject to disciplinary action pursuant to Section 41301 or Section 41302. Qualified admission or denial of admission in such cases shall be determined under procedures adopted pursuant to Section 41304.

#### 41304. Student Disciplinary Procedures for The California State University

The Chancellor shall prescribe, and may from time to time revise, a code of student disciplinary procedures for The California State University. Subject to other applicable law, this code shall provide for determinations of fact and sanctions to be applied for conduct which is a ground of discipline under Sections 41301 or 41302, and for qualified admissions or denial of admission under Section 41303; the authority of the campus President in such matters; conduct-related determinations on financial aid eligibility and termination; alternative kinds of proceedings, including proceedings conducted by a Hearing Officer; time limitations; notice; conduct of hearings, including provisions governing evidence, a record, and review; and such other related matters as may be appropriate. The Chancellor shall report to the Board actions taken under this section.

The current University regulation on alcoholic beverages is stated in the CSULB Policies, Information and Regulations Handbook published by the Office of Student Affairs.

Additional detailed information relating to student discipline is available in the Office of Student Affairs, and from the Office of the Vice President for Student Services.

#### Administrative Action

Procedures and sanctions of the Office of Judicial Affairs are under the administration of the Vice President for Student Services and are conducted pursuant to the authority provided in Section 41301 of Title 5 of the California Code of Regulations. Copies of Section 41301 of Title 5 may be found in the University Catalog and the Campus Regulations available in the Office of Judicial Affairs. Copies of Chancellor's Executive Order 628, "Student Disciplinary Procedures for the California State University" are also available upon request.

The Vice President for Student Services shall report annually to the President and the Chair of the Academic Senate a summary of the charges concerning cheating and plagiarism brought before the Office of Judicial Affairs.

#### Judicial Affairs

The Office of Judicial Affairs (SSA, Room 377) provides assistance with the interpretation and enforcement of campus regulations. Complete copies of the CSULB Policies, Information and Regulations Handbook, including a listing of infractions which may result in student disciplinary action under Title 5, Section 41301, of the California Code of Regulations, "Probation, Suspension and Expulsion of Students," are available in this office; also available are copies of Executive Order 628, "Student Disciplinary Procedures for The California State University." General assistance and aid in directing individuals to the proper procedures, departments and personnel may be obtained in this office.

Alleged violations are investigated primarily through informal office conferences with the involved students. The conferences which are held as a result of impending disciplinary action are:

1. to clarify the referral, the charges or the circumstances involved;
2. to prevent the incidence of, or further occurrences of violations; and
3. to educate as a preventive experience, and to indicate the possible consequences as a result of committing a violation. Discussion is centered on the cause-and-effect relationship of various courses of action and, when possible, alternate paths or solutions are explored.

#### The Federal Drug-Free Schools and Communities Act

Each student and employee of California State University, Long Beach needs to be aware of the requirements of the Drug-Free Schools and Communities Act Amendments of 1989 (PL 101-226). These requirements include the notification to each student and employee of campus standards of conduct regarding the use of alcohol and illicit drugs, the legal sanctions which apply, possible health risks, and available counseling and assistance programs. This law, like others the federal government has passed in the last two decades, is tied to eligibility for federal financial assistance. Thus, because California State University, Long Beach receives federal funds such as "federally funded or guaranteed student loans," the law applies to the University and we must comply with its provisions. Under PL 101-226 the Secretary of Education can terminate federal funding for failure to comply and the University has the burden of appealing that decision to an administrative law judge. The law became effective October 1, 1990.

Any questions regarding this law should be directed to the Director of Student Administrative Services at (562) 985-5587.

California State University, Long Beach is dedicated to the elimination of the use of illicit drugs and alcohol abuse. The University makes every effort to create an environment that promotes and reinforces good health. This includes responsible living, respect for community and campus standards and regulations, individual responsibility within the community, and the intellectual, social, emotional, ethical, and physical well being of all members of the campus community. To facilitate

this process, the University provides a Student Assistance Program and an Employee Assistance Program.

California State University, Long Beach complies with the requirements of the Drug Free Schools and Communities Act Amendments of 1989 by implementing the following:

1. The annual distribution in writing to each student, regardless of the length of the student's program of study, and to each employee of:
  - A. standards of conduct that clearly prohibit, at a minimum, the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees on its property or as part of any of its activities;
  - B. a description of the applicable legal sanctions under local, State, or Federal law for the unlawful possession or distribution of illicit drugs and alcohol;
  - C. a description of the health risks associated with the use of illicit drugs and abuse of alcohol; and,
  - D. a clear statement that the institution will impose disciplinary sanctions on students and employees (consistent with local, State and Federal law), and a description of those sanctions, up to and including expulsion or termination of employment and referral for prosecution, for violations of the standards of conduct. A disciplinary sanction may include the completion of an appropriate rehabilitation program.
2. Conducting a biennial review of the campus drug and alcohol abuse prevention program to:
  - A. determine its effectiveness and implement changes to the program if they are needed; and
  - B. ensure that its disciplinary sanctions are consistently enforced.

The review is conducted by a panel consisting of the Provost and Senior Vice President for Academic Affairs or designee, the Vice President for Student Services or designee, the Vice President for Administration and Finance or designee, the Chair of the Academic Senate or designee, the President of the Associated Students or designee, and the Chair of the Academic Senate Student Affairs committee or designee.

The review is conducted during the month of October in each even-numbered year. The report of the review panel is submitted to the President by December 1 following the October review period.

The following are members of the review panel recommended by the Academic Senate Committee on Committees for approval by the Academic Senate: a member from the University Counseling Center, a full-time permanent or probationary staff member, an Associated Students Senator, and a member from the Student Health Center.

#### Campus Standards of Conduct

Both productivity at work and the learning process are significantly impaired by alcohol abuse and the use of illicit drugs. Substance abuse among college students inhibits their educational development and is of serious nationwide concern.

California State University, Long Beach is dedicated to the elimination of the use of illicit drugs and alcohol abuse. The University is making every effort to create an environment that promotes and reinforces good health. This includes responsible living, respect for community and campus standards and regulations, individual responsibility within the community, and

the intellectual, social, emotional, ethical, and physical well-being of all members of the campus community.

On campus property, the solicitation, sale, use or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics, as those terms are used in California statutes, are prohibited.

Consumption of alcohol is prohibited in individual offices, classrooms, laboratories, or generally accessible public or open areas, such as the quad and athletic fields.

Information regarding campus policies on the consumption of alcohol may be obtained by calling the Office of Student Life and Development at 985-8668.

Pursuant to Title 5 of the California Code of Regulations, violations by students of the above regulations, when campus related, may, after due process, result in the student being placed on probation, being suspended, or being expelled. Additionally, violations of laws committed on campus property, or at a campus event, will also be subject to referral and prosecution through off-campus authorities. Penalties by enforcement agencies for violations of the law may include imprisonment, fines, or both; these are in addition to administrative sanctions imposed by the University.

More detailed descriptions of student regulations concerning drugs, or alcohol, may be found elsewhere in the CSULB Catalog, or in the Residence Hall Calendar and Handbook, or the Regulations for Campus Activities, Organizations and the University Community.

Pursuant to Education Code Section 89535, employees may be disciplined, up to and including termination, for the following causes:

1. Conviction of criminal offenses involving the illegal use of drugs.
2. Appearing for work impaired by the use of alcohol and/or controlled substances.
3. Addiction to the use of controlled substances.

More detailed descriptions of employee regulations concerning drugs, or alcohol, may be found in the Administrative Policies and Procedures Handbook and the Faculty and Staff Handbooks.

### Don't Put Your Health at Risk

To become dependent upon chemicals such as illicit drugs and/or alcohol is to put your health at risk. Chemical dependency is a condition in which the use of mood altering substances such as drugs or alcohol is associated with problems in any area of life on a more or less continuing basis.

One does not, however, have to be addicted or chemically dependent to suffer health risks from the use of illicit drugs or alcohol.

Alcohol and illicit drugs (in all the many forms) may, and often do, impair physical coordination and judgement, diminish control over impulsive behavior, and cause many short- and long-term health consequences.

Alcohol-related illnesses now represent the third leading cause of death in the United States exceeded only by cancer and heart disease, and medical research has established very strong evidence that alcohol abuse contributes significantly to cancer and heart disease. There is clear evidence of serious negative effects on babies due to use of illicit drugs and alcohol by the mother during pregnancy.

### If You Have a Problem, We Want to Help

The California State University, Long Beach Health Center offers substance abuse programs for students, faculty and staff. These include: a Student Assistance Program for students; and Employee Assistance Program for faculty and staff; and an Athletic Assistance Program for student athletes (offered as a separate program due to NCAA testing and eligibility requirements and conference affiliation rules for competition).

An experienced and specially trained therapist under the supervision of the Medical Director serves as the coordinator and counselor for these programs, and medical doctors, other health professionals, and counseling psychologists are available for consultation. All contacts with the Health Center and professional personnel are confidential. Information concerning the prevention of drug and alcohol abuse may be obtained from Shifra Teitelbaum, Student Health Center, (562) 985-4609.

The California State University, Long Beach Health Center is located at the corner of State University Drive and Merriam Drive. The telephone number is (562) 985-4771.

### Rights and Responsibilities

CSULB admits students of any race, religion, age, color, creed, gender, handicap, sexual orientation, or national or ethnic origin or ancestry to all the rights, privileges, programs, and activities generally accorded or made available to students at CSULB. CSULB does not discriminate on the basis of race, religion, age, color, creed, gender (including sexual harassment), disability, medical condition (physical or mental), sexual orientation (actual or perceived), or national or ethnic origin or ancestry in the administration of its educational policies, admission policies, employment policies, or any other programs administered by the University.

California State University, Long Beach does not discriminate on the basis of race, color, national origin, sex, physical handicap or sexual orientation in the educational programs or activities it conducts.

In addition to meeting fully its obligations of nondiscrimination under federal and state law, CSULB is committed to creating a community in which a diverse population can live, and work, in an atmosphere of tolerance, civility, and respect for the rights and sensibilities of each individual, without regard to economic status, ethnic background, political views, sexual orientation, or other personal characteristics or beliefs.

### Statement on Civility and Acts of Violence

California State University, Long Beach, takes pride in its tradition of maintaining a civil and non-violent learning, working, and social environment. Civility and mutual respect toward all members of the University community are intrinsic to the establishment of excellence in teaching and learning. They also contribute to the maintenance of a safe and productive workplace and overall healthy campus climate.

The University espouses and practices zero tolerance for violence against any member of the University community (i.e., students, faculty, staff, administrators, and visitors). Violence and threats of violence not only disrupt the campus environment; they also negatively impact the University's ability to foster open dialogue and a free exchange of ideas among all campus constituencies.

To fulfill this policy, the University strives: 1) to prevent violence from occurring; and 2) to enforce local, state, and federal laws, as well as University regulations, regarding such conduct. The University also has established procedures for resolving and/or adjudicating circumstances involving violence, as well as threats of violence. A threat of violence is an expression of intention that implies impending physical injury, abuse, or damage to an individual or his/her belongings. All allegations of such incidents (i.e., acts and threats) will be aggressively investigated. Allegations that are sustained may result in disciplinary action up to and including dismissal from employment, expulsion from the University, and/or civil and criminal prosecution.

Members of the campus community are encouraged to promptly report any acts of violence, threats of violence, or other behavior which by intent, act, or outcome harm themselves or others.

## Nondiscrimination Policies

### Educational Programs and Activities

**SEX:** The California State University does not discriminate on the basis of sex in educational programs and activities it conducts. Title IX of the Educational Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of sex in education programs and activities operated by CSULB. Such programs and activities include admission of students and employment. Inquiries concerning the application of Title IX to programs and activities of CSULB may be referred to the Director of Affirmative Action, SSA 238, (562) 985-8490, the campus officer assigned the administrative responsibility of reviewing such matters or to the Regional Director of the Office for Civil Rights, Region 9, 220 Main Street, 10th Floor, San Francisco, CA 94105.

**DISABILITY:** The California State University does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. This includes admission or access to programs and activities, provision of services and benefits, and employment. Section 504 of the Rehabilitation Act of 1973, as amended, and the regulations adopted thereunder and the Americans with Disabilities Act prohibit such discrimination. The Director of Disabled Student Services, Division of Student Services, has been designated to coordinate the efforts of California State University, Long Beach to comply with the Acts in their implementing regulations. Inquiries concerning compliance may be addressed to this person at USU 206, (562) 985-5401. Questions concerning other discrimination issues and the filing of complaints should be directed to the Director, Affirmative Action, (562) 985-8490, SSA 238. Copies of procedures for filing complaints are available through the Office of Affirmative Action and the Division of Student Services.

**RACE, COLOR, NATIONAL ORIGIN, OR DISABILITY:** The California State University does not discriminate on the basis of race, color, or national origin and complies with the requirements of Title VI of the Civil Rights Act of 1964 as amended by the Americans with Disabilities Act and the regulations adopted thereunder. No person shall, on the ground of race, color, national origin, or disability, be excluded from participation in, be denied the benefits of, or be

subjected to discrimination in any program or activity of The California State University nor shall the University tolerate employment discrimination that may cause discrimination in providing services under such programs. If you have questions regarding Title VI and forms of prohibited discrimination on the basis of race, color, and/or national origin you may contact the Division of Student Services, SSA 377, (562) 985-5587, or the Office of Affirmative Action. You may also contact the Regional Civil Rights Director, United States Department of Education, Region IX, Old Federal Office Building, 50 United Nations Plaza, Room 239, San Francisco, California 94102. If you feel you have been subjected to racial harassment on the part of an employee of the University you may contact the Director, Affirmative Action, Office of Affirmative Action, SSA 238, (562) 985-8490.

**AGE, MARITAL STATUS, RELIGION, ANCESTRY, ETHNIC GROUP IDENTIFICATION, SEXUAL ORIENTATION (Actual or perceived):** The California State University does not discriminate on the basis of age, marital status, religion, ethnic group identification or sexual orientation (actual or perceived). If you have questions regarding forms of prohibited discrimination on the basis of age, marital status, religion, ethnic group identification and/or sexual orientation, you may contact the Division of Student Services, SSA 377, (562) 985-5587.

**ATHLETICS:** The California State University is committed to providing equal opportunities to men and women CSU students in all campus programs, including intercollegiate athletics.

**EMPLOYMENT:** The California State University does not discriminate in employment on the basis of sex, race, color, national origin, ethnic group identification, age, marital status, religion, sexual preference, disability/handicap, or veteran's status. Harassment on the basis of sex, race, religious creed, ancestry, national origin, marital status, and physical handicap is expressly forbidden in the California public employment law. If you have questions regarding prohibited forms of discrimination you may contact the Office of Affirmative Action, SSA 238, (562) 985-8490.

**SEXUAL HARASSMENT:** Sexual harassment is a form of unlawful sex discrimination. Sexual harassment is prohibited by Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and California law. It is the policy of the California State University that all employees and students have the right to work and learn in an environment free from unlawful discrimination. This includes freedom from sexual harassment--unwelcome and unwanted sexual attention. California State University prohibits sexual harassment of its employees and students in any form.

Sexually harassing conduct by supervisors, non-supervisory employees, or faculty members, whether physical, verbal, or visual, is prohibited. Sexually harassing conduct includes repeated offensive sexual flirtation, advances, propositions, continued or repeated abuse of a sexual nature, sexually oriented humor, graphic verbal comments about an individual's body or clothing, the display in the work place or learning environment of sexually degrading objects or pictures, sexually threatening behavior, and any undesirable physical contact.

Sexual harassment is a violation of a person's privacy and dignity. It can create a hostile and intimidating work or learning environment. It is illegal. Overwhelmingly, victims of

sexual harassment are women; however, men may be victims of sexual harassment by women, and same-sex harassment also occurs.

For students, sexual harassment occurs when it is indicated, explicitly or implicitly, that sexual interactions will have an effect on grades, performance evaluations, letters of recommendation, customary referrals, or references. Sexual harassment can also be gender-related verbal or physical conduct that interferes with a student's academic or work performance or creates an intimidating, hostile, offensive, or otherwise adverse learning or work environment.

All employees, faculty and staff, have an ethical as well as a legal responsibility to interact with students in a manner free from all forms of unlawful discrimination including refraining from sexual harassment. Employees have a concurrent right to work in an environment free from unlawful discriminatory behavior, including the right to work in an environment free from sexual harassment.

No supervisor shall threaten, or insinuate either explicitly or implicitly, that any employee's submission to or rejection of sexual activities will in any way influence personnel decisions regarding the employee's employment, evaluation, duties, wages, advancement, shifts, or any other condition of employment or career development.

The University has established a formal and informal procedure to deal with sexual harassment complaints. Persons raising complaints of unlawful sexual harassment are protected from retaliatory actions or reprisals by state and federal law. Retaliation or reprisal against a complainant may constitute unlawful or unprofessional behavior. Such conduct may result in disciplinary action up to and including dismissal or disenrollment.

#### Discrimination Complaint Procedure

Any person who feels that she or he has been subjected to a form of prohibited discrimination may file an informal internal complaint and/or a formal internal complaint.

If a complainant cannot complete the complaint form due to language barrier, physical barrier, or competency/capacity barriers, another person may complete the complaint form. Where there is a language barrier, a translation/translator shall be provided in the dominant language of the complainant.

The identity of any person submitting a complaint shall be held in confidence, unless the person submits written authorization otherwise, and except to the extent necessary to carry out the conduct of any investigation, hearing, proceeding, or resolution.

Internal complaints are reviewed or investigated and action taken by responsible individuals. An informal internal complaint should be lodged when you want someone to know about the problem, but you do not want to be identified. You would like the behavior to stop, but you are not asking the University to take disciplinary action against the person(s) who allegedly discriminated. An informal internal complaint may yield some form of intervention short of disciplinary action. A formal internal complaint is a written complaint alleging discrimination. A formal complaint will trigger an investigation. In instances where corrective action is indicated, administrative and/or disciplinary action may be taken in response.

#### Informal Internal Complaint Process

1. Complaints should be presented orally or in writing to the Director, Affirmative Action. The complainant should provide details concerning the time, place, and specific facts of the alleged discriminatory act.
2. The Director, Affirmative Action, or designee, shall receive all complaints; discuss the nature of the complaint with the complainant; and discuss all internal or external grievance options with the complainant.
3. The Director, Affirmative Action, shall within ten (10) instructional days of receipt of the complaint refer the complaint to the appropriate administrator for action.
4. The administrator to whom the complaint has been referred shall within ten (10) instructional days of the receipt of the complaint:
  - A. Collect information as necessary for the informal resolution of the complaint;
  - B. Utilize all available resources to resolve the complaint informally;
  - C. Confer and review the nature of any inquiry, allegation, finding, or plan of action with the Director, Affirmative Action;
  - D. Take prompt timely action to resolve the issue, and promptly take all necessary steps to correct the discriminatory effect and/or practice;
  - E. Inform the Director, Affirmative Action, of the results of the informal process.
5. If the complainant is not satisfied with the results of the informal complaint process, s/he may proceed with the filing of a formal internal complaint.

#### Formal Internal Complaint Process

1. Where informal complaint processing is not possible, not appropriate, or fails to satisfactorily resolve the matter, the complainant may file a formal written complaint with the Office of Affirmative Action.
2. The formal internal complaint must be filed within 180 calendar days of occurrence of the alleged act of discrimination, or within 180 calendar days of the time the complainant learned of its occurrence.
3. The complaint must be in writing, must be signed, and should:
  - A. Describe, in the complainant's own words, what happened, including the date, time, place, the number of times the discriminatory acts occurred, etc.;
  - B. Identify any witnesses and provide any and all documentation the complainant may have concerning the alleged discrimination;
  - C. Indicate the action that the complainant feels would resolve the matter.
4. The Office of Affirmative Action shall within ninety (90) instructional days, unless additional time is warranted:
  - A. Investigate the complaint;
  - B. Determine whether there is reason to believe prohibited discrimination has taken place;
  - C. Attempt informal resolution of the complaint, if possible;
  - D. Make findings of fact;
  - E. Draw conclusions.



5. The Director, Affirmative Action, shall communicate findings, conclusions, and recommendations for action to the appropriate CSULB Vice-President and/or the President.
6. Within twenty (20) working days of the receipt of the report from the Director, Affirmative Action, the Vice-President/President shall issue a decision either sustaining or rejecting the complaint, in whole or in part. The Vice-President/President may seek additional information during this time.
  - A. If the Vice-President/President decides in favor of the complainant, s/he will so notify the complainant and shall meet with appropriate individuals to communicate the action that will be taken by the University to remedy the discrimination. Such action to remedy the discrimination will be taken promptly and in a timely fashion.
  - B. If the Vice-President/President rejects the complaint, she/he will so notify the complainant and other appropriate individuals and shall advise the complainant of complainant's right to appeal.

### Appeal Process

1. If the complainant is not satisfied with the outcome of the complaint process described above, the complainant may file a written appeal with the President of CSULB. This appeal must be filed with the President within five (5) working days of receipt by the complainant of the administrator's decision. The appeal shall outline the basis upon which the complainant believes the appeal should be granted. If the President rendered the initial decision under the formal internal complaint process, the complainant may appeal directly to the Chancellor, thus bypassing this step.
2. The President shall acknowledge the receipt of the appeal within five (5) working days and shall, within twenty (20) working days provide a written decision to the complainant. The President's decision is the final University decision.
3. If the complainant is not satisfied with the President's decision, the complainant may appeal the decision to the Chancellor of the California State University.

### Policy on Sexual Assault

Students, faculty, and staff who are victims of sexual assault committed at or upon the grounds of the University, or upon off-campus grounds or facilities maintained by affiliated student organizations, are required by law to be advised of specified information, to include treatment which may be available [California Education Code, Section 67385; California Assembly Concurrent Resolution 46 (1987)]. This policy is designed to provide the written procedures and information required.

Rape is the most prevalent serious violent crime committed on University campuses. Rape, including acquaintance rape, or any other form of sexual assault, will not be tolerated by California State University, Long Beach. Where there is evidence that campus-related sexual assault has been committed, severe campus disciplinary action will be initiated. Such campus disciplinary action may include, after due process, the possibility of dismissal, suspension or disenrollment. Additionally, where the victim initiates criminal action, the perpetrator is subject to criminal penalties which may include fines and imprisonment.

### Sexual Assault

The term "sexual assault" includes, but is not limited to, rape, acquaintance rape, sexual battery, forced sodomy, forced oral copulation, rape by a foreign object, or threat of sexual assault [California Education Code, Section 67385(d)].

Rape is a criminal offense. "Rape" is defined as non-consensual sexual intercourse. It may involve the use or threat of force, violence, retaliation, or immediate bodily injury. Rape also occurs when the victim is incapable of giving legal consent, for example, when: a) the victim has a mental disorder, or is developmentally or physically disabled; or b) the victim is prevented from resisting the assault due to intoxicating substances (e.g. alcohol or drugs); or c) the victim is unconscious of the nature of the act and this is known to the accused (Reference: California Penal Code, Section 261, and the following sections).

"Acquaintance Rape" is forced sexual intercourse undertaken by someone the victim knows, against the will of the victim or as a result of threats, force or fear. It is estimated that 50-70% of all rapes are acquaintance rapes or non-stranger crimes.

"Sexual Battery" is defined as the touching of an intimate part of another person, if the touching is against the will of the person touched, for the purpose of sexual arousal, sexual gratification, or sexual abuse (Reference: California Penal Code, Section 243.4).

"Assault with intent to commit a sexual battery" is defined as an unlawful attempt, coupled with the present ability, to commit a violent injury (e.g., rape) on the person of another. (Reference: California Penal Code, Section 220; 240; 261; and following sections).

"Consent" is defined as positive cooperation in an act or attitude pursuant to an exercise of free will. The person must act freely and voluntarily and have knowledge of the nature of the act or transaction involved [Reference: California Penal Code, Section 261.6; 266(c)].

"Unlawful Sexual Intercourse" is an act of sexual intercourse accomplished with a female not the wife of the perpetrator, where the female is under the age of 18 years (California Penal Code, Section 261.5).

Any person who willfully and lewdly commits any lewd or lascivious act upon or with a child under the age of 14 years with the intent of arousing, appealing to, or gratifying the sexual desires or passions of either the child or defendant is guilty of a felony. Any person who commits any act in the previous sentence with a person 14 or 15 years old, and the defendant is at least 10 years older than the child is guilty of a public offense (California Penal Code, Section 288). Any person who intentionally persuades, induces, provides or makes available to another a child under age 16 for lewd or lascivious acts is guilty of a felony, punishable by fine and imprisonment [California Penal Code, Section 266(j)]. Every person who annoys or molests any child under the age of 18 is punishable by fine and imprisonment (California Penal Code, Section 647.6).

### University Jurisdiction

California State University, Long Beach views seriously its obligation to uphold the laws of the larger community of which it is a part. An association with the University does not exempt a person from local, state, or federal laws, but rather

imposes the additional obligation to abide by all of the rules and regulations of the California State University.

A student charged with a sexual abuse violation which is campus-related may be subject to prosecution under appropriate California criminal statutes, as well as being subject to student discipline under the Student Disciplinary Procedures for the California State University (Reference: Chancellor's Executive Order 148, "Student Disciplinary Procedures for the California State University"; and Title V, California Code of Regulations, Section 41301-41304, "Student Discipline").

Employees charged with a sexual abuse violation which is campus-related may be subject to prosecution under appropriate California criminal statutes, as well as being subject to discipline under the California Education Code, Sections 89535-89540. Such campus disciplinary action for employees may include demotion, suspension, or dismissal.

### Campus Reporting Procedures

Persons involved in, or possessing knowledge of, a campus-related abuse violation are strongly encouraged to notify Public Safety immediately. Public Safety may be notified using the emergency number from a campus telephone at 9-1-1, or may be called at (562) 985-4101.

Upon calling Public Safety, an officer will be immediately dispatched. The officer will ensure, where indicated, that a victim of sexual assault is promptly transported to a medical facility for medical care and collection of evidence. Should the victim desire to file charges, an officer will assist. An officer will remain with the victim until a friend or relative can be located. When requested, a female officer trained in prevention of sexually related violations will be available.

With the consent of the victim, Public Safety may contact one or more of the following by telephone, memorandum, or both. Alternatively, the victim may contact directly or request from Public Safety that one or more of the following be contacted:

1. Associate Vice President for Student Services (562) 985-5587, SSA 377
2. Director, University Counseling Center (562) 985-4001, SSA 226
3. Director, Student Health Center (562) 985-4771, Health Center
4. Director, Staff Personnel Services (562) 985-4031, SSA 335
5. Director, Affirmative Action (562) 985-8256, SSA 238
6. Senior Director, Judicial Affairs (562) 985-5270, SSA 377
7. Director, Women's Resource Center (562) 985-8575, LA3-105

The respective units or persons contacted shall be responsible for reports, as may be required by law, to be filed for their respective unit, e.g., violations under the "Child Abuse Reporting Law".

The following are among the options available to a victim; more than one option may be exercised by the victim:

1. Criminal Prosecution: Public Safety - (562) 985-4101  
Emergency: 9-1-1
2. Civil Action: Consult an attorney.
3. University Disciplinary Process, where accused is:
  - A. Faculty or Staff: Employee Relations Administrator (562) 985-4128; SSA 300

B. Student: Senior Director, Judicial Affairs (562) 985-5270; SSA 377

4. Alternative Campus Housing Assignments: Director, Housing (562) 985-4187; Housing Office
5. Academic Assistance:
  - A. University Counseling Center (562) 985-4001; SSA 226
  - B. Women's Resource Center (562) 985-5466; LA3-105
  - C. Academic Advising Center (562) 985-4837; East Library 125

In the event there are requests for information from the press, concerned students, parents, and others, prudence shall be exercised, and when required by law, confidentiality shall be maintained. When appropriate, only the Department Director (for matters strictly within the Director's purview), or the University Director of Public Affairs (for inquiries by the media), shall respond.

Victims are advised that there could likely be a need to identify both the victim and the assailant in the course of investigation and hearings under University student disciplinary proceedings, as well as under employee disciplinary proceedings, or criminal prosecutions. In the case of student disciplinary actions against an assailant, the victim is required to be promptly notified by the Director, Judicial Affairs of the status of the proceedings, and the general terms of the disposition.

Persons are reminded of the importance of preserving evidence as may be necessary to the proof of criminal sexual assault. With respect to sexual assault involving student discipline, both the accused and the accuser are entitled to have an advisor present during a campus disciplinary proceeding, and to be informed of the outcome of the campus student disciplinary proceeding. Student victims of sexual assault may request changes in academic and living arrangements precipitated by the offense where such changes are reasonably available.

### Support Services

Sexual assault violations often result in physical harm, psychological harm, or both. Even if the victim decides not to report the incident to authorities, it is urged that the victim seek medical and counseling assistance for potential emotional trauma and the possibility of sexually transmitted diseases.

- The University Counseling Center provides crisis counseling as well as ongoing assistance to students who have experienced sexual assault; (562) 985-4001.
- The University Student Health Center offers routine medical examinations, including pregnancy tests and tests for sexually transmitted diseases; (562) 985-4771.
- The University Women's Resource Center provides video tapes, books, and brochures for both men and women, and referrals to community services are also provided; (562) 985-5466.

Additionally, referrals may be made to the Rape Crisis Hotline - Long Beach area (562) 597-2002 or to the Sexual Assault Crisis Agency, (562) 433-1287 which offers a 24-hour crisis hotline:

- A. The Rape Crisis Hotline - South Bay area, (310) 545-2111;
- B. The Rape Crisis Hotline - Orange County, (714) 831-9110;
- C. Rape Treatment Center - Santa Monica Hospital (310) 319-4000;

D. The Victim Witness Assistance Hotline, (714) 957-2737.

Also, the University Counseling Center, and the Career Development Center maintain lists of referrals within the community which deal with the issues of rape and sexual assault crisis, including legal, medical, and therapeutic support services. The phone number for the University Counseling Center is (562) 985-4001. The Career Development Center can be reached at (562) 985-4152.

#### Victims of Violent Crime Statute

A person who has sustained physical injury as a direct result of a crime of violence, or is legally dependent for support upon a person who has sustained physical injury or death as a direct result of a crime of violence (or, in the event of a death caused by a crime of violence, has legally assumed or voluntarily paid the medical or burial expenses incurred as a direct result thereof) may qualify for indemnification by the State of California for the out-of-pocket wages, medical and/or burial expenses incurred as a result of the crime (California Government Code, Section 13959, et seq.). Claims must be filed with the State Board of Control for the State of California. The Statute provides that, absent certain extenuating circumstances, a claimant has one year from the date of the crime to file his or her claim with the State Board of Control. For further information regarding this program, contact:

University Police  
California State University, Long Beach  
1331 Palo Verde Avenue  
Long Beach, California 90840  
Telephone: (562) 985-4101

OR

Victims of Violent Crime Program  
State Board of Control  
State Office Bldg. No. 1, Rm. 102  
Sacramento, California 95814  
Telephone: (916) 445-1540

#### Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232 g) and regulations adopted thereunder (34 C.F.R. 99) and California Education Code Section 67100 et seq., set out requirements designed to protect the privacy of students concerning their records maintained by the campus. Specifically, the statute and regulations govern access to student records maintained by the campus, and the release of such records. In brief, the law provides that the campus must provide students access to records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading, or otherwise inappropriate. The right to a hearing under the law does not include any right to challenge the appropriateness of a grade as determined by the instructor. The law generally requires that written consent of the student be received before releasing personally identifiable data about the student from records to other than a specified list of exceptions. The institution has adopted a set of policies and procedures concerning implementation of the statutes and the regulations on the campus. Copies of these policies and procedures may be obtained at the Office of Enrollment Services or the Office of Judicial Affairs. Among the types of information included in the campus statement of policies and

procedures are: (1) the types of student records and the information contained therein; (2) the official responsible for the maintenance of each type of record; (3) the location of access lists which indicate persons requesting or receiving information from the record; (4) policies for reviewing and expunging records; (5) the access rights of students; (6) the procedures for challenging the content of student records; (7) the cost which will be charged for reproducing copies of records; and (8) the right of the student to file a complaint with the Department of Education. An office and review board have been established by the Department to investigate and adjudicate violations and complaints. The office designated for this purpose is: The Family Educational Rights and Privacy Act Office (FERPA), U.S. Department of Education, 330 "C" Street, Room 4511, Washington, D.C. 20202.

The campus is authorized under the Act to release "directory information" concerning students. "Directory information" includes the student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. Currently, CSULB offices may release only the following types of information: name, major, dates of attendance, and degrees or awards received. The Director of Athletics may, in addition, provide information concerning participation of students in athletic events, including the height and weight of athletes. The above designated information is subject to release by the campus at any time unless the campus has received prior written objection from the student specifying information which the student requests not be released. Written objections should be sent to the Director of Enrollment Services.

The campus is authorized to provide access to student records to campus officials and employees who have legitimate educational interests in such access. These persons are those who have responsibilities in connection with the campus' academic, administrative, or service functions and who have reason for using student records connected with their campus or other related academic responsibilities. Disclosure may also be made to other persons or organizations under certain conditions (e.g., as part of accreditation or program evaluation; in response to a court order or subpoena; in connection with financial aid; to other institutions to which the student is transferring).

#### Career Placement Information

The Career Development Center office may furnish, upon request, information about the employment of students who graduate from programs or courses of study preparing students for a particular career field. This information includes data concerning the average starting salary and the percentage of previously enrolled students who obtained employment. The information may include data collected from either graduates of the campus or graduates of all campuses in The California State University.

#### Use of Social Security Number

Applicants are required to include their Social Security account number in designated places on applications for admission pursuant to the authority contained in Section 41201 of Title 5, California Code of Regulations. The Social Security

account number is used as a means of identifying records pertaining to the student as well as identifying the student for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution. If the applicant does not have a Social Security account number, an identification number will be assigned.

Taxpayers who claim Hope Scholarship or Lifetime Learning tax credit will be required to provide the campus with the name, address, and Taxpayer Identification Number to the campus.

## Security on Campus

### Campus Security Act

California State University, Long Beach Department of Public Safety, obtains its powers to arrest from the California Penal Code and the California Education Code.

### Reporting Emergencies on Campus

The on-campus emergency phone number is 9-1-1. The non-emergency phone number is (562) 985-4101. Any problems concerning behavior of members of the campus community, thefts, vandalism, fire, and all related matters should immediately be brought to the attention of the Public Safety Department.

### Procedures for Reporting Crimes on Campus

Whenever students or employees become victims of a crime while on the campus of CSULB, or whenever they have witnessed a crime or feel that there is a possibility that a crime is about to occur, they should notify PUBLIC SAFETY as soon as possible. There are numerous emergency phones located throughout the campus and parking lots, which are direct lines to the PUBLIC SAFETY dispatcher. Contact PUBLIC SAFETY by simply locating the nearest emergency phone or by using the emergency phone that is located in all elevators. Individuals may also contact the mobile police units that patrol the campus on a 24-hour schedule. Parking enforcement officers also patrol the parking lots and have direct radio contact with the police dispatcher and the mobile police units. The Department of Public Safety is located at the far east end of campus, between parking lot "C" and parking lot "9" on Palo Verde Avenue. The Department is open 24 hours a day to respond to any call for service or to any emergency.

### Opening Classrooms

Custodians are responsible for unlocking all outside doors and classrooms which do not contain equipment (audiovisual, computers, etc.) at 7:00 am. Public Safety personnel are responsible for opening buildings on weekends and holidays. Persons requesting a door opened must have proper authorization. Questions of interpretation and special access matters should be directed to Public Safety.

### Security of Buildings

It is the responsibility of the person assigned to an office to ensure that the door is locked at the conclusion of work. Further, it is the responsibility of the last instructor teaching in a classroom to ensure that the door is secure and the lights are turned off when the class is concluded. In areas where equipment technicians are employed, it will be their responsibility to secure all doors at the end of the working day. Public

Safety will ensure that all buildings are secured every night. An individual desiring to remain in a building after normal closing hours is required to notify Public Safety.

Personnel who require access to buildings and rooms must request keys with appropriate departmental approval. Individuals granted special access to rooms and buildings must assume personal responsibility for facilities and equipment during the time they are using these facilities and equipment. Should a faculty or staff member require access to a particular building or room after normal instructional or working hours, presentation of identification to Public Safety is required. Failure to present proper identification to Public Safety is grounds to deny the request for access to the building. Graduate Assistants and other students who require entrance to a building during other than normal hours must have proper identification and prior approval in writing from the appropriate administrator. This authorization must be on file with Public Safety.

Anyone who has difficulty in gaining authorized access to an area or who needs assistance in securing a building or room should contact Public Safety.

### Policy Concerning Law Enforcement on Campus

California State University Police Officers are sworn Law Enforcement Officers under California Penal Code, Section 830.2, and in compliance with State Statute meet the peace officer standards and training requirements mandatory for all California law enforcement officers. In addition, California State University Police Officers undergo training specially designed to meet the needs and problems of a contemporary university community.

The primary responsibility of the Public Safety Department is the preservation of the public peace and the protection of life and property against all unlawful acts. The department will take all possible measures to prevent crime and accidents, investigate thoroughly all suspicious and criminal activity, and apprehend offenders quickly in all cases where crimes are committed.

### Type and Frequency of Programs to Inform Campus Personnel About Security Procedures and Practices

Public Safety actively involves fraternities and sororities, as well as sports groups and clubs on campus, to participate in the "Acquaintance/Date Rape" lectures. These classes are scheduled flexibly to meet the group's needs at no charge. The Public Safety Department also conducts new employee, new student, and special groups orientations. Officers routinely address residence hall students on a variety of topics, such as drug and alcohol abuse, and the problem of sexual assaults.

### Programs Designed to Prevent Crime

Public Safety offers an evening escort service for all students and employees. They are picked up and escorted to their vehicles or to the residence halls.

Public Safety provides employees with information about California law and how to avoid being a victim. Advice is also provided about securing valuables and protecting vehicles.

## Statistics on Major Crimes

Public Safety reports statistics on major crimes monthly to the Office of the President, to the Chancellor's Office, and to the Department of Justice.

Information concerning CSULB policies, procedures, and facilities for students and others to report criminal actions or other emergencies occurring on campus may be obtained from University Police, (562) 985-4101.

Information concerning CSULB annual crime statistics reports may be obtained from University Police, (562) 985-4101.

## Off-Campus Monitoring of Criminal Activity at Campus Events

The Public Safety Department has a close working relationship with the City of Long Beach Police Department. The meetings are on a monthly basis and discuss areas of possible problems. Reports are exchanged with LBPD, LASO, and other police departments.

## Policy for the Use of Alcohol and Drugs on Campus

Alcoholic beverages generally may not be consumed on campus except at sponsored events and with specific approval of the Director of Student Life and Development.

Alcoholic beverages may only be consumed on University premises that have been licensed by the Department of Alcoholic Beverage Control or on other University premises at "approved group sponsored events." Sponsors of such events must obtain prior written approval from the office of Student Life and Development. Approval normally will be limited to events in such areas as the University Student Union, the Soroptimist House, or the Chart Room.

The solicitation, sale, use or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics, as those terms are used in California statutes, is prohibited on campus property. Excepted are drugs which are lawfully prescribed or lawfully permitted for the purpose of bona fide research, instruction or analysis.

CSULB is dedicated to the elimination of the use of illicit drugs and alcohol abuse. The CSULB Student Health Center offers substance-abuse consultation programs for students, faculty and staff who may need assistance in overcoming the personal problems associated with alcohol or drug abuse. These programs include a Student Assistance Program for students, an Employee Assistance Program for faculty and staff, and an Athletic Assistance Program for student athletes (offered as a separate program due to NCAA requirements). All contacts with the Health Center and its personnel are confidential.

More detailed descriptions of campus regulations concerning alcohol and drugs may be found in the current editions of the CSULB Catalog, the CSULB Schedule of Classes, Regulations for Campus Activities, Organizations, and the University Community, and the Faculty, Staff and Student Handbooks.

***IN MEMORIAM***

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