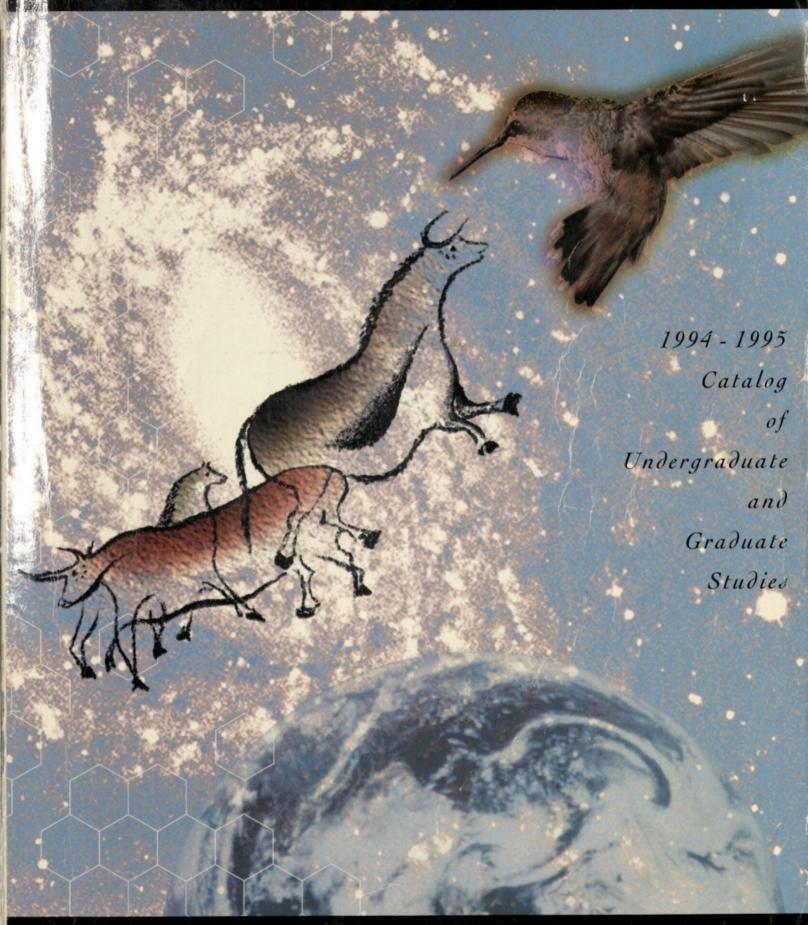
CSULBBULLETIN



CALIFORNIA STATE UNIVERSITY LONG BEACH

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. Today, all 20 campuses have the title "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. The newest campus — California State University, San Marcos — began admitting students in fall 1990.

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. 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 1993, the system enrolled approximately 326,000 students, taught by more than 16,000 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 20 campuses since 1960.

Campuses — The California State University

California State University, Bakersfield 9001 Stockdale Highway Bakersfield, California 93311-1099 Dr. Tomas A. Arciniega, President (805) 664-2011

California State University, Chico 1st & Normal Streets Chico, California 95929 Dr. Manuel A. Esteban, President (916) 898-6116

California State University, Dominguez Hills 1000 East Victoria Street Carson, California 90747 Dr. Robert C. Detweiler, President (310) 516-3300

California State University, Fresno 5241 North Maple Avenue Fresno, California 93740 Dr. John D. Welty, President (209) 278-4240

California State University, Fullerton, California 92634-9480 Dr. Milton A. Gordon, President (714) 773-2011

California State University, Hayward Hayward, California 94542 Dr. Norma S. Rees, President (510) 881-3000

Humboldt State University Arcata, California 95521 Dr. Alistair W. McCrone, President (707) 826-3011

California State University, Los Angeles 5151 State University Drive Los Angeles, California 90032 Dr. James M. Rosser, President (213) 343-3000

California State University, Northridge 18111 Nordhoff Street Northridge, California 91330 Dr. Blenda J. Wilson, President (818) 885-1200 California State University, Long Beach 1250 Bellflower Boulevard Long Beach, California 90840 Dr. Robert C. Maxson President (310) 985-4111

California State Polytechnic University, Pomona 3801 West Temple Avenue Pomona, California 91768 Dr. Bob Suzuki, President (909) 869-7659

California State University, Sacramento 6000 J Street Sacramento, California 95819 Dr. Donald R. Gerth, President (916) 278-6011

California State University, San Bernardino 5500 University Parkway San Bernardino, California 92407 Dr. Anthony H. Evans, President (909) 880-5000

San Diego State University 5300 Campanile Drive San Diego, California 92182 Dr. Thomas B. Day, President (619) 594-5000

Imperial Valley Campus 720 Heber Avenue Calexico, California 92231 (619) 357-3721

San Francisco State University 1600 Holloway Avenue San Francisco, California 94132 Dr. Robert A. Corrigan, President (415) 338-1111

San Jose State University One Washington Square San Jose, California 95192 Dr. J. Handel Evans, Acting President (408) 924-1000

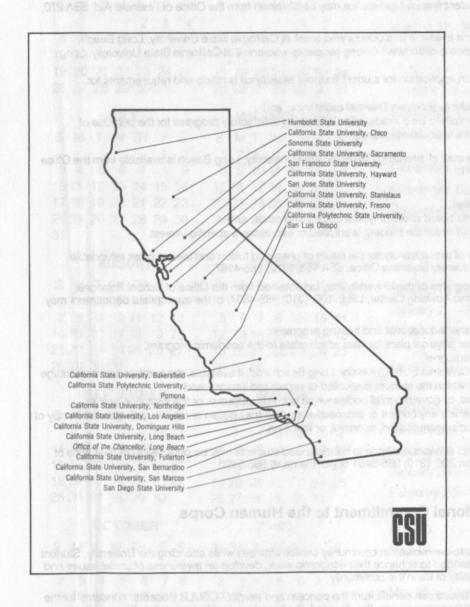
California Polytechnic State University, San Luis Obispo San Luis Obispo, California 93407 Dr. Warren J. Baker, President (805) 756-1111

California State University, San Marcos, San Marcos, California 92069-0001 Dr. Bill W. Stacy, President (619) 752-4000

Sonoma State University 1801 East Cotati Avenue Rohnert Park, California 94928 Dr. Ruben Arminana, President (707) 664-2880

California State University, Stanislaus 801 West Monte Vista Avenue Turlock, California 95380 Dr. Lee R. Kerschner, Interim President (209) 667-3122

California State University, Long Beach Bulletin 1994-95 Undergraduate and Graduate Catalog



1250 Bellflower Boulevard, Long Beach, California 90840
Telephone, (310) 985-4111
California State University, Long Beach Bulletin
(USPS 702-100) April, 1994, Volume 46

The Undergraduate and Graduate Catalog is printed by Forty-Niner Shops, Inc. at no expense to the State of California.

Postmaster: Send address changes to California State University, Long Beach Bulletin, 1250 Bellflower Blvd., Long Beach, California 90840

Using This Bulletin

The California State University, Long Beach *Bulletin* is the general catalog of undergraduate and graduate studies. It describes the courses, programs and services of the University projected for academic year 1993-1994. Most of the policies and regulations affecting students are contained in this catalog; and each student is responsible for becoming familiar with these rules. Some rules and regulations are very detailed and complex, the prospective or enrolled student may wish to have additional advice from the Academic Advising Center, LIB E-125, or from a particular academic department.

The following information concerning student financial assistance may be obtained from the Office of Financial Aid, SSA 270, (310) 985-4641:

- 1. Student financial assistance programs available to students who enroll at California State University, Long Beach;
- 2. The methods by which such assistance is distributed among recipients who enroll at California State University, Long Beach:
- 3. The means, including forms, by which application for student financial assistance is made and requirements for accurately preparing such application;
- 4. The rights and responsibilities of students receiving financial assistance; and
- 5. The standards the student must maintain to be considered to be making satisfactory 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 270, (310) 985-4641:

- 1. Fees and tuition (where applicable);
- 2. Estimated costs of books and supplies;
- 3. Estimates of typical student room and board costs or typical commuting costs; and
- 4. Any additional costs of the program in which the student is enrolled or expresses a specific interest.

Information concerning the refund policy of the University for the return of unearned tuition and fees or other refundable portions of costs is available from the University Business Office, SSA 155, (310) 985-4167.

Information concerning the academic programs of the University may be obtained from the Office of School Relations, SSA 289, (310) 985-5358, or the Academic Advising Center, LIB E-109, (310) 985-4837, or the appropriate department 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 California State University, Long Beach and, if available, the number and percentage of students completing the program in which the student is enrolled or expressed interest; and
- 5. The names of associations, agencies, or governmental bodies which accredit, approve, or 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.

Information regarding special facilities and services available to handicapped students may be obtained from the Office of Disabled Student Services, Student Union 206, (310) 985-5401 or (for the deaf) 985-5426.

Institutional Commitment to the Human Corps

CSULB strongly encourages all students to be involved in community service activities while attending the University. Student participation in community activities is intended to enhance their academic work, develop an awareness of social issues and problems and to directly improve the quality of life in the community.

A wide variety of community needs and issues can benefit from the concern and talent of CSULB students: concerns for the elderly, substance abuse, juvenile delinquency prevention, the disabled, the homeless and hungry, education and literacy, health care, immigration concerns, and child care and protective services.

Students can become involved in the community through class-related projects, internship programs, part-time jobs, University out-reach programs, campus service and leadership positions, individual volunteer activities, as well as, club and organization service projects.

The Human Corps office is located in the Career Development Center, SSA 250. See also the Cooperative Education in the University Programs section of this catalog.

: Editor's Note: Boulevard Long Beach, California SCE40

We are always interested to know what improvements to this catalog the readers believe to be appropriate. We accept suggestions in writing and incorporate them in future editions when possible.

The *Bulletin* is produced by Dr. James R. Brett, Director of Curricular Administration and Janice Jackson, Curriculum Assistant. Cover: Art Direction by University Publications. Design and Illustration by Mark Sojka/Graphic Design Workshop/Department of Art/CSULB, 1994.

1994-1995 ACADEMIC CALENDAR

Table of Contents 1 1994-1998

Please note: This is not intended to be construed as an employee work calendar.

		20121107 10 21081
JUNE 1994	DECEMBER	FALL 1994 SEMESTER DATES
SMTWTHFS	SMTWTHFS	August 22 — First Day of the Semester
1 2 3 4	1 2 3	August 22 - 26 — Departmental Advising
5 6 7 8 9 10 11 12 13 14 15 16 17 18	4 5 6 7 8 9 10	August 29 — First Day of Instruction
12 13 14 15 16 17 18 19 20 21 22 23 24 25	11 12 13 14 15 16 17 18 19 20 21 22 23 24	September 5 — Labor Day Holiday (campus closed)
26 27 28 29 30		October 10 — Columbus Day (campus open)
JULY	MANUARY 1005	November 11 — Veterans Day (campus open)
S M T W TH F S	S M T W TH F S	November 24 and 25 — Thanksgiving Holiday
1 2	1 2 3 4 5 6 7	(campus closed)
3 4 5 6 7 8 9	8 9 10 11 12 13 14	December 9 — Last Day of Instruction
10 11 12 13 14 15 16	15 16 17 18 19 20 21	December 12 - 16 — Final Examinations
17 18 19 20 21 22 23 24 25 26 27 28 29 30	22 23 24 25 26 27 28 29 30 31	December 20 — Last Day of the Semester
of Courses and Courses	payer C lemman grant Independe	December 21 - 30 — Winter Recess (all offices closed)
AUGUST	FEBRUARY	Committee consessoro Processoro
SMTWTHFS	SMTWTHFS	WINTER 1995 SESSION DATES
1 2 3 4 5 6 7 8 9 10 11 12 13	1 2 3 4 5 6 7 8 9 10 11	January 2 — First Day of Instruction
14 15 16 17 18 19 20	12 13 14 15 16 17 18	January 16 — Martin Luther King, Jr. Holiday
21 22 23 24 25 26 27	19 20 21 22 23 24 25	(campus closed)
28 29 30 31	26 27 28	January 20 — Last Day of Instruction
SEPTEMBER	MARCH	Enty-NinerShape 3 and over receipt
SMTWTHFS	SMTWTHFS	SPRING 1995 SEMESTER DATES noinU mebula
1 2 3	1 2 3 4	January 23 — First Day of the Semester
4 5 6 7 8 9 10	5 6 7 8 9 10 11	January 23 - 25 — Departmental Advising
11 12 13 14 15 16 17 18 19 20 21 22 23 24	12 13 14 15 16 17 18 19 20 21 22 23 24 25	January 26 — First Day of Instruction
25 26 27 28 29 30	26 27 28 29 30 31	February 20 — Washington's Birthday (campus closed)
OCTOBER	APRIL	April 10 - 14 — Spring Recess (campus closed)
SMTWTHFS	SMTWTHFS	May 19 — Last Day of Instruction
2 3 4 5 6 7 8	00150001	May 22 - 26 — Final Examinations
9 10 11 12 13 14 15		May 29 — Memorial Day Holiday (campus closed)
	16 17 18 19 20 21 22	May 31 - June 2 — Commencements
23 24 25 26 27 28 29	23 24 25 26 27 28 29	June 2 — Last Day of the Semester
30 31	30	Housing Auditors Career Development
NOVEMBER	MAY	SUMMER 1995 SESSION DATES
SMTWTHFS	SMTWTHFS	
1 2 3 4 5	Sandy Street Land Street Land	First Session May 29 - July 7
6 7 8 9 10 11 12	7 8 9 10 11 12 13	Second Session June 19 - July 28
13 14 15 16 17 18 19 20 21 22 23 24 25 26	14 15 16 17 18 19 20 21 22 23 24 25 26 27	July 4 — Independence Day Holiday (campus closed)
27 28 29 30	28 29 30 31	Third Session July 10 - August 18 192 hebut 8 beldeeld
Manager and and the New		

Table of Contents

The California State University
(inside front cover)
Using This Bulletin
Academic Calendar 1994-19953
Table of Contents
Table of Contents
Administration
The University
History
Setting
Mission
The Faculty
Academic Organization
University Extension
Academic Senate, Councils, and
Committee
University Library
Research Centers and Institutes
Fine Arts Performances and
Exhibits14
University Art Museum
Earl Burns Miller Japanese Garden
Forty-Niner Shops
Student Union
Soroptimist House
Alumni Association
University Foundation
Honor Societies
Horior Societies
Student Services and Activities
Academic Advising Center
Learning Assistance Center
Supplemental Instruction
Educational Opportunity
Program (EOP)23
Upward Bound
University Outreach and School
Relations
Housing
Career Development
CoOp
EPIC
Career Placement
Testing Services
Counseling Center
Student Health Center
Disabled Student Services
Isabel Patterson Child

House, See August, 22 3	T WA
Women's Resource Center	27
Campus Organizations	28
College Organizations	00
Student Government	29
Admissions	
Procedures and Policies	
Undergraduate Application Proces	dures
Impacted Programs	
Filing Periods	33
Eligibility Index	
Subject Requirements	
Foreign Language Waiver	34
Test Requirements	35
Systemwide Tests	
English Placement Test	
Entry Level Mathematics Examinat (ELM)	ion
Writing Proficiency Exam (WPE)	
Graduateand Postbaccalaureate	
Admission	36
TOEFL Requirement	
Auditors	
Senior Citizen Program	37
Returning Students	
International (Foreign) Students	
Concurrent Enrollment	
Open University	38
Visitors	
Summer Session Students	
Registration Procedures	
SOAR	
Adding Classes	
Advanced Placement	
Credit by Examination .	
Health Screening	39
d.F. S Way 19 at Jose	
Fees, Financial Assistance	
Fees	
College-based Programs	41
Schedule of Fees	42
Short Term Loans	
Installment Payments	
Auditors	
Refund of Fees	
Parking	43
Determination of Residence for Non-Residence Tuition	44
Debts Owed the University	
Bad Checks	45
Estimated Expenses	46
Financial Aid Eligibility	S AS
Academic Responsibilities	

Students Owing Educational Debts
Financial Aid Programs 47
Student Part-Time Employment
Federal/State Regulations 49
General Regulations and Procedures
Changes in Rules and Policies
Election of Regulations 51
Student Load
Class Attendance
Visitors to Classes
Course Listings
Course Numbers
Course Credit Units
Independent Study Courses
Cross-Listed Courses 53
Repetition of Courses
Transfer Credit
California Articulation Number (CAN)
Extension Credit
Credit for Noncollegiate Instruction
International Program Credit
Acceleration of University Studies
Advanced Placement
Unit Credit by Examination
Substitution of Courses
Waiver of Course Requirement 55
Graduate Credit Earned as a Senior
Senior Enrollment in Graduate Courses for Undergraduate Credit
Grades
Change of Grades
Final Examinations
Final Grade Reports 58
Grade Appeal
Educational Leave
Change of Major
Graduation Check
Graduation with Honors
Honor Lists
Scholastic Probation and Disqualification 60
Cheating and Plagiarism 61
Smoke-Free Campus
Student Discipline
Drug-Free Schools
Standards of Contuct
Student Rights
Policy on Nondiscrimination
Policy on Sexual Harassment 67
Policy on Sexual Assault 70

Privacy Rights of Students	
Career Placement Information .	72
Campus Security	
Graduation Statistics Table	75
CAN Listing	
CAN Listing	
Baccalaureate Degrees and Certificate Programs	
Degrees	
The state of the s	79
Certificates	basa
Minore	
General Requirements	. 80
Ten-Year Rule	nois
English Placement Test (EPT)	
Writing Proficiency Exam (WPE)	81
Entry Level Mathematics Exam (E	
	LIVI)
University 100 General Education	. 00
General Education	82
Credential Programs	
Programs Offered	OF
Credential Applications	
Appeal Process	86
Post-Baccalaureate Studies as Graduate Degrees	nd
Graduate Studies	
Degrees Offered	80
Certificates	. 03
Post-Baccalaureate Studies	
	00
Requirements for Admission	.90
Second Master's Degree	0.4
International Programs	
Advancement to Candidacy	. 93
Educational Leave	
Comprehensive Examination	
	. 94
Academic Probation and	
Disqualification	.95
Academic Credit	
Transfer Units	.96
Academic Load	
Graduate Dean's List	
Departmental Graduate Student	and the same
Honors	.97
Helicosolty December	
University Programs	
Liberal Studies	
University Scholars Program	
Interdisciplinary Studies	
Cooperative Education	
Ocean Studies Institute	114
Sports, Athletics, and	
Recreation	115
International Education (8 and	
International Education/Americ Language Institute	117

College of the Arts	121
Art asset was a second	123
	137
Design	
Music	
Radio, Television, and Film	
Theatre Arts	159
rasett et slooma A som	00 00 opra
College of Business	
Administration	167
Accountancy	177
Finance, Real Estate, and	
Information Systems	
Management and Human	
Resources Management	183
Marketing	
authinistical A les votes and a semile	ensimali aldura
College of Education .	189
Educational Psychology ar	nd
Administration	
Instructional Systems	Trustees
rechnology	
Single Subject Credential Programs	207
Teacher Education	212
Teacher Education	al manala
College of Engineering	221
Aerospace Engineering .	229
Chemical Engineering	232
Civil Engineering	235
Computer Engineering and Computer Science	243
Electrical Engineering	248
Engineering Technology .	256
Mechanical Engineering .	265
Luzer ritoroard resund and	
College of Health and Human Services	275
	275
	277
Communicative Disorders	
	283
Gerontology	288
Health Care Administration	
Health Science	295
Home Economics	301
Nursing	314
Occupational Studies	319
Physical Education	322
Physical Therapy	331
Public Policy and Administration	334
Recreation and Leisure	01
Studies	340
Technology Education	345
Siluta Ass' dark Vice Preside	nriol

College Liberal Arts	349
American Indian Studies	351
American Studies	353
Anthropology	355
Asian and Asian American	
Studies	359
Black Studies	366
Chicano and Latino Studies	369
Comparative Literature and Classics	372
Computer Applications in the Liberal Arts Economics	378
Economics	379
English	384
Geography	393
History	397
History Human Development	404
International Studies	406
Journalism	408
Latin American Studies	414
Legal Studies	415
Linguistics	416
Medieval Renaissance	siooa
Studies	420
Peace Studies	421
Philosophy Political Science	422
Political Science	427
Psychology	433
Religious Studies	441
Romance, German, Russian Languages and Literatures	
Russian and East European	
Studies	453
Social Work	454
	463
Speech Communication	466
Women's Studies	473
College of Natural Science an	d
Mathematics	
Biology	480
Chemistry and Biochemistry	497
Environmental Studies	
	504
Mathematics	512
Physics and Astronomy	518
Emeritus Faculty	524
Faculty	530
Index	549
In Memoriam	
Campus Man (inside back con	1001

Office of the Chancellor

Chancellor—CSU System Dr. Barry Munitz
Executive Vice Chancellor Ms. Molly Corbett Broad
Senior Vice Chancellor, Academic Affairs Dr. Peter S. Hoff
Vice Chancellor, Human Resources and Operations
Vice Chancellor, Business and Finance Mr. Richard West
Vice Chancellor, University Advancement Dr. Douglas X. Patino
General Counsel
100 0-11-01-01

400 Golden Shore Long Beach, California, 90802-4275 (310) 590-5506

California State University, Long Beach Administration

President Robert C. Maxson

Immediate Office of the President

Executive Assistant to the President A	rmando Contreras
Special Assistant to the President	. Marilouise Sims
Director of Affirmative Action	Karen Alvarado

Division of Academi	c Affairs
Provost and Senior Vice President for	
Academic Affairs	Karl Anatol
Associate Vice President for Academic Aff	airs and
Dean of Graduate Studies	Keith Polakoff
Associate Vice President for Academic Aff	fairs and
Dean of Undergraduate Studies	Maniyn Jensen
Associate Vice President for Academic Afr Academic Personnel	Charles Austin
Assistant Vice President for Academic Affa	airs,
Fiscal Operations	Claric Court
Director of Operations, Academic Affairs	
Director, Academic Advising Program	Marilee Samuelson
Director, Academic Computing	Chuck Schneeback
Chair, Academic Senate	Dorothy Goldish
Acting Director, American Language Instit	tute Teresa Ross
Director, Athletes Advising Center	Suzanne Wurzer
Director, Center for International Education	
Acting Director, Faculty Development Cer	nter Susan Nummedal
Director, KLON	Sharon Weissman
Director, Learning Assistance Center	Genevieve Ramirez
Director, Liberal Studies Program	Kristi Jones
Acting Director, Multicultural Center	James Sauceda
Acting Director, Ocean Studies Institute .	
Director, Interdisciplinary Studies	295 Ce
Program	Margaret Toohey-Costa
Director, University Art Museum	Constance Glenn
Director, University Research and	
Curricular Administration	James Brett
Director, University Scholars Program	Roberta Markman
Director, University 100	Sharon Olson
WASC Accreditation Liaison	David Hood
Dean, College of the Arts	Wade Hobgood
Acting Associate Dean	Richard Birkemeier
Dean, College of Business Administration	
Interim Associate Dean	Barbara George
Dean, College of Education	
Associate Dean	
Dean, College of Engineering	
Associate Dean	
Acting Associate Dean	

Dean, College of Health and Human Services Donald Lauda
Associate Dean W. Andrew Sinclair
Dean, College of Liberal Arts Dorothy Abrahamse
Associate Dean David Dowell
Acting Dean, College of Natural Sciences
and Mathematics James Jensen
Acting Associate Dean
Acting Assoicate Dean Robert Loeschen
Dean, University Extension Services Robert Behm
Associate Dean Marilyn Crego
Acting Director, Extension Programs Lynn Hendricks
Director, University Television Mat Kaplan
Director, University Library and Learning Resources Jordan Scepanski
Associate Deputy Director
Associate Director, Information Programs Gretchen Johnson
Division of Student Services

Division of Student Services
Vice President for Student Services Douglas W. Robinson
Director of Administrative Services Paula Gleason Director of Resource Management Doug Harris
Director of Resource Management Doug Harris
Director of Development Deborah Veady
Acting Director, Housing and Hesidential Life Gary Little
Acting Director, Student Health Services Jone Levis
Condition Francisco Assistance
Program/Student Judi Phillips
Assistance Program/Athlete Assistance Program
Health Educator Mary Byron-Garcia
Acting Associate Vice President for Student Services
Acting Director, Career Development Center Wade Hawley
Coordinator, OPTIONS Program Shifra Teitelbaum
Director, Disabled Student Services David Sanfilippo
Acting Director, Educational Equity Services Jim Matsuoka
Director, Student Support Services Cherryl Arnold-Moore
Coordinator, EOP Admissions
Director, Judicial Affairs Steve Katz
Director, Testing and Evaluation Services Jim Neal
Director, University Counseling Center Clyde Crego
Director, University Outreach/School Relations Valerie Bordeaux
Director, University Outreach/School Helations valerie Bordeaux Director, Educational Information Services/
Talent Search Loretta Enriquez-Najera
Director, Upward Bound
Assistant Vice President for
Student Services Rosemary Taylor Schmidt
Senior Director, Student Life and
Development Jeane Relieve Caveness
Director, Women's Resource Center Marcela Chavez
Director, New Student Orientation
Director, Isabel PattersonChild Development
Center
Director, University Student Union Eugene Minter
Director, Administrative Services Associated
Students, Inc Richard Haller
Division of Administration and Finance

Division of Administration and Finance

Vice President for Administration and Finance William H. Griffith
Acting Assistant Vice President Roman Kochan
Assistant Vice President Ted Kadowaki
Director for Budget and Human Resource
Management Robyn Mack
Management Robyn Mack University Registrar Vacant

Director of Payroll and Benefit Services Sandra Gunderson
Director of Budget Annette Troxel
Director of Environmental Health and Safety Maryann Rozanski
Director of Staff Personnel Services Tom Angell
Associate Vice President for Financial
Management
Executive Director of Foundation Sandra VanderHeyden
Director of Purchasing Charles Hughes
University Controller
Associate Vice President for Information
Management and Analysis Ronald A. Lee
Assistant Vice President for Information
Technology ServicesRichard Timboe
Assistant Vice President for Enrollment Services Ernst Huff
Director of Admissions and Financial Aid
Director of Institutional Research Donald Coan
Director of Academic Computing Services Charles Schneebeck
Director of Administrative Computing Services David Young
Director of Communication and Office Services MaryAnn Dase
Acting Associate Vice President for Physical
Planning and Facilities Management Scott Charmack
Director of Public Safety Jack Pearson
Director of Parking Administration Thomas Bass
Acting Director of Plant Operations Jeanne O'Dell
Division of University Relations and Development
Vise Descident for Heiseseit - Deletions and

Division of University Relations and Development
Vice President for University Relations and
Development Jerry E. Mandel
Divisional Fiscal OfficerJim Suguitan
Senior Director of Endowment Development Bob Bersi
Senior Director of Estate Planning and Gifts Peter Kote
Director of Performing Arts Center Rich Kerlin
Assistant to the Director, PAC Nicole Santina
Director of Regional Development
Associate Vice President Duane L. Day
Administrative Assistant
Director of Foundation and Corporate Relations Vacant
Faculty Associate Tim Plax
Senior Director of Prospect Management
and Research Linda Williams
Prospect Research Assistant Dori Watanabe
Prospect Research Assistant Erin Ferguson
Director of Alumni Records/Systems Manager Brian Lawver
Director of Development for College of the Arts Barbara Bauer
Director of Development for College of
Business Administration Ann T. Allen
Director of Development, College of Education Sally Sherlock
Director of Development, College of Engineering Tom Morrissey
Director of Development, College of Health
and Human Services
Director of Development, College of Liberal Arts Andree Morin Director of Development, College of Natural Sciences
and Mathematics
Director of Performing Arts Center
Assistant Vice President for Alumni Relations/
Annual Fund Janice Hatanaka
Director of Donor Relations Barbara Holden
Director of Alumni Relations
Director of Annual Fund Pong Devera
Special Events Coordinator Cindy Regnier
Assistant Vice President for Public Affairs
and Publications Toni Beron
Administrative Assistant

Director of Media Relations	Tom Wood
Editor/Writer	Chris Franzen
Editor/Writer	Rick Manly
Editor/Writer	Barbara Parks
Photographer	
Art Director	Victoria Waller
Public Information Specialist Sha	yne Schroeder
Production Coordinator for Public Affairs/Publications	Vacant

Production Coordinator for Public Affairs/Publications Vacant	
Auxiliaries	
CSULB Alumni Association	
President Robert Spidell	
Assistant Vice President for Alumni Relations	
and Annual Giving Janice Hatanaka	
Forty-Niner Athletic Association	
President Sam Breuklander	
Director of Athletics David O'Brien	
Executive Director	
Forty-Niner Shops, Inc.	
General Manager Gary Adams	
Controller Roman Gulon	

Trustees of the California State University Ex Officio Trustees

The Honorable Pete Wilson, Governor of California State Capitol, Sacramento 95814

The Honorable Leo T. McCarthy, Lieutenant Governor of California State Capitol, Sacramento 95814

The Honorable Willie L. Brown, Jr., Speaker of the Assembly State Capitol, Sacramento 95814

To be Appointed, State Superintendent of Public Instruction 721 Capitol Mall, Sacramento 95814

Dr. Barry Munitz, Chancellor of The California State University 400 Golden Shore, Long Beach, 90802-4275

Officers of the Trustees

Governor Pete Wilson, President Mr. Anthony M. Vitti, Chairman Mr. R. J. Considine, Jr., Vice Chairman Chancellor Barry Munitz, Secretary-Treasurer

Appointed Trustees

Appointments are for a term of eight years, except for a student Trustee, alumni Trustee, and faculty Trustee whose terms are for two years. Terms expire in the year in parentheses. Names are listed in order of appointment to the Board.

> Dr. Claudia H. Hampton (1994) Mr. Roland E. Arnall (1998)

Ms. Marian Bagdasarian (1996) John E. Kashiwabara, M.D. (1994) Mr. James H. Gray (1998)

Mr. R. James Considine, Jr. (1994) Ms. Martha C. Fallgatter (1995)

Mr. William D. Campbell (1995)

Mr. Ralph R. Pesqueira (1996)

Mr. Ted J. Saenger (1997)

Mr. Anthony M. Vitti (1997)

Mr. Ronald L. Cedillos (1999)

Dr. Bernard Goldstein (1993)

Mr. William Hauck (2001)

Dr. Joan Otomo-Corgel (2001)

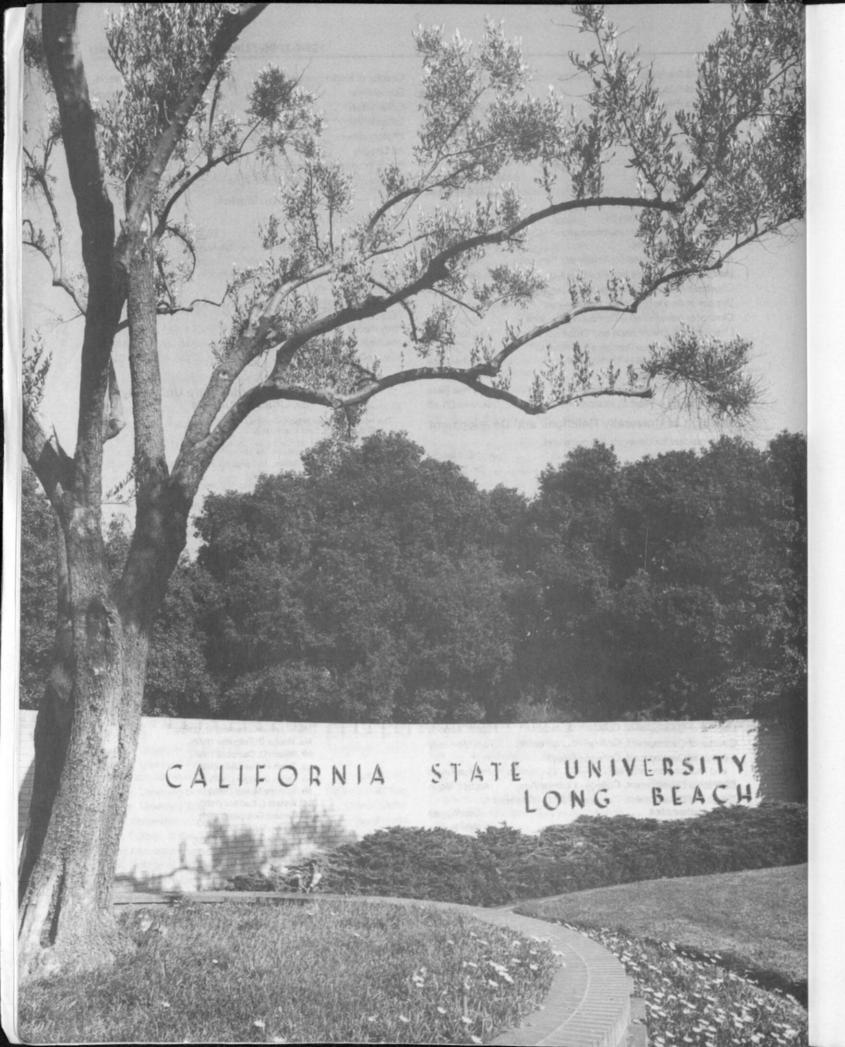
Ms. Rosemary Thakar (2001)

Mr. J. Gary Shansby (1999)

Mr. Christopher A. Lowe (1995)

Mr. Michael D. Stennis (2002)

Correspondence with Trustees should be sent: c/o Trustees Secretariat The California State University 400 Golden Shore, Suite 214 Long Beach, CA 90802-4275



The University

History

The history of 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 south-

eastern Los Angeles County. The college—first called Los Angeles-Orange County State College—was officially authorized by Assembly Bill 8, signed by Governor 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.

The first classes 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 President P. Victor Peterson, 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 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 growth throughout the 1960's. Enrollment soared from 10,000 students in

1960 to 20,000 in 1966. Expansion meant new physical facilities, a broader range of degree and course offerings, and an enlarged faculty. The mission of the campus was modified to encompass both undergraduate and graduate education through the master's degree in six schools: Ap-

plied 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. College of the Arts offered the first professional arts degrees (BFA, MFA) in the California State University system.

Under President 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.



Dr. Robert C. Maxson, President

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 qualitative improvements. With additional dormitories, residential students doubled to more than 1800, giving the campus a new sense of community. Acquisition of KLON, FM-88, which became one the nation's premier public radio stations, featuring jazz and information programming, expansion of the University Art Museum, and opening of the Earl Burns Miller Japanese Garden, University Music Center, and Loraine Huntington Miller and Char-

les 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. At the same time, led by its success in basketball, volleyball, baseball, and softball, the athletic program rose to national prominence.

During the decade of the 1990's, President Curtis L. Mc-Cray and Interim President Karl Anatol, helped the university through the troubled times of state budget cuts. We begin this academic year with our new president, Robert C. Maxon.

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, 10 centers, 5 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, Microbiology, Dance, Music, and Nursing have been completed, as has the new International House student dormitory 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 spanning 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 curriculum is grounded in a strong general education program, 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, the agency responsible for granting national accreditation to colleges and universities in the western United States. 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 the appropriate college dean.

- Art National Association of Schools of Art and Design
- Athletic Training National Athletic Trainers' Association
- Business Administration American Assembly of Collegiate Schools of Business
- Chemistry (undergraduate) American Chemical Society, Committee on Professional Training
- Communicative Disorders (graduate) American Speech and Hearing Association, Education and Training Board
- Dance National Association of Schools of Dance
- Design National Association of Schools of Art and Design
- Engineering (undergraduate: Chemical, Civil, Computer, Electrical, Mechanical) Accreditation Board for Engineering and Technology



- Home Economics American Home Economics Association and American Dietetics Association
- Journalism Accrediting Council on Education in Journalism and Mass Communication
- Music National Association of Schools of Music
- Nursing National League for Nursing
- Physical Therapy American Physical Therapy Association
- Health Science (graduate) Council for Education in Public Health
- Public Policy and Administration National Association of Schools of Public Affairs and Administration
- Radiation Therapy Technology American Medical Association Committee on Allied Health Education and Accreditation, Joint Review Committee on Education in Radiologic Technology
- Recreation and Leisure Studies National Recreation and Park Association, Council on Accreditation
- Social Work Council on Social Work Education
- Theatre Arts National Association of Schools of Theatre
- University Art Museum— American Association of Museums

10

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 executive officer of a college. Deans are appointed by the 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 *Bulletin* 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 use not only the 150 instructional days per year to the best possible advantage, but that by reflecting on the learning process, by thinking about how the professor came to understand and organize what she or he knows, they will also learn how to take advantage of the University's and other resources, 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. Thirty thousand students, sixteen hundred faculty members, and nearly twelve hundred 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 end 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 with 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 so that the departments and programs of the individual colleges are grouped together. In order to find Biological Sciences, for instance, you need to know that it is within the College of Natural Sciences and Mathematics. Please use the table of contents; it will solve these riddles for the beginning student. For the continuing student, the names of deans and department chairs should be useful for times when information or approvals are not available from faculty or other administrative offices.

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. 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 Extension

University Extension Services is the community outreach branch of the University. It is a self-supporting entity which provides general education as well as professional training for the adult. Approximately 450 seminars, briefings, short courses, and certificate programs are provided each semester throughout the Los Angeles-Orange County region. University Extension Services encompasses the Extended Education Office, the Summer Session Office (the largest in the CSU system), the South Coast Center for Professional Training and Development, and the University Television Center. In the area of professional training, the South Coast Center provides customized industry training. creates and manages company retraining, and offers qualified researchers and trainers to assist companies in designing their own training. The University Television Center offers a series of public information broadcasts on local Long Beach and Lakewood cable systems. The University Television Center also works in concert with the South Coast Center and academic schools to deliver training via television to on-site business and industry locations.

Academic Senate, Councils, and Committees 1993-1994 Academic Year

- Chair of the Academic Senate Professor Dorothy M. Goldish
- Chair of the Planning and Educational Policies Council
 — Professor William V. Wittich
- Chair of the Graduate Council Professor Henry Fung
- Chair of the Financial Affairs Council Professor David Hood
- Chair of the Teacher Preparation Committee Professor Marquita Grenot-Scheyer

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 collegelevel 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.

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 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 cour-

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 papers and files related to their years of public service to the library, and an important collection of radical literature centering on the California political activities of Dorothy Healy is another resource for scholars located in Special Collections. These materials are complemented by original art works, photographic prints by Edward Weston and 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 mainframe, minicomputer, and microcomputer resources. More than 1000 student access terminals and microcomputers may connect to the University's VAX 6320 supermini, and a DEC system 5810 running Unix. An X.25 network (CSUNET) links more than 50 mainframe and minicomputer systems at the 20 CSU campuses. CSUNET also provides links to other networks and computers, including INTERNET, BITNET, CERFNET, and a Cray XMP located at the University of California at San Diego.

Fifteen general access computing laboratories situated throughout the campus provide access to an extensive collection of software packages and programming languages. More than 1,000 microcomputers are available for student use. These includes IBM PC's and compatibles, Apple II's, Macintoshes, NeXT workstations, and Zenith AT's. Many of these microcomputers are networked, and many may be used to access the campus mainframes, minicomputers and CSUNET computing resources. Students also use University graphics terminals, plotters, laser printers, and other special devices for graphics applications.

Research Centers and Institutes

- Center for Aerospace Sciences Tuncer Cebeci
- · Center for Career Studies Paul Bott, Director
- Center for Criminal Justice Research and Training Arthur Basile, Director
- Center for Educational Applications of Brain Hemisphere Research — Betty Edwards, Consulting Director; Pat Clark, Executive Director
- Center for Educational Research and Services Robert Berdan, Director
- Center for First Amendment Studies Craig Smith, Director
- Center for Health and Behavior Studies Connie Evashwick. Director
- Center for Humanities Shirley Mangini, Director

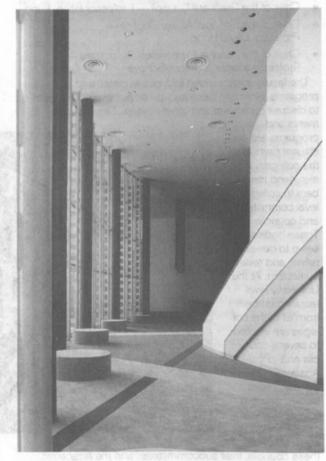


"The Carpenters"
Karen and Richard Carpenter

- Center for Language-Minority Education and Research — David Ramirez Director
- Institute for Science
 and Math Education —
 William Ritz, Director
- Center for Successful
 Aging Jeanne
 Bader, Director
- Institute for the Study of Judeo-Christian Origins — Robert H. Eisenman, Director
- Molecular Ecology Institute — Kenneth Jenkins, Director

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 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 the first weekends of December 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, Graphic 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 at the First Congregational Church in Long Beach.

The Department of Theatre Arts produces five major productions each year. Acclaimed for quality acting and elaborate 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 four or five additional plays annually in an intimate, 90-seat theater.

Tickets for all dance, music, and theatre arts performances are sold through the CSULB Fine Arts Ticket Office located in the southwest corner of the Theatre Arts Building. The Ticket Office is open from 10 a.m. to 4 p.m.

Monday-Friday and is open one hour prior to performance. Faculty, staff, and student rates are available for most performances. Visa and Mastercard are honored. For information or to charge tickets, call (310) 985-5526. The Carpenter Performing Arts Center has its own ticket office. For information or to charge tickets, call (310) 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 accreditated by the American Association of Museums 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 profes-

sional group affiliated with the University Art Museum. For information about University Art Museum activities, call (310) 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 processes 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, which includes A La Mode, the International Cafe, the Nugget, and the Chart Room, and a variety of food and refreshment stations across the campus. Forty-Niner Shops, Inc. is a nonprofit corporation which has faculty, student, and administrative representation on its Board of Directors.

The University Bookstore stocks required textbooks, school supplies, stationery, and additional items for personal use. Services include notary public, check cashing, and the sale of money orders and stamps.

The Campus Copy Center offers copying, duplicating, offset printing, book and report binding, transparencies, and typewriter rentals. The Library Copy Center, an extension of the Campus Copy Center, provides copying needs in that location.

The University Dining Service includes the residence dining units, the new University Dining Plaza, consisting of four dining areas featuring a wide range of foods and service formats, the University Student Union dining facilities, and the satellite food operations on campus. Catering services are available for campus functions.

The University Student Union

The University Student Union (USU), paid for with student fees, 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 Relations and Activities, University-related student groups, legal counseling, United Campus Ministries, Disabled Student Services, University Alumni Relations, an Information/Ticket Booth, the Office of the Assistant Vice-President for Student Services, and much more.

The Information/Ticket Booth, located on the Plaza Level. offers local bus schedules and maps. Bus passes for the Southern California area, newspapers, photo developing, and tickets for campus events sponsored by student organizations are sold there. The Book Exchange Board aids students interested in selling or exchanging books with other students. The Scheduling Office is a central scheduling and coordinating service for the entire campus. The Student Relations and Activities area offers advising for student organizations, as well as mail boxes, organizational files, and work space for all student groups. The Student Union Score Board serves breakfast, lunch, and dinner with a wide variety of foods. The Deli is located in the Games Area adjacent to the swimming pool and the TV Lounge. The Counter sells various candies, popcorn, sodas, and sundry items. Paradise Bakery, located on the Mall Level, offers a delicious selection of fresh-baked cookies, muffins, quiches, and beverages.

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. The Outing Center offers backpacking and camping equipment rentals at reasonable prices. 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, Campus Travel Agency, and Kinko's Copy. Center

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.

KLON-FM 88 Public Radio

FM88/KLON (88.1 on the FM dial), a noncommercial radio station staffed by nine full-time professionals, 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 current audience of 135,000 and a potential of 2,000,000.

The station is on the air 24 hours per day with a program format principally of jazz, information, and public affairs. KLON provides diverse professional learning opportunities for CSULB students, including a unique opportunity for students in the Radio/TV and Journalism departments to gain

experience in a full-time, professional radio station with direct supervision by faculty members and industry professionals. Over 40 students are currently involved in the operation of the station. KLON provides additional learning experiences for students in marketing, graphic design, industrial design, and public relations. FM88 is a listener-sup-

ported radio station, funded by a combination of institutional, governmental, corporate, foundation, and private contributions. Its studios occupy 4,500 square feet of Faculty Office I on the CSULB campus.

University Development

The Office of University Development actively encourages and coordinates the receipt, acknowledgment, and disbursement of donations from alumni, parents, graduating seniors, and many friends of the University, including private foundations and corporations. Millions of dollars are given annually in support of various activities which further the educational mission of CSULB.

Alumni Association

The CSULB Alumni Association provides an important link between the University and its more than 140,000 graduates. With alumni needs and interests in mind, the Association develops social, educational and recreational programs that bring alumni back to campus, encouraging positive relationships and ongoing communication between former students and CSULB's faculty and staff.

All former students of at least one semester at CSULB are considered alumni and are invited to remain a part of the campus community through the Alumni Association.

Graduates and credential recipients can join by simply completing an enrollment card and paying a one-time \$5.00 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 centers, scholarship and award programs, the summer Concerts in the Grove series, and other events.

Alumni Association chapters allow former CSULB students with common interests to maintain friendships formed in college and to network with new acquaintances. Career-related chapters also provide professional advice to students and recent graduates planning to follow similar paths.

> Members of the Alumni Association are entitled to a benefit package that includes library privileges at all CSU institutions (there are some 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. credit union

membership, a hotel/motel discount program, and short-term and long-term major medical 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 theatre performances, athletics events and local attractions.

For more information on Alumni Association services for former and current CSULB students, please call the Alumni Relations Office at (310) 985-5252.

Annual Fund Phonathon: Opportunities for Quality

Alumni, too, give generously to the University. Throughout the year, thousands of CSULB alumni are contacted by student callers in the various Annual Fund Phonathon/Opportunities for Quality campaigns. Several donor club levels have been established in the Annual Fund, and special benefits are given to the members. Most donations from the annual alumni fund effort are directed to meet the needs of the colleges and departments. Some of the funds are used for specially designated projects.

Alumni Scholars Program

The annual Opportunities for Quality Phonathon continues to support an Alumni Scholars Program. Each year,



fifteen outstanding high school seniors are named "CSULB Alumni Scholars" and receive \$1000 stipends, renewable annually, based on the achievement of a required gradepoint average. Unique features of the Alumni Scholars Program include assigned faculty mentors for each student and outreach activities which require the students to return to their high schools during the year to provide information concerning CSULB.

Parents' Fund

A Parents' Fund campaign was initiated in 1986 and the response was excellent. In a one-month campaign, for example, 43 percent of the parents contacted responded with average pledges of nearly \$100 per family. The willing-

ness 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

A past campus tradition was reinstated with a phonathon campaign directed toward the Senior Class of 1986. In just three weeks, graduating seniors responded generously in support of a lasting gift to the CSULB campus. Monies provided by those donors are designated toward the construction of permanent picnic sites across the campus. In the

future, each Senior Class will choose its commemorative gift to the University.

Major Gifts

The Office of University Development works with individual 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.

Other donors have established trusts to provide continuing funds for special events, for example, the Carlson Fund for the Performing Arts and the Zeitlin Lectures in the visual arts. Private donations supplied a portion of the funds used to complete the new International House complex. Other contributions will be used for amenities in the new College of Business Administration and Dance buildings.

Even more, endowed scholarships honoring individuals and families have been established in all areas of the University. In 1986, the \$1.1 million endowed Chair in Health and Behavior was established by the FHP Foundation. Other individuals have included CSULB in their wills by providing for future scholarships, endowed faculty chairs and lectureships, or the transfer of cash, securities, real property, personal libraries, private collections, works of art, and musical instruments.

Major gifts may serve restricted purposes in accordance with the donor's designation, or their use may be left to the discretion of the CSULB Foundation and the President of the University. For additional information, please contact the Vice President for Development, (310) 985-5197.

University Foundation

The California State University, Long Beach Foundation is a nonprofit, tax-exempt corporation organized to administer grants and contracts for research and other activities related to the University's programs. The Foundation also accepts donations, gifts, and bequests for University-related use, and provides tax-deductible advantage to the donor.

The research and other activities involving the Foundation are related directly to the academic program. They involve substantial interaction between faculty, staff, and students. Often, businesses, government, and non-profit agencies in the broader Southern California community are also involved and participate in the benefits of the projects.

Donations, gifts, and bequests provide a significant addition to the accomplishments of the University. Public funds provide support for most of the instructional and in-

structionally-related activities and facilities, but private contributions are essential for the support of creative faculty efforts which extend beyond normal instructionally supported areas; scholarships for needy students; and necessary physical facilities such as seminar rooms, libraries, and laboratories which become available to enhance the learning process.

Facilities which cannot be provided through available public funding also depend upon outside contributions. The beautiful Louise Carlson Memorial Tower (designed by the late French sculptor Andre Bloc), the Isabel Patterson Child Development Center, and the Earl Burns Miller Japanese Garden are outstanding examples of such donations which enrich the University environment both aesthetically and functionally.

Charitable donations counseling and consulting services are available to potential donors. Information can be secured from the Vice President for Development (310) 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 — Phi Beta Kappa, founded at the College of William and Mary in 1776, 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.
- 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, is the oldest and largest national honor society which recognizes and encourages superior scholarship in <u>all</u> 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 junior and senior 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 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 his/her final 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 50 Fellowships nationwide to seniors, on a competitive basis, for \$7,000 with honorable mentions receiving \$1,000. Local scholarships are awarded by the Chapter; last spring five \$500 scholarships were awarded to deserving students.

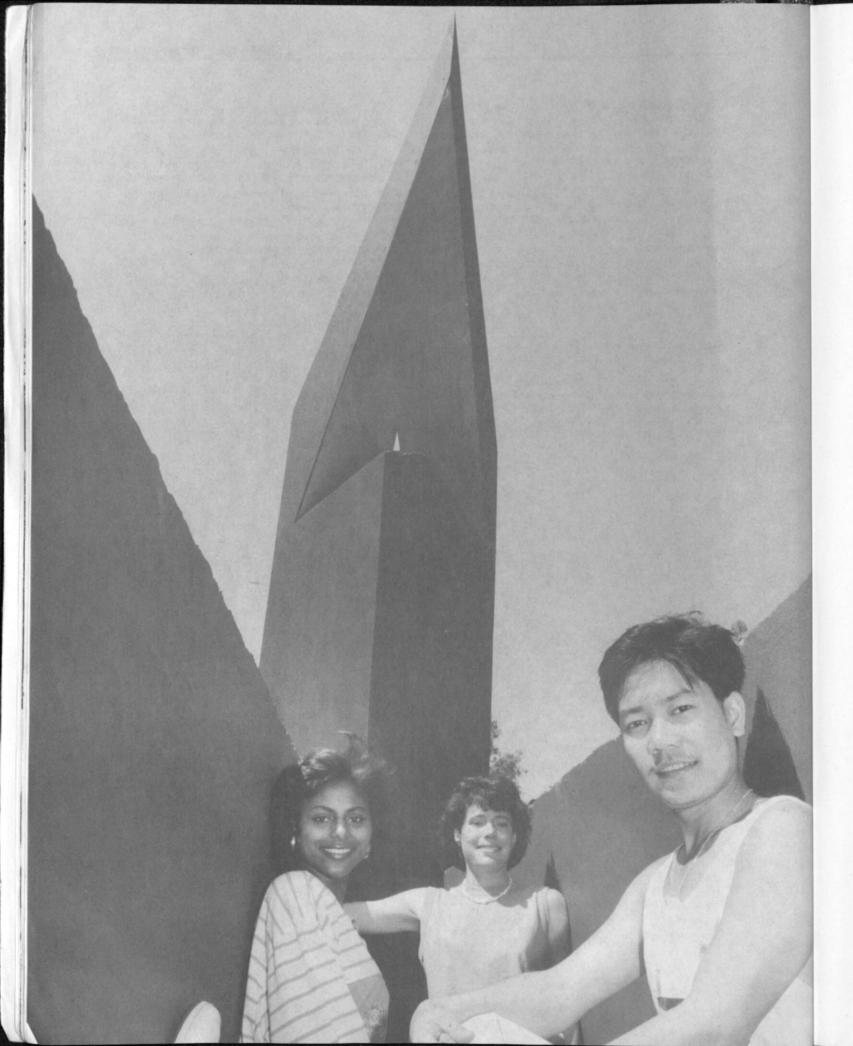
Inquiries should be directed to the President of the University chapter of Phi Kappa Phi, Dr. Donald Lauda, Dean of the College of Health and Human Services.

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 lota (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 (Home Economics) National honor society recognizing superior scholarship and promoting leadership and research in the field of Home Economics.
- Phi Alpha (Social Work) National honor society to improve the goals of social work on campus. GPA requirement 3.0.
- 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 lota (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.



Student Services and Activities

Academic Advising Center

The Academic Advising Center, located in Library East Room 126 serves students who seek information and advice concerning General Education requirements, electives, University rules and regulations graduation requirements and academic probation. Students who have not declared a major are encouraged to look upon the Center as their academic home.

Students are seen by appointment and when possible, on a walk-in basis. Service is provided by well trained upper division and graduate student peer advisors. The Center is open Monday through Thursday from 9:00 a.m. - 12:00 p.m. and 1:00 p.m. - 5:00 p.m. Hours may vary during holiday and vacation periods. Students should call (310) 985-4837 for further information.

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:

- Learning Skills Services
- 2. Supplemental Instruction
- 3. Tutorial Services
- 4. International Students' Conversation Lab

Learning Skills Services address those areas typically identified as study skills. The LAC 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. Assistance 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 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 SI typically perform significantly better in the GE course than peers who attempt the course independently.

Tutorial Services offers weekly group sessions led by a trained tutor for several of the more highly requested general education courses. The listing of tutorials offered and their meeting times is available at the LAC reception desk each semester. Content is whatever regularly participating students request. Other tutorial support can be utilized by students in academic support programs such as EOP, SSSP, and MEP who are referred by program advisors.

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.

Students who want to improve their skills may make appointments with the LAC 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.

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.

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.

Educational Equity Services

The Office of Educational Equity Services (EES) assists in the admission and retention of low income and under-represented ethnic minority students who might not otherwise be enrolled in the University due to inadequate prior educational opportunities, and/or inadequate financial support. Programs currently under EES include the Educational Opportunity Program, Summer Bridge Program, and the federally-sponsored Student Support Services, Talent Search and Upward Bound programs.

Summer Bridge Program

The Summer Bridge Program provides an intensive five week summer residential experience for entering University students. The program provides English and mathematics instruction, tutoring, orientation and study skills workshops, and cultural enrichment activities for eligible students.

Student Support Services Program

The Student Support Services Program provides academic and personal counseling and tutorial assistance to low income and/or 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.

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 general 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.

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.

Upward Bound Math/Science Regional Center

The Upward Bound Math/Science Regional Center (UBMS) is a federally funded college preparatory program designed to expose first generation low-income high school students to college curricula, foster interest in high education and provide enriching adventurous experiences in the fields of math and science.

The UBMS Program provides six weeks of instruction in the areas of marie biology, mathematics/statistics and computer application. The program includes field trips, oceanic outings, and the integration of marine data collection and statistical application.

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.

UOSR offers guided campus tours by appointment. Those interested should call (310) 985-5358. Specialized campus visits for K - 12 students, counselors, and other interested groups may also be arranged. A major focus of UOSR is the implementation of outreach and recruitment programs and services to increase the population of traditionally underrepresented students at the University.

Educational awareness and academic enrichment efforts which target elementary and middle school students are also offered in an effort to increase the pool of underrepresented students eligible to matriculate to the University upon high school graduation.

Admissions workshops for adult re-entry students are also offered by the UOSR office.

HOUSING

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 hae double rooms on either side of a long corridor. Halls are available with Regular Quiet Hours or Very Quiet Hours and residents may select 19 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 \$4,900 for an individual student depending on the accommodation selected.

Resident hall applications forms are sent to all applicants 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 (310) 985-4187.

In order to obtain preference in hall placement, students are urged to apply for on-campus housing early. It is best to apply for housing even before being notified about admission to the university.

Off-Campus Listing Service

Listing boards of available rentals is maintained at the Housing Office and is available 24 hours a day. Listings include rooms, furnished and unfurnished apartments and houses, and a limited number of work-opportunity listings for students who are interested in working for the room and board or room rent. It is suggested that prospective students visit Long Beach to make such living arrangements since information about these listings cannot be mailed.

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 Council (for sororities), the Interfraternity Council (for fraternities), or Black Greek Letter Council via Office of Student Life and Development, University Student Union.

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.

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 fulltime academic periods or they may work parttime while simultaneously attending the University. Both lower and 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. Both lower and upper-division Coop courses are available for up to 6 units of elective academic credit.

Human Corps

Established in 1987, the Human Corps program provides students with the opportunity to become involved in local community service activities. Students may volunteer in non-profit agencies in order to combat social problems and improve the quality of community life. Typical areas include: health care, literacy, child care, services to the elderly, substance abuse, and programs for the disabled. The program is available to individual students as well as student organizations seeking community service projects.

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 13,000 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 several hundred 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 employers 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 Jobline 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 a.m. to 6 p.m. and Friday 8 a.m. to 1 p.m. The Center is located in SS/AD 250, (310) 985-4151.

Teacher and school administration candidates receive assistance through the Educational Career Services Office in the School of Education. Call (310) 985-5772 for information on the services offered.

Testing and Evaluation Services

Information regarding the administration of admission, placement, and certification examinations may be obtained from the office of Testing and Evaluation Services, SSA 216 (310) 985-4006. Test programs currently offered include the SAT and Achievement Tests, ACT, EPT/ELM, WPE, GRE, GMAT, NTE (PRAXIS), and CBEST. Students are advised to refer to testing requirements described elsewhere in the Bulletin, 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.

Testing and Evaluation Services, in addition to administering the above mentioned exams, maintains a professional staff to assist students and staff in the interpretation of University testing requirements. Consultation services regarding the selection and use of test instruments, test construction, and evaluation research design are also offered. Testing and Evaluation Services conducts needs assessment and program evaluations for the Division of Student services and related areas.



University Counseling Center

The University Counseling Center offers a strong array of services in direct support of helping students achieve a satisfactory and meaningful academic experience. Staff members of the Counseling Center are trained in applied psychology and student development services delivery at both the M.A. and Ph.D levels. 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 the Center by an intake counselor. Counselors 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 full 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.

The University Counseling Center is open from 8:00 a.m. to 5:00 p.m. Monday through Friday. The telephone number is 985-4001.

University Student Health Service

The Student Health Service (310) 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 5:00 p.m. Monday, Tuesday and Thursday; Friday 8:00 to 11:00 a.m. 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 (310) 985-8311.

Disabled Student Services

Information regarding special facilities and services available to students with disabilities may be obtained from Disabled Student Services, University Student Union, Rm. 206 (310) 985-5401.

The Disabled Student Services Office provides support services to both permanently and temporarily disabled students in the University community. Disabled Student Services (DSS) includes: the Adult Learning Disability Program and the High Tech Center for the Disabled. In DSS, accessibility assistance includes: elevator keys, parking permits and, arrangements for accessible classroom locations. Academic support includes: readers, notetakers, interpreters, assistance with adapted equipment, requests for proctored tests, alternative test locations, and referral to oncampus services.

Some of the services are: priority registration, registration assistance, counseling and advisement. The DSS works with the Department of Rehabilitation and can provide fee offsets for rehabilitating students. In the main office, (Student Union, 206,) a current set of local job announcements and information on scholarships is available.

The Disabled Student Services provides referrals to the High Tech Center for the Disabled and the Adult Learning Disability Program. Students with a learning disability or a suspected Jearning disability can make an appointment for screening and referral to tutoring and counseling by calling (310) 985-4430.

Students needing special parking due to medical or disabling condition should call the main office number (310) 985-5401 before calling the Parking Office.

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. It was designed by Frank Sata, a recognized architect in the field of early childhood education.

The services provided enable a student parent to attend classes at the University. The children of University staff, faculty, administration and then community are offered these services as space allows, following the registration of student children.

Child Development Programs 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 Extended Day 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 familystyle 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 (310) 985-5333 between 8:00 a.m. and 5:00 p.m.



Women's Resource Center

The mission of the Women's Resource Center is to contribute to the personal, educational and professional growth of women on campus. The Center houses a women's library, offers women's support groups, and peer counseling. It provides referrals to community services, scholarship information, and is a clearinghouse for current events of interest to women. The Center also offers 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. The seminars, workshops and/or conferences range from the more current theoretical women's issues to practical concerns of university women. The Center is open from 9:00 a.m. to 5:00 p.m. Monday through Thursday, and from 9:00 a.m. to 1:00 p.m. on Friday. The Women's Resource Center services are free and available to women and men, campus and community. The Center is located in LA3-105. For further information, please call (310) 985-5466/8575.

Student Life and Development

The Student Life and Development (SLD) office provides an "open office" with directors to assist students with student activities, questions, concerns, emergencies, referrals, and college-based student services in each academic college. Meetings, debates, lectures, coffee hours, newsletters, seminars, and other projects which encourage communication among students and between faculty and students in academic departments and colleges are promoted and coordinated by directors in the colleges. College-based directors may be reached through the SLD office or in the respective college. Call the SLD office for the location and telephone number of your director. SLD is located in the University Student Union, Plaza Level and can be reached by calling (310) 985-4181.

Students may seek assistance with leadership training programs, the Student Orientation, Advising, and Registration (SOAR) program, fraternities and sororities, and program advising and approval for campus organizations and

clubs. Interpretation of campus regulations including those governing eligibility, posting, solicitation, fundraising, food sales, University recognition, use of facilities and grounds, and consumption of beer and wine are also available. The office publishes handbooks for students, information on University policies and regulations, and brochures on publicity and scheduling group activities, as well as the student yearbook.

SLD provdes annual registration, mail boxes and oversight for over 300 campus organizations in the following categories: Recognition and Honor Societies, Professional and Academic Organizations, Special Interest Groups, Political and Social Action Organizations, Service Clubs, Ethnic and Cultural Groups, Religious Organizations, Social Fraternities and Sororities, Coordinating Councils and Departmental Associations.

CSULB CAMPUS ORGANIZATIONS

Special Interest Clubs

Air Force ROTC, Army ROTC, Arnold Air Society, Association of Scholars on European Affairs, Black Law Society, Circle K, Cinema Society, College Students in Broadcasting, CSULB Games Group, Forty-Niner Rangers, Friendship International, Gay, Lesbian & Bisexual Students United, Gospel Choir, Illiterati, Law Society. Moorish Sports Club.

Pacific Rim Club, Ptahhotep Grand Nubians, Real Estate Society, Residence Hall Association, Semper Fidelis Society, Senior Citizens Club, Silver Wings Society, Social Dance Club, Societas Rhetoricas.

Sports Clubs

Alpine Ski Team, Aikido Club, Archery, Badminton, Crew, Cycling, Fencing, 49er Hockey Team, Hwa Rang Do, Judo Club, Kung Fu, Men's Soccer, Rugby Club, Sailing Association, Shotokan Karate, Surf Club, Tae Kwon Do, Water Ski, Women's Soccer, Women's Water Polo.

Political and Social Action Clubs

American Civil Liberties Union, College Republicans, CSULB Democratic Club, GLOBE, Model United Nations, SAFE - Students for AIDS Facts & Education, SPARK -Students Promoting Animal Rights Knowledge, STAND - Students Taking Action Not Drugs, Students For Life Choices, Students for Peace and Justice.

Sororities

Alpha Kappa Alpha, Alpha Omicron Pi, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Delta Zeta, Gamma Phi Beta, Panhellenic Council, Sigma Gamma Rho, Sigma Kappa, Sigma Phi Omega, Zeta Phi Beta.

raternities

Acacia, Alpha Epsilon Pi, Alpha Gamma Omega, Alpha Phi Alpha, Black Greek Letter Council, Delta Chi, Delta Lambda Phi, Delta Sigma Chi, Delta Upsilon, Interfraternity Council, Kappa Alpha Psi, Kappa Sigma, Phi Beta Sigma, Phi Gamma Delta, Phi Kappa Tau, Sigma Alpha Epsilon, Sigma Chi, Sigma Phi Epsilon, Sigma Pi, Tau Kappa Epsilon, Theta Chi, Zeta Epsilon Tau.

Cultural Clubs

African Repertory Ensemble, American Indian Student Council, Asian Pacific Council, Association of Lebanese Students, Black Cultural Program, Black Scholars, Black Student Union, Cambodian Student Association, Folkloristas Del Pueblo, Friendship International, General Union of Palestine Students, Hawaii Club, Hong Kong Student Association, Indian Student Association, Indian Student

Association, International Student Association, InterRace Association, Iranian Student Union, Japanese Student Association, Korean International Student Association, Korean Scholastic Society, Korean Student Association, La Raza Student Association, Moorish Sports Club, Muslim Students Association, Organization of African Students, Pacific Islander, Pakistani Student Association. Pan African Student Research

Coalition, Pilipino American Coalition, Society of Mexican American Engineers and Scientists, Turkish Student Association, Vietnamese Fellowship Assistance, Vietnamese Student Association.

Religious Clubs

Asian American Christian Fellowship, Baha'i Club, Campus Ambassadors, Campus Crusade for Christ, Catholic Newman Club, Chabad, Chinese Christian Fellowship, Christian Students, Episcopalians at CSULB, Front Line College Fellowship, Hillel, International Christian Fellowship, Intervarsity 49er Christian Fellowship, Korean American Bible Study, Korean Christian Fellowship, Korean Intervarsity Christian Fellowship, Latter Day Saints Student Association, Little SPARK, Lutheran Student Association, Methodist Wesley Foundation, Navigators, Network Christian Fellowship, Student Ministries, Studies in the Old and New Testament, University Bible Fellowship, Victory Campus Fellowship.

Honor and Recognition Socieites

Alpha Phi Omega, Beta Alpha Psi, Beta Gamma Sigma, Chi Epsilon, Delta Sigma Pi, Eta Sigma Gamma, Golden Key National Honor Society, Kappa Delta Pi, Mortar Board, Omicron Nu, Phi Delta Kappa, Phi Eta Sigma-Alpha Lambda Delta, Phi Epsilon Kappa, Phi Kappa Phi, Pi Alpha Alpha, Pi Lambda Theta, Pi Sigma Alpha, Pi Tau Sigma, Psi Chi, Tau Beta Pi.

ACADEMIC COLLEGE ORGANIZATIONS

College of the Arts

Art Educators In Our University (AEIOU), Ceramics Guild, College of the Arts Student Council, Design Student Association, Metal Art Guild, Music Student Council, Off 7th Street, Photography Guild, Potters Guild, Radio/TV/Film Student Association, Stage & Screen Make-Up Artists, Theatre Arts Showcase, University Art Association.

College of Business Administration

Accounting Society, AIESEC, American Marketing Association, Associated Business Students Organization Council, Black Business Students Association, Financial Management Association, Hispanic Students Business Association, Informational Systems Student Association, International Association of Business Communication, National Association of Black Accountants, Operational Management Association, Personnel Industrial Relations Association, Quantative Systems Student Association, Society for the Advancement of Management.

College of Education

Association of Instructional Media, California Teachers Association, Educational Psychology Student Association, State of California Association of Teacher Education.

College of Engineering

American Indian Science and Engineering Society, American Institute of Chemical Engineers, American Institute of Plant Engineers, American Society of Civil Engineering, American Society of Mechanical Engineers. American Society of Naval Engineers, Associated Builders and Contractors, Associated Clubs of Construction Management, Associated Engineering Student Body, Associated General Contractors, Association of Engineering and Industrial Technology; Computer Science Student Association, Construction Management Association, Institute. of Electrical Engineers, Korean Engineering Club, Mexican American Engineering Society, National Society of Black Engineers, Society of Mexican American Engineers and Scientists, Society of Hispanic Professional Engineers, Society of Manufacturing Engineers, Society of Women Engineers, Women in Construction.

College of Health and Human Services

American Society of Interior Design, California Nursing Students Association, Child and Family Associated Students, Criminal Justice Student Association, Health and Human Services Student Council, Health Care Administration Forum, Health Science Student Association, Home Economics Students Association, National Student Speech and Hearing Association, Physical Educational Majors Club, Physical Therapy Student Association, Recreation Society, Student Council of Consumer Interest/Society of Consumer Affairs Professionals (SOCAP/SCCI), Student Dietetic Association, Students in Fashion.

College of Liberal Arts

American Indian Student Council, Anthropology Students Association, Asian American Student Association, Associated Students of Social Work, Associated Students of Comparative Literature, Black Students in Psychology Association, Black Studies Student Association, Chicano/Latino Studies Student Association, College of Liberal Arts Student Council, Club Italia, Economics Students Association, English Students Association, French Club, German Society, Graduate Speech Communication Association, History Student Association, Human Development Student Association, Latino Psychology Student Association, Medieval and Renaissance Studies Student Association, Public Relations Student Society of America, Psychology Student Association, Political Science Student Association, Religious Studies Student Association, Russian Club, Society of Professional Journalists, Sociology Students 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, Black Students in Science Organization, Chicanos in Community Medicine, College of Natural Sciences and Mathematics Student Council, Geology Students Association, Latinos in Science, Microbiology Students Association, Society of Physics Students, Student Affiliates of the American Chemical Society, TOPS - The Organization of Pre-Professional Students.



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 ap-

proximately 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. This officer prepares the Associated Students budget 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 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 oncampus student groups (except fraternities and sororities), which enables these groups to request Associated Stu-

dents 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 (310) 985-5241 or write to: Associated Students Inc., 1212 Bellflower Blvd., Long Beach, CA 90815-0602.





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.

Applications may be submitted using the CSUperAPP for either the IBM or MAC computers. The disks may be obtained at your local CSU campus in the Office of Admissions.

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, Article 1.1, 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, or 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 applications.

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

Admission to the University

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 in impacted programs at two or more campuses, you must file an application to each. @10B = 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 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	Applications	Student
1994 - 1995	First Accepted	Notification Begins
Fall 1994	November 1, 1993	December 1993
Spring 1995	August 1, 1994	September 1994

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 admission requirements. 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.

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). Your grade point average is based on grades earned during your final three years of high school (excluding physical education and ROTC).

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. 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 2800 using the SAT or 694 using the ACT;

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

If you neither graduated from a California high school nor are a resident of California for tuition purposes, you need a minimum index of 3402 (SAT) or 842 (ACT add 2 points to ACT score if taken prior to October, 1989).

If your grade point average is 3.00 or above (3.61 for nonresidents), you are exempt from submitting test scores. However, you are urged to take the SAT or ACT since all campuses use test results for advising and placement purposes. Below a 2.00 GPA does not qualify for regular admission. (2.45 GPA minimum required for non-residence.)

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.

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

Subject Requirements

GPA SAT ACT

2.99 410
2.98 420
2.97 430
2.96 440
2.94 450
2.94 450
2.93 460
2.92 470
2.91 480
2.92 470
2.91 480
2.88 500
2.87 510
2.86 520
2.85 520
2.84 530
2.87 510
2.86 620
2.74 610
2.72 630
2.77 600
2.78 680
2.77 600
2.78 680
2.71 640
2.79 670
2.66 680
2.67 670
2.66 680
2.67 670
2.68 660
2.67 670
2.68 660
2.67 670
2.68 680
2.67 670
2.69 680
2.67 670
2.69 680
2.61 720
2.71 840
2.72 830
2.71 840
2.72 830
2.71 840
2.72 830
2.74 840
2.74 880
2.63 780
2.55 760
2.54 770
2.55 760
2.54 770
2.55 760
2.54 770
2.55 780
2.51 800
2.51 800
2.52 780
2.53 800
2.44 880
2.47 880
2.47 880
2.48 820
2.47 880
2.48 820
2.47 880
2.49 880
2.41 880
2.41 880
2.42 870
2.41 880
2.43 890
2.44 880
2.49 890
2.33 990
2.34 930
2.33 950
2.31 960
2.22 990
2.24 1010
2.23 990
2.24 1010
2.23 990
2.24 1010
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.24 1010
2.23 1020
2.24 1010
2.23 1020
2.24 1010
2.24 1010

The California State University requires that first-time freshman applicants complete, with grades of "C" or better, a comprehensive pattern of college preparatory subjects study 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

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.

If you have completed at least 15 college preparatory units, you may offset a one-unit shortage in one subject area by completing an extra unit in another subject area. This option is available from fall 1992 through summer quarter 1995. Although you will be granted regular admission under this option. you are strongly advised to complete all courses in the college preparatory pattern, especially mathematics and English, so that you will be adequately prepared to begin your university studies. Please see your high school counselor for further information.

Foreign Language Waiver

Foreign Language Subject Requirement

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

Disabled student applicants are strongly 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, alternative college preparatory courses may be substituted for specific subject require-*Add two points to the ACT score if ments. Students who are deaf and hearing impaired, are blind and visually impaired, or

have learning disabilities, may in certain circumstances qualify for substitutions for the foreign language, laboratory science, and mathematics 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 310-985-5401.

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 School Relations and Outreach 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.

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 and have been in continuous attendance in an accredited college since high school gradua-
- 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 a accredited college since high school graduation.

4) You have completed at least 56 transferable semester (84 quarter) units and have made up any missing subject requirements (see *Making Up Missing College Preparatory Subjects' section). Nonresidents must have a 2.4 grade point average or better

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

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 or four quarter units will be considered equivalent to one year of high school study.
- 3) Earn acceptable scores on specified examinations.
- 4) If you have 56 or more semester (84 quarter) units, you may complete one of the following alternatives:
- a) 1987 or earlier high school graduates: complete the CSU general education requirements in communication in the English language (at least 9 semester units) and mathematics (usually 3 semester units) with a "C" or better in each course:
- b) 1988 or later high school graduates: complete a minimum of 30 semester (45 quarter) units, with a "C" or better in each course, chosen from courses in English, arts and humanities, social science, science, and mathematics of a level at least equivalent to courses that meet general education requirements. Each student must complete all CSU general education requirements in communication in the English language (at least 9 semester units) and mathematics (usually 3 semester units) as part of the 30-unit re-

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 or ACT are available from school or college counselors or from a campus testing office. Or you may write to or call:

Registration Unit, Box 592 Princeton, NJ 08541 (609) 771-7588

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

TOEFL Requirement

TOEFL Requirement - All undergraduate applicants, regardless of citizenship, who have not attended schools at the secondary level or above for at least three years full time where English is the principal language of instruction must present a score of 500 or above on the Test of English as a Foreign Language. Some programs may require a score higher than 500. Visa students refer to International Student Admission Requirements.

Systemwide Tests Required of Most New Students

The CSU requires new students to be tested in English and mathematics after they are admitted. These are not admission tests, but a way to determine whether you are prepared for college work and, if not, to counsel students 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 new non-exempt undergraduates* during their first semester of attendance. 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 qualifies a student for exemption from the English Placement Test;
- a score of 470 or above on the Verbal section of the College Board Scholastic Aptitude Test (SAT-Verbal);
- . a score of 22 or above on the 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);
- a score of 600 or above on the College Board Achievement Test in English Composition with essay;
- for transfer students, completion and transfer to the CSU of an acceptable college course in English composition of four quarter or three semester units 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.

"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.

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 new undergraduate students must take the test or be exempted from it during their first semester of attendance. 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 Scholastic Aptitude Test (SAT-Math);
- a score of 24 or above on the American College Test (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);
- a score of 560 or above on the College Board Mathematics Achievement Test, Level 1 or Level 2;
- 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 course was completed with a grade of *C* or better.

Failure to take either the ELM or EPT, as required, before the end of the first semester of admission 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, Administrative Code, and CSU Executive Order 393).

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 on the Notice of Matriculation. The materials may also be obtained from the office of admissions and records or the campus test office.

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. 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 also take the test prior to filing a Request to Graduate form with Enrollment Services. (See Index for additional WPE information within this *Bulletin*.

Graduate and Postbaccalaureate Application probability Procedures

All graduate and postbaccalaureate applicants (i.e., master's degree applicants, those seeking credentials, and those interested in taking graduate level courses for personal or professional growth) must file a complete graduate application as described in the graduate and postbaccalaureate admission booklet. 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 Graduate Studies 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, or may have no program objective. Depending on the objective, the CSU will consider an application for admission as follows:

· General Requirements — The general 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

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

- Postbaccalaureate Unclassified To enroll in courses
 for professional or personal growth, you must be admitted as a postbaccalaureate unclassified student. By
 meeting the general requirements, you are eligible for
 admission as a postbaccalaureate unclassified student.
 Some departments may restrict enrollment of unclassified students because of heavy enrollment pressure.
 Admission in this status does not constitute admission
 to, or assurance of consideration for admission to any
 graduate degree or credential program.
- Postbaccalaureate Classified If you wish to enroll in a credential or certificate program, you will be required to satisfy additional professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus.
- Graduate Conditionally Classified standing to enroll in a graduate degree curriculum if in the opinion of appropriate campus authority you can remedy any deficiencies by additional preparation.
- 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, perscribed by the campus.

TOEFL Requirement

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 do not possess a bachelor's degree from a postsecondary institution where English is the principal language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Some programs require a higher score. Visa students refer to International Student Admission Requirements.

Auditors

Persons who have not been accepted by the University for the semester they wish to attend may request permission to audit courses only after the close of registration. Applicants must present to the Registration Office written authorization from the instructor of the course they wish to audit, after which the Registration Office will issue a class admission card upon payment of regular fees. Once enrolled, the student is restricted to auditor status and may not apply for credit at any time for work completed during the semester.

Other students who have been accepted by the University to register for credit may, in addition, audit courses. See the regulation under "Grades and Administrative Symbols." At the end of the semester the instructor will report "audit" on the grade sheet to the Records Office. However, such students may, in a later session, enroll in the course audited previously and complete it for credit. Deadline to enroll to audit is the same as to register.

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:

- 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, and requests to waive the application filing fee must accompany the application if the applicant seeks this waiver. Courses are available to program participants on a "space available" basis. Due to high enrollments many courses may not be open for participation by Senior Citizens.

Additional information on the Senior Citizen Education Program may be obtained by visiting the Registration Office, SSA-198 or by calling (310) 985-5484.

Returning Students

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

International (Foreign) Student Admission Requirements

The CSU must assess the academic preparation of foreign students. For this purpose, "foreign students" include those who hold U.S. visas as students, exchange visitors, or in other nonimmigrant classifications. Applications and questions should be addressed to the Center for International Education at CSULB.

The CSU uses separate requirements and application filing dates in the admission of foreign students. All visa students must provide the required TOEFL. Verification of English proficiency (see the section on TOEFL Requirement for undergraduate applicants), financial resources and academic performance are all important considerations for admission. Academic records and supporting documents from foreign institutions must be on file by the deadline dates noted in the International Application. If academic records are not in English, they must be accompanied by certified English translations.

Priority in admission is given to residents of California.

There is little likelihood of nonresident applicants, including international students, being admitted either to impacted majors or to those with limited openings.

Special application forms are required of foreign student applicants. Forms and directions for their use may be obtained from the Center for International Education. A medical certificate of health, and evidence of financial resources adequate to provide for all expenses (approximately \$750 United States currency per month) during the period that they expect to be registered as a student in the University are required.

Among citizens of countries other than the U.S. who do not already hold status as Permanent Resident Aliens (Form I-551), the University will admit and enroll only those applicants who, through their admission to this University, (1) will be admitted to the U.S. by the Immigration and Naturalization Service (INS) to study here or (2) are currently in valid nonimmigrant status in the U.S. or will achieve or continue such status. Enrollment in courses through Extended Education does not constitute admission to the University. For purposes of maintaining valid nonimmigrant student status (F or J visa) under immigration regulations, enrollment in courses through Extended Education will be counted as part of "a full course of study" only when approved in advance of registration by the Director, Center for International Education, International Admissions.

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 in English as a second language. In some cases this will mean that students will be required to take reduced course loads in their major field until English proficiency can be demonstrated in the English classes. This requirement cannot be postponed.

Admission of foreign graduate students will involve consultation with the graduate advisor from the department or college to which the student is applying for study. Scholastically eligible foreign graduate students may be admitted, dependent upon the preparation of the student as assessed by the Director for International Education, International Admissions, and the graduate advisor of the appropriate college or department. The graduate advisor of the appropriate college or department in consultation with International Admissions Officer and the Director of the American Language Program will decide the English standard to be applied to foreign students applying to that college.

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.

Concurrent Enrollment

All students wishing to enroll concurrently at CSULB and one of the other 19 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 Enrollment

Enrollment in regular courses through the CSULB University Extension Services Office is considered adjunct enrollment. Units received through adjunct enrollment are subject to the limit of 24 units of extension/continuing education course work applicable to the baccalaureate degree; this is explained in greater detail in the section on General Regulations. Enrollment is by petition only. Forms are available in the University Extension Services Office. Students may not be enrolled concurrently through adjunct and the regular University.

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 985-5561 during the spring semester.

Registration Procedures

When admission and re-admission requirements have been satisfied, the student is ready to register for classes at the University. Students who have been accepted for admission and re-admission should purchase the Schedule of Classes in the University Bookstore before registration. Registration dates, time 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 up to the end of the third week of classes.

Note: Admission and readmission deadlines are much earlier

Student Orientation, Advising, and Registration (S.O.A.R.)

If you are an incoming freshman or a transfer student, you are eligible to participate in the Student Orientation, Advising, and Registration (S.O.A.R.) program. S.O.A.R. will assist you in planning your course schedule and in registering for your classes. An invitation to S.O.A.R. 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 *Bulletin*, and other materials.

Adding Classes

Students may add classes for two weeks after classes begin, provided that space is available. During the third week of the semester the written permission of the instructor is required to add a class. No request to add classes

will be considered after the third week unless there is a technical error or an enrollment exception. (Deadline dates to add and drop classes are published each semester in the Schedule of Classes).

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.

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.

Student Fees



comment are the major areas of service offered foroids. The money order is time explication is m

Average Annual Cost of Education and Sources of Funds Per Full-Time Equivalent Student

The 20 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 1993/94 (including capital outlay funding in the amount of \$240,459,000) is \$1,723,703,000. However, the total cost of education for the CSU system is \$2,081,064,210 which must provide support for a projected 247,494 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 \$8,408. Of this amount, the average student fee support per FTE is \$1,978. (The State University Fee, application fee, and non-resident tuition are included in the average costs paid by the students; individual students may pay less or more than \$1,978, depending on whether they are part-time, full-time, resident, or nonresident students.)

In Magner tilkingdag si Siste University Fees		Avg Cost per FTE Student	%
Total Cost of Education	\$2,081,064,210	\$8,408	100.0
State Appropriation	1,483,244,000	5,993	71.3
Student Fee Support	489,572,610	1,978	23.5
Other Support	108,247,600	437	5.2

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.

State University Fee

The State University Fee, established by the Board of Trustees in January 1975, is a reimbursement to the General Fund used to provide the following student support services:

Counseling

Counseling assists students in personal growth, value formation, and the resolution of personal problems which, especially in the period of early adulthood, may impede the learning process.

Experiential Learning Center

The Experiential Learning Center assists students in gaining a deeper understanding of the relationship between theory and practical application through on-the-job experience with professionals in the field. The Experiential Learning Center develops, certifies and maintains paid and volunteer internships in community organizations and companies.

Learning Assistance Center

The Learning Assistance Center provides drop-in and referral service and tutorial assistance to students who require assistance in learning skills regarding any course-related learning problems.

College-Based Programs

The College-based Student Services exist in each of the academic colleges to provide a sense of community. They identify and produce programs which bring together students, faculty members and alumni by developing seminars, presentations, social events and all campus events. The College-Based Associate Deans in each College also serve as a student services liaison.

Disabled Student Services

The Disabled Student Services provide and develop a support service to equalize educational opportunities for students with disabilities and to maximize their educational independence. The program offers a whole host of specialized services to meet the ongoing needs of students with varied disabilities.

Testing and the company of the compa

The Testing and Evaluation Services administers, interprets and, when necessary, develops tests used by Counseling, Career Planning and Placement, and other student support services. It also administers academic placement and advanced placement tests and conducts student profile surveys used in assessing the need for specific student support programs.

Career Development Center

Career planning, cooperative education/internship and placement are the major areas of service offered through this Center. Career planning service focus the student on vocational and career opportunities related to a particular field of study. The cooperative education/internship program helps students acquire work experience related to their field of study. The placement service assists students in preparing resumes, improving interviewing techniques, and in securing employment both part-time while students and full-time employment following graduation.

Social/Cultural Development

The Social/Cultural Development Program provides both opportunities and direction for students in developing organizational skills, planning and implementing programs, developing and administering program budgets and in working effectively with others to achieve a common goal.

Health Services

The Student Health Service aids students to maintain physical and mental health to avoid health-related problems which prevent active participation in educational programs.

Financial Aid Administration

Although funds for grants and loans are provided by Federal and State governments and through private benefactors, the administrative staff required to assist students in securing needed financial support is funded through State University Fee reimbursements.

Housing Administration

Not all campuses offer on campus housing for students. Each campus, however, provides services to all students in their efforts to secure suitable housing near the campus and at a reasonable cost.

A bulletin board of rental listings is maintained at the Housing Office. These listings include rooms, rooms with board, rentals to share, furnished and unfurnished apartments and houses, and a limited number of work-opportunity listings for students who are interested in working for their room and board or room rent. It is suggested that prospective students visit Long Beach to make such living arrangements since information about these listings cannot be mailed. Information about summer housing is available

Schedule of Fees - 1993-1994

Legal residents of California are not charged tuition. The following reflects applicable fees and nonresident tuition for the semester system in which CSULB operates. (Fees are subject to change without advance notice. The following fees represent Fall 1993 and Spring 1994 semesters and is subject to change.)

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.

All Students

Units

6.1 or more units

Application Fee (nonrefundable), payable by check or money order at time application is made: \$55.00 State University Fee:

0117.00	
\$417.00	
\$720.00	
ester)	
	\$3.00
Fee	\$12.50
	ester)

Associate Students Inc. Fee	\$17.00
University Student Union Fee	\$25.00
Student ID Card Fee	\$1.00
Student Health Services Fee \$25.00	
Total Resident Fees Per Semester	
0.1 to 6.0 units	\$500.50
Total Resident Fees Per Semester	

\$803.50

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. 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 advance notice.)

The total fee paid per term is determined by the total number of units taken, including those in excess of fifteen.

Duplicate Degree Tuition

The California State University is required by law to charge duplicate degree tuition of \$150.00 per unit (in addition to Other Mandatory Fees) up to a maximum of \$2,250 per semester to any student who has earned a degree equivalent to or higher than the degree awarded by the program in which the student is enrolled or who has earned a baccalaureate or postbaccalaureate degree and is enrolled without a declared degree objective. (Fees and tuition are subject to change by State Legislative action without advance notice.)

The following categories are exempted from Duplicate Degree Tuition:

- 1. A dislocated worker as certified by a state agency in accordance with Title 3 of the Federal Job Training Partnership Act.
- 2. A displaced homemaker as defined in accordance with the Higher Education Act of 1965, as amended (20 USC 1001 et seq.)
- 3. A person who is an enrollee in any program leading to a credential or certificate that has been approved by the Commission on Teacher Credentialing.
- 4. A recipient of benefits under the Aid to Families with Dependent Children program, the Supplementary Security Income or State Supplementary Program, or a general assistance program.

- 5. A nonresident student except those for whom nonresident tuition has been waived.
- 6. A California resident who is sixty years of age or older.
- 7. Children of deceased law enforcement or fire suppression prevention employees.

Optional Fees (per semester)

The following represents rates for the Fall 1993 and Spring 1994 semesters and is subject to change.

Motorcycle and Moped Parking	
(per semester)	\$13.50
Automobile Parking (per semester)	\$54.00
Athletic All-Event Pass	\$45.00
Replacement Parking Permit	Current Price

Other Fees and Charges (Non-Refundable)

Late Registration	\$25.00
Application and Reapplication Fee	\$55.00
Missed Deadline Fee	\$10.00
Bad Check Charge (Credit Cards	
are not accepted)	\$20.00
MM - D - d Ch - d for nor mont of	registration

(If the Bad Check was for payment of registration fees, the Late Registration Fee may also apply)

Complete transcript of record	\$4.00
Replacement of Student ID Card	\$5.00

REMINDER: Fees are Subject to Change Without Advance Notice

Payment of Registration in full (or based on terms of applicable installment agreement) and Activity Fees must be paid prior to registration.

Short Term Loans

A limited number of short term loans are available to eligible students on a semester basis. There is a processing fee for receiving one of these loans, which varies depending on the type of loan. The loan must be repaid n full at the end of the semester. Recorded information about the program including eligibility requirements is available by calling (310) 985-4060. A counseling session is available to and is strongly encouraged for all program participants.

Installment Payments

State University Fees and Non-Resident Tuition may be paid in installments by eligible students. There is a processing fee for entering into an installment agreement, which varies depending on the fee/tuition type. Recorded information about the program, including eligibility requirements, is available by calling (310) 985-4060. A counseling session is available to and is strongly encouraged for all program participants.

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 Section 42201 (parking fees), 41913 (nonresident tuition), 42019 (housing charges), and 41802 (all other fees) of Title 5, California Code of Regulations. In all cases it is important to act quickly in applying for a refund.

Special Consideration 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 Accounts Receivable Office at (310) 985-1673.

State University Fees

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

Nonresident (U.S., Out-of-State, and Foreign) and **Duplicate Degree Tuition**

If a nonresident student officially withdraws from the University, drops in unit load, or is reclassified a resident, tuition is automatically refunded, less any other money due the University, in the following amount effective the date the withdrawal occured

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

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 (310) 985-4146 for additional information.

Partial refund of the parking fee is made according to the following schedule if a written application for refund is submitted to the Accounts Receivable Office and all relevant parking documents issued by the University, including parking permit, stickers and decals are returned. If any of these are affixed to the vehicle, their removal by a campus security officer or under the officer's direction shall constitute appropriate return. Following is the schedule for refunds which will be paid:

Period Refund	Percent Refunded	Amount Refunded
1-30 days	75%	\$40.50
31-60 days	50%	\$27.00
61-90 days	25%	\$13.50
91-end of sem.	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.

Student Body Fees, Instructionally Related Activities Fees, and University Student Union Fees

The Student Body fee, Instructionally Related Activities fee, and the University Student Union fee are automatically refunded if a student officially withdraws from the University within 14 days after the start of instruction. After that date, no portion of these fees is refundable. Refund credits are posted to the student's account. Refund balances after payment of any outstanding obligations will be paid by check.

There is no refund of the Student Body fee, Instructionally Related Activities fee or the University Student Union fee because of a reduction in unit load from 6.1 units or more, to 6.0 units or less.

Determination of Residence for Nonresident Tuition Purposes

The campus Admissions Office determines the residency status of all new and returning students for nonresident tuition purposes. Responses to the Application for Admission 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 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, the 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 a minor cannot be changed by the minor or the appointment of a guardian for the minor, so long as the minor's parents are living.

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, 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) 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.
- (7) 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.
- (8) Certain credentialed, full-time employees of California school districts;
- (9) 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;
- (10) Certain exchange students;
- (11) 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 non-resident 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, SS/AD 101.

Debts Owed to the University

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 for future registration with the University and 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

Bad Checks

A \$20 fee is charged to the student for any dishonored check paid toward the student's account (insufficient funds or stop payment). The amount of the original dishonored check plus the \$20 fee becomes a financial obligation of the student to the University. The student may be liable for damages equal to three times the amount of the returned check or draft (see Civil Code, Section 1719). The student will have 15 calendar days to pay the amount in cash or by Cashier's Check following issuance of a letter from the University demanding cash payment. If payment is not made within 15 days, the University may initiate collection proceedings with an outside collection agent for the amount of the bad check plus collection fees of 33 1/3% of the outstanding debt. A hold will be placed on all academic records until payment is received.

A Stop Payment Order on a check does NOT constitute an official withdrawal from the University, nor does it relieve the student from the financial obligation for registration fees or tuition incurred by registration for classes.

If an obligation continues to be unpaid beyond the response period of a demand for payment, the student's name is submitted to the State of California Franchise Tax Board. The State then has the authority to withhold amounts owed to the University from any tax refund to which the student may have been otherwise entitled.

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.

A student whose check is dishonored for insufficient funds or stop payment order may lose the privilege of tendering checks for future payments to the University and

be required to pay all obligations in cash, cashier's check, or recognized money order.

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 six to eight 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 1989-1990 CSULB budgets.)

Student living at home with parents (nine month term): \$5.553:

Student living in a residence hall (nine month term): \$8,633;

Single student living off-campus (apartment, house — nine month term): \$10,593 (assumes shared housing).

Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from Financial Aid, SS/AD Bldg., Rm. 270. (310)985-4641:

- Student financial assistance programs available to students who enroll at CSULB;
- (2) The methods by which such assistance is distributed among recipients who enroll at CSULB;
- (3) The means, including forms, by which application for student financial assistance is made and requirements for accurately preparing such application;
- (4) The rights and responsibilities of students receiving financial assistance; and
- (5) 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, SS/AD Bldg., Rm. 270, 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, SS/AD 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, SS/AD Bldg., Rm. 270, 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 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.

Information regarding special facilities and services available to disabled students may be obtained from the Office of the Provost and Senior Vice President for Academic Affairs

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 Student Aid Application for California by March 2 and have a complete file by May 10.

Application

To apply for financial aid from CSULB, students must file the Student Aid Application for California (SAAC). The SAAC 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 SAAC must be mailed to a nationally designated processor. New students may obtain the SAAC from high school counselors or local college financial aid offices. Students currently enrolled at CSULB may pick up the SAAC from the Office of Financial Aid. Detailed information about CSULB financial aid programs is available in the Office of Financial Aid, SS/AD Bldg., Room 270, (310) 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 SAAC; (2) financial aid transcripts from all colleges previously attended; and (3) 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 SAAC, and appropriate supporting documents. All loan, grant and work programs are available for the academic year.

Financial Assistance

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.

Enrollment is assumed to be full-time. Part-time students carrying a minimum of six undergraduate units, or four graduate level units are eligible to receive aid. However, the part-time student's ability to contribute toward educational costs is expected to be greater. This may result in reduced financial need.

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 are complete by May 7 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 a minimum number of units per academic year, and a minimum cumulative number of units from each year to the next; 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.

Students Owing Educational Debts

Loans are not given to any student with a history of nonpayment of debts. A student who defaults on any educational loan will be denied further aid. A student who owes a refund for any federal financial aid previously received will not receive funds from the University until corrective action is taken. Students are barred from discharging their educational loan debt through bankruptcy proceedings for a fiveyear period after leaving the University.

CAMPUS FINANCIAL AID PROGRAMS

Perkins Federal Loans

The Perkins Loan is a federal program providing longterm, low interest loans to both graduate and undergraduate students. Repayment of loan principal and interest begins nine months after you cease to be enrolled at last half-time.

Federal Supplemental Educational Opportunity Grant (SEOG)

The SEOG is a federally sponsored, non-repayable program for undergraduate students with exceptional financial need.

Federal Work-Study (CWS)

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. Students may work a maximum of 20 hours per week while classes are in session.

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. Grants may be made for a maximum of ten semesters. 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 currently under-represented in their field of study. These groups are defined as: individuals with disabilities; women majoring in academic areas in which women are underrepresented; African-Americans, Hispanics, American Indians, Filipinos,

and Pacific Islanders. Eligible students must be California residents, demonstrate financial need of at least \$1000, and be accepted into or continuing in a graduate program with at least a 3.0 grade point average.

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 abailable.

Alumni Scholars

Each year CSULB awards \$1000 grants to 15 freshman applicants who have an outstanding academic record. The awards are continued for the four undergraduate years if a 3.5 grade point average is achieved while at CSULB. Funds for this program come from the Annual Opportunities for Quality Fund drive.

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. The amount of the award differs among colleges according to their tuition and fees.

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 at any of the CSU campuses

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 enroll-

ment 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 (Guaranteed Student) Loan (GSL) and Federal Supplemental/Parent Loan. Applicants for summer financial aid must continue at CSULB during Fall 1992 to be considered. Students must be enrolled at least half-time during the Summer Sessions and be accepted for admission to CSULB for the Fall 1992 semester. Summer awards are determined by financial aid eligibility to the 1992-93 academic year.

The Office of Financial Aid should be notified by May 15, 1992 to allow sufficient time for processing applications and funds for Summer Sessions.

Information, brochures, advising, and application forms are available from the Office of Financial Aid, SSA-270, or phone (310) 985-4641.

Federal regulations allow any student to apply for the Stafford Loan providing the student: (1) is enrolled in 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, 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 a financial aid counselor to complete a separate form.

OTHER TYPES OF FINANCIAL ASSISTANCE

Cooperative Education (CO-OP)

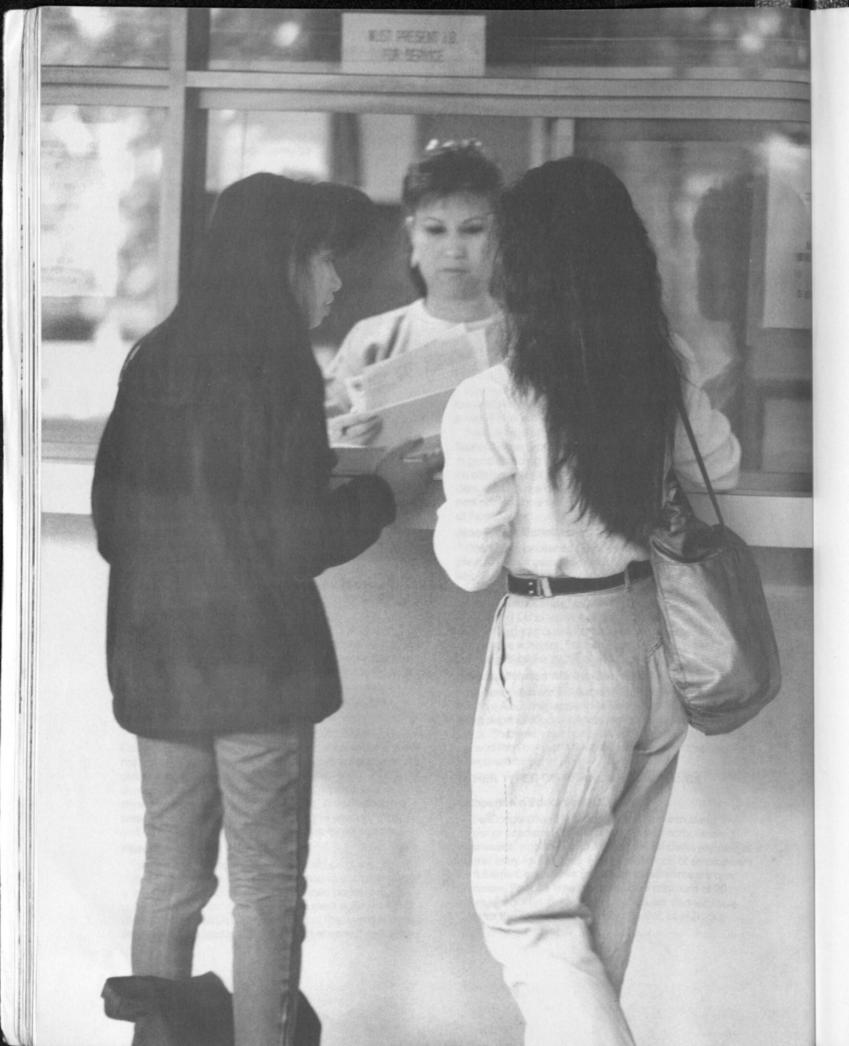
The Cooperative Education Office places students in career or academic related positions with corporations, businesses, agencies and institutions. Students are paid at normal entry-level wages. Minimum periods of employment for full-time Cooperative Education placements are one semester. For part-time placements, a minimum of 20 hours is required. Summer internships are also available. Contact the Experiential Learning Center, SS/AD 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.



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 *Bulletin* 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 the academic programs of CSULB may be obtained from the Academic Vice President, SS/AD-309, at (310) 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 con-

tinuous 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 immediately following Labor Day in September. 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 23rd or 24th 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 prior to 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 subsessions 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 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 8 units at the graduate level.

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.)

The faculty recognizes that it is frequently necessary for students to hold part-time positions while attending the University. It advises 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 scholar-

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 *Bulletin*.

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 Educa-

tion. 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 in the Colleges in which they are administered. 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

Courses with a first digit of zero do not confer degree credit. 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. Findicates Fall Semester, Sindicates Spring Semester, Windicates 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).

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.

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 dance, journalism, music, speech, theatre arts, and physical education. Students may apply to the degree no more than eight units of activity course credit in any one area, and no more than 20 units of activity credit in all areas. For purposes of defining areas Physical Education (P ED) and Sports, Athletics, and Recreation (SAR) are counted as one area and a maximum of 12 units may be counted toward the baccalaureate degree, 8 in P ED and four in SAR.

Independent Study Courses

Each student enrolled in a supervised independent study, research, or reading course (exclude 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

If students wish to exclude a grade from grade point determination 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 Admissions and Records. 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 California community college may be applied toward the baccalaureate degree, with the following limitations and stipulations:

- (a) No upper division credit may be allowed for courses taken in a community college;
- (b) No credit may be allowed for professional courses in education taken in a community college, other than introduction to education courses;
- (c) Individual program regulations for specific transfer limitations should be consulted.

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 articulation agreement for each course with four public four-year institutions or three public four-year institutions and one UC campus 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 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. For a listing of CSULB courses and the assigned CAN NUMBERS, see the end of this section. For additional information contact the University Articulation Office, (310) 985-8221.

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 Admissions and Records.

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

The University grants credit toward its undergraduate degrees for successful completion of examinations of the Advanced Placement Program of the College Entrance Examination Board. Students who present scores of three or better will be granted up to six semester units of college credit.

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-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 Admissions and Records. A student may not receive credit by examination:

- (a) for an activity course;
- (b) for any course which is a prerequisite to one for which credit has been received, (see department for possibility of course waiver);
- (c) to remove a grade of "F," "U," "NC,";
- (d) to satisfy the courses required for a major in a master's degree;
- (e) 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 Admissions and Records. 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. A final grade of "F" may be assigned as the result of cheating or plagiarism. (See Cheating and Plagiarism later in this section.)

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:

For undergraduate students, a CR is equivalent to an A, B, or C; an NC is equivalent to a D, F, or U;

For graduate students, a CR is equivalent to an A, B, or C in courses at the 100- and 200-levels, and an NC equivalent to a D, F, or U, as above, but for 300-, 400-, 500-, and 600-level courses, the CR is equivalent to an A or B only; a NC grade is equivalent to a C, D, F, or U.

Grade Point Computation

A receives 4 points per unit

B receives 3 points per unit

C receives 2 points per unit

D receives 1 point per unit

F receives 0 points per unit

U receives 0 points per unit

CR is not calculated in the grade point average

NC is not calculated in the grade point average

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. Any undergraduate course may be designated for or closed to the option of Credit/No Credit 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 6 units) when the individual department has specifically designated Credit/No Credit grading for the thesis/ project course in the department, and for fieldwork, practicum, and/or internship courses (also to a maximum of 6 units). 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 Credit/No Credit 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 Credit/No Credit grades. Courses graded Credit/No Credit taken at another institution, course credit earned by examination, and courses in which Credit/No Credit grading is the only form of grading are exempt from these limitations.

Administrative Symbols

The symbols AU (Audit), SP (Satisfactory Progress), RD (Report Delayed), I (Incomplete), and W (Withdrawal), discussed below, are not used in computing the GPA.

AU— Audit. Enrollment as an auditor is subject to permission of the instructor. 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. To establish auditor status in a course, students must file a Schedule Adjustment Form in the Office of Admissions and Records.

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 all units required. Cumulative enrollment in units attempted may not exceed the total number applicable to the student's educational objective. Work is to be completed within one year except for graduate degree theses.

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 below.

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 and progress point computation, (except as noted in item 3 immediately 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 "!" 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 Admissions and Records 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: a) more than one third of the work remains to be completed, and no justification has been provided; b) the work required to complete the course has not been specified; c) the faculty member failed to sign the form; or d) 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. Students will not be cleared for graduation until all incompletes are resolved.

U— Unauthorized Incomplete. 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 gradepoint average and progress point computation this symbol is equivalent to an "F." 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.

W— Withdrawal. 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: Withdrawals during this period are permissible only for serious and compelling reasons. The procedure for withdrawal during this period is 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: Withdrawals 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 second 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.

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. Students should be aware, however, that instructors may have a policy that a single instance of cheating or plagiarism may result in a failing grade in the class. (See the section on Cheating and Plagiarism later in this section);
- (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 chair of a College or University-level grade appeal committee acts as the result of a grade appeal. (See the separate policy statement on Grade Appeals.)

Except for changes of grade resulting from grade appeals processes, all changes of grade 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. 86-05) 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 withdrawal and academic renewal.

Students can obtain the "Petition for Exception to Academic Policy" forms in Enrollment Services, SS/AD 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, SS/AD 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 Regulation" 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 Admissions and Records.

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 pur-

poses. 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 Admissions and Records. 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 Admissions and Records 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:

- (a) 3.95 to 4.00—graduated Summa Cum Laude
- (b) 3.80 through 3.94— graduated Magna Cum Laude
- (c) 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.

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:

- (A) Withdrawal from all or a substantial portion of a program of studies in two successive semesters or in any three semesters:
- (B) 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);
- (C) 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:

- (A) 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;
- (B) 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;
- (C) 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.
- (D) 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:

- (A) At the end of any semester the student has fewer cumulative grade points than cumulative units attempted, and:
- (B) 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 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:

- (A) The conditions for removal of administrativeacademic probation are not met within the period specified;
- (B) The students become subject to academic probation while on administrative-academic probation;
- (C) The students become subject to administrativeacademic 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 the 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 Admissions and Records 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 Admissions and Records. 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; allow-

ing 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.

- (A) Review no action;
- (B) An oral reprimand with emphasis on counseling toward prevention of further occurrences:
- (C) A requirement that the work be repeated;
- (D) Assignment of a score of zero (0) for the specific demonstration of competence, resulting in the proportional reduction of final course grade;
- (E) Assignment of a failing final grade;
- (F) 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 shall support and assist 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 (310) 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:

Article 1.1, Title 5, California Code of Regulations 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:

- (a) Cheating or plagiarism in connection with an academic program at a campus;
- (b) Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus;
- (c) Misrepresentation of oneself or of an organization to be an agent of a campus;
- (d) Obstruction or disruption, on or off university property, of the campus educational process, administrative process, or other campus function;
- (e) 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;
- (f) Theft of, or non-accidental damage to, campus property; or property in the possession of, or owned by, a member of the campus community;
- (g) Unauthorized entry into, unauthorized use of, or misuse of campus property;
- (h) 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;
- (i) 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;
- (j) Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function;
- (k) Abusive behavior directed toward, or hazing of, a member of the campus community;
- (I) 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;
- (m) Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section;
- (n) For purposes of this Article, the following terms are defined:
- (1) 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;

- (2) 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.
- (3) 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;
- (4) The term "behavior" includes conduct and expression;
- (5) 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.
- (o) This Section is not adopted pursuant to Education Code Section 89031;
- (p) 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 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 in this Chapter 1 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 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 Bulletin and the Campus Regulations available in the Office of Judicial Affairs. Copies of Chancellor's Executive Order 148, "Student Disciplinary Procedures for the California State University" are also available upon request.

Opportunities for appeal regarding the sanctions applied by the Vice President for Student Services are provided for students involved in the proceedings as outlined by Executive Order 148.

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 (East Library, Room 107) 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 148, "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/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 new 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, which President Bush signed late last year, became effective October 1, 1990.

Any questions regarding this law should be directed to the Director of Student Administrative Services at 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:

 The annual distribution in writing to each student regardless of the length of the student's program of study, and 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:
 - a description of the applicable legal sanctions under local, State, or Federal law for the unlawful possession or distribution of illicit drugs and alcohol;
 - 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.
- Conducting a biennial review of the campus drug and alcohol abuse prevention program to:
 - 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 with the first review in October, 1992. 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, emotion-

al, 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 guad 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 Bulletin, or in the Resident 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:

- 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 *Administra*tive 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.

The California State University, Long Beach Health Center is located at the corner of State University Drive and Merriam Drive. The telephone number is 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.

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.

California State University, Long Beach, in compliance with the Civil Rights Act of 1964 (Title VI and Title VII), Title IX of the Education Amendments of 1972, the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990, does not discriminate on the basis of race, color, national origin, ethnicity, ancestry, religion, gender (including harassment), handicap, or age in any of its policies, procedures, or practices; nor does CSULB discriminate on the basis of marital status or sexual orientation. This nondiscrimination policy covers all CSULB programs and activities, including

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, eth-

nic background, political views, sexual orientation, or other personal characteristics or beliefs.

Nondiscrimination Policies.

EDUCATIONAL PROGRAMS AND ACTIVITIES:

GENDER: The California State University does not discriminate on the basis of gender in educational programs and activities conducted by the University. Discrimination on the basis of gender (including sexual harassment) is prohibited by the State of California and by federal law. Title IX of the Educational Amendments of 1972, as amended, and the administrative regulations adopted by federal agencies under Title IX prohibit discrimination in CSULB programs and activities including admission of students, provision of services and benefits, and employment. The Director, Affirmative Action has administrative responsibility for Title IX at CSULB. If you have questions regarding Title IX and forms of prohibited discrimination on the basis of gender you may contact the Office of Affirmative Action SS/AD 303, (310) 985-4128. 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

DISABILITY/HANDICAP: The California State University does not discriminate on the basis of disability/handicap in educational programs and activities conducted by the University. This includes admission or access to programs and activities, provision of services and benefits, and employment. The Rehabilitation Act of 1973, Sections 503 and 504, and the Americans with Disabilities Act of 1990 prohibit such discrimination, as do the implementing regulations adopted by federal agencies providing federal financial assistance to the University. Student requests for modifications to ensure equal access and benefits, including academic adjustments, auxiliary aids and accessible programs and facilities, should be directed to the Director, Disabled Student Services, Division of Student Services, (310) 985-5401, USU 206. Questions concerning other discrimination issues and the filing of complaints should be directed to the Director, Affirmative Action, (310) 985-4128, SSA 303. Copies of procedures for filing complaints are available through the Office of Affirmative Action and the Division of Student Services. 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

RACE, COLOR, NATIONAL ORIGIN: 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 Civil Rights Act of 1987. No person shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination in any program or activity of the 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, SS/AD 377, (310) 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, SS/AD 303, (310) 985-4128.

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, SS/AD 377, (310) 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, SS/AD 303, (310) 985-4128.

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

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 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.
- 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 compliant process, s/he may proceed with the filing of a formal internal complaint.

Formal Internal Complaint Process

- 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.
- 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, s/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 Sate University.

MYTHS ABOUT SEXUAL HARASSMENT

MYTH: Sexual harassment only happens to women or men who are provocatively dressed.

FACT: Sexual harassment can happen to anyone, no matter how she/he dresses.

MYTH: If the person had only said "NO" to the harasser, it would have stopped immediately.

FACT: Many harassers are told "NO" repeatedly and it does no good. NO is often heard as YES.

MYTH: If a person ignores sexual harassment, it will go away.

FACT: No, it won't. Generally, the harasser is a repeat offender who will not stop on his/her own. Ignoring it may be seen as assent or encouragement.

MYTH: All men are harassers.

FACT: No, only a few men harass. Usually there is a pattern of harassment: one man harasses a number of women either sequentially or simultaneously, or both.

MYTH: Sexual harassment is harmless. Women or men who object have no sense of humor.

FACT: Harassment is humiliating and degrading. It undermines University careers and often threatens economic livelihood. No one should have to endure humiliation with a smile.

MYTH: Sexual harassment affects only a few people.

FACT: Surveys on campus show that up to 30 percent of all female college students experience some form of sexual harassment. Some surveys of women in the working world have shown that as many as 70 percent have been sexually harassed in some way.

(Appreciation to be extended to the Project on the Status and Education of Women, Association of American Colleges, 1818 R Street, N.W., Washington, DC 20009 (202) 387-1300. Copies of this paper are available for \$2.00 [prepaid] from the Project on the Status and Education of Women. Copyright 1986.)

WHAT SHOULD YOU NOT DO?

Don't blame yourself. Sexual harassment is not something that a person brings on one's self; it is action that the harasser decides to take. It is not your fault. Blaming yourself only turns your anger inward and can lead to depression. You need to turn your anger outward, against the appropriate person: the harasser.

<u>Don't delay.</u> If you delay action when someone harasses you, it is likely to continue. Also, if you intend to file charges against someone and put off doing so for a long time, you may find out that you have missed the time limit for doing so.

Don't keep it to yourself. By being quiet about sexual harassment, you enable it to continue. Chances are extremely good that you are not the only victim. Speaking up can prevent other people from also becoming victims. Additionally, not telling anyone encourages feelings of helplessness and can also lead to blaming yourself for the incident.

WHAT SHOULD YOU DO?

Do discuss the incident with a friend, colleague, counselor, or faculty member whom you trust.

<u>Do seek informal action.</u> If you decide to take action, there are persons on campus who can give you support, assistance, and information.

Students may contact the Director, Student Life and Development, located in the Dean's office of every school/college; the Senior Director, Student Life and Development (USU 212, Ext. 4181); the Women's Resource Center (LA3-105, Ext. 5466); the Office of Judicial Affairs, LIBE 106, Ext. Ext. 5270).

Employees may contact their union representative, their supervisor (if appropriate), the Women's Resource Center, or the Office of Affirmative Action.

Do make a formal internal complaint.

All formal complaints by a student against another student should be addressed to the Vice President of Student Services, SS/AD 377, (310) 985-5587.

All formal complaints by an employee or by a student against an employee should be addressed to the Director, Affirmative Action, SS/AD 303, (310) 985-4128.

Do consider external remedies.

If you do not wish to make use of University procedures, or if you are not satisfied with decisions made by the University, you may exercise other options including:

- Utilizing the Collective Bargaining Grievance Procedure
- Filing a complaint with the US Equal Employment Opportunity Commission or the California Department of Fair Employment and Housing
- Filing a civil suit
- Contacting the Office of Civil Rights, US Department of Education (or any other federal agency providing financial assistance to the University)
- Contacting the California Commission on the Status of Women
- Contacting the Office of Federal Contract Compliance Programs, US Department of Labor

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 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 (Calif. 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 (310) 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 or 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:

- Associate Vice-President for Student Services (310) 985-5587; SS/AD 377
- 2) Director, University Counseling Center (310) 985-4001; SS/AD 226
- Director, Student Health Center
 (310) 985-4771; Health Center
- 4) Director, Staff Personnel Services (310) 985-4031; SS/AD 335
- 5) Director, Affirmative Action (310) 985-4128; SS/AD 300
- 6) Senior Director, Judicial Affairs (310) 985-5270; SS/AD 377
- 7) Director, Women's Resource Center (310) 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:

- Criminal Prosecution: Public Safety -(310) 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 (310) 985-4128; SS/AD 300
- b) Student. Senior Director, Judicial Affairs (310) 985-5270; SS/AD 377
- Alternative Campus Housing Assignments: Director, Housing (310) 985-4187; Housing Office
- 5) Academic Assistance:
 - a) University Counseling Center
 (310) 985-4001; SS/AD 226
 - b) Women's Resource Center (310) 985-5466; LA3-105
 - c) Academic Advising Center (310) 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 rnedia), 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; (310) 985-4001.
- * * The University Student Health Center offers routine medical examinations, including pregnancy tests and tests for sexually transmitted diseases; (310) 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; (310) 985-5466.

Additionally, referrals may be made to the Rape Crisis Hotline - Long Beach area (310) 597-2002; or (310) 433-1287 of the Sexual Assault Crisis Agency, 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;
- 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 University 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 (310) 985-4001. The Career Development Center can be reached at (310) 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. seg.). 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:

Jerry Prieto, Sergeant
Technical Services Division
Department of Public Safety
California State University, Long Beach
1331 Palo Verde Avenue
Long Beach, California 90840
Telephone: (310) 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 Admissions and Records 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 be released. Written objections should be sent to the Director of Admissions and

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's 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 Office of Career Planning and Placement 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 Title 5, California Code of Regulations, Section 41201. 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.

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. These codes are:

PC830 and 830.2. Any person who comes within the provisions of this chapter and who otherwise meets all standards imposed by law on peace officers, and not-withstanding any other provisions of law, no person other than those designated in this chapter is a peace officer. The restriction of peace officer functions of any public officer or employee shall not affect his status for purpose of retirement. The following persons are peace officers whose authority extends to any place in the state. PC830.2(e) A member of the CALIFORNIA STATE UNIVER-SITY and COLLEGE POLICE DEPARTMENTS appointed pursuant to Section 89560 of the California Education. Code, provided that the primary duty of the peace officer shall be enforcement of the law within the area specified in Section 89560 of the Education Code.

REPORTING EMERGENCIES ON CAMPUS:

The on-campus emergency phone number is 9-1-1. The non-emergency phone number is (310) 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.

POLICY FOR SECURING AND ACCESS TO CAMPUS FACILITIES:

Opening Classrooms

Custodians are responsible for unlocking all outside doors and classrooms which do not contain equipment (audiovisual, typewriters, 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 THE 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 orienta-

tions. Officers routinely address residence hall students on a variety of topics, such as drug, 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 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.

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 <u>CSULB Bulletin</u>, the <u>CSULB Schedule of</u> <u>Classes</u>, <u>Regulations for Campus Activities</u>, <u>Organizations</u>, <u>and the University Community</u>, and the <u>Faculty</u>, <u>Staff and</u> <u>Student Handbooks</u>.

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 by July 1, 1993. This statement provides general information about the California State University, including the Student Right-To-Know graduation rate. Besides this rate, it also includes contextual findings from the special Survey of Spring 1987 Graduates and from analyses of time-to-degree. The main purpose of the contextual information is to communicate to students more about what we know has guided time and persistence to degree.

The California State University is the largest system of senior higher education in the country. Its 20 campuses extend from Arcata in the north to San Diego in the south. The oldest campus is San Jose State University, founded in 1857. The newest is CSU San Marcos, which opened in Fall 1990.

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 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 baccaluaureate, 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.

Graduation at California State University, Long Beach For CSULB the following statistics apply:

TABLE 1

One-Year Continuation Rates for Fall 1984 and Fall 1991 Regularly Admitted First-Time Freshmen
Who Attempted At Least 12 Units in Their First Term of Enrollment
and Who First Attended CSULB

CSU Campus Fall 1984	Enrolled Fall 1984	Re-Enrolled Fall 1985	One-Year Continuation Fall 1985
Long Beach	1,628	1,323	81.3%
CSU Campus Fall 1991	Enrolled Fall 1991	Re-Enrolled Fall 1992	One-Year Continuation Fall 1992
Long Beach	1,805	1,420	78.7%

TABLE 2

Six-Year Graduation Rates for Fall 1984 Regularly Admitted First-Time Freshmen Who Attempted At Least 12 Units in Their First Term of Enrollment and Who First Attended CSULB

Long Beach	39.1%	2.5%	41.6%
Fall 1984	by Fall 1990	by Fall 1990	by Fall 1990
First Attendance	First Attendance	CSU Campus	Rate
Campus of	Campus of	Another	Graduation
	Graduated at	Graduated at	Total

TABLE 3

Eight-Year Graduation Rates and Continuation Rates for Fall 1984 Regularly Admitted First-Time Freshmen
Who Attempted At Least 12 Units in Their First Term of Enrollment
and Who First Attended CSULB

Campus of First Attendance Fall 1984	Graduated at Campus of First Attendance by Fall 1992	Another CSU Campus by Fall 1992	Graduated at Graduation Rate by Fall 1992	Total Enrolled Fall 1992	Projected Eventual Graduation Rates
Long Beach	48.3%	4.6%	52.9%	4.5%	57.4%

California Articulation			
Number CSU, Long Beach Course			
CAN AJ 2	CRIM 101	CRIMINAL JUSTICE SYSTEM	
CAN AJ 4	CRIM 151	BASIC CONCEPTS CRIMI LAW	
CAN AJ 6	CRIM 155	CONCEPTS OF EVIDENCE	
CAN AJ 8	CRIM 161	INTRO TO INVESTIGATING	
CAN ANTH 2	ANTH 110	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 112A	SURVEY OF WESTERN ART	
CAN ART 4	ART 112B	SURVEY OF WESTERN ART	
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 ART 14	DESN 121	TWO-DIMENSIONAL DESIGN	
CAN BIOL SEQA	BIOL 210A+B	BIOLOGICAL SCIENCE I+II	
CAN C SCI 4	CECS 270	INTRO TO FORTRAN	
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 I	
CAN ENGR 8	C E 205	ANALYTICAL MECH (STATICS)	
CAN ENGR 10	C E 225	SURVEY - MAPPING	
CAN ENGR 12	E E 211	FUND OF ELECTRIC CIRCUITS	
CAN GEOG 2	GEOG 140	INTRO TO PHYSICAL GEOG	
CAN GEOG 4	GEOG 160	INTRO TO CULTURAL GEOG	
CAN GEOL 2	GEOL 102+104	GEN GEOL+GEOL LAB	
CAN GOVT 2	POSC 100	AMER POLITICAL INSTITUTION	
CAN HEC 2	H EC 232	NUTRITION AND YOU	
CAN HEC 6	H EC 253	SURVEY TEXTILES CONTEMP	
CAN HEC 8	H EC 235	PRIN OF FOOD PREPARATION	
CAN H EC 10	H EC 254	FUND APPAREL PROD/DESIG	
CAN H EC 14	HEC 111+111L	PRESCHL CHILD + OBSERV	
CAN HEC 20	H EC 251	PRIN OF APPAREL SELECTIO	
OF THE O'ED	1120201		

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	CALCULUSI
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 34	MATH 115B	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 SEQB	PHYS 151+	MECHANICS AND HEAT
7 - 1	152+	ELECTRICITY AND MAGNETISM
	153	MODERN PHYSICS AND LIGHT
CAN PSY 2	PSY 100	GENERAL PSYCHOLOGY
CAN REC 2	REC 241	INTRO LEISURE SERVICES
CAN SOC 2	SOC 100	PRIN OF SOCIOLOGY
CAN SOC 4	SOC 142	SOCIAL TRENDS & PROBLEMS
CAN SPCH 4	SPCH 130	ESSENTIALS OF PUBLIC SPEA
CAN SPCH 6	SPCH 131	ESSENTIALS OF ARGUMENT
CAN SPCH 10	SPCH 132	SMALL GROUP DISCUSSION
CAN STAT 2	MATH 180	ELEMENTARY STATISTICS



Baccalaureate Degrees, Other Undergraduate Programs, and General Education

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

California State University, Long Beach offers the following Baccalaureate Degree Programs:

Recreation

Social Work

Bachelor of Arts Degree in: American Studies Anthropology Biology Black Studies Chemistry Chicano and Latino Studies Communicative Disorders Comparative Literature Economics History Home Economics Liberal Studies Music Philosophy Physical Education Physics Political Science Radio, Television, and Film

Religious Studies

Spanish Speech Communication Theatre Arts

Bachelor of Fine Arts Degree in:

Bachelor of Music Degree

Bachelor of Science Degree in:

Biology Business Administration Chemical Engineering Chemistry Civil Engineering Criminal Justice Computer Science Dietetics and Food Administration Electrical Engineering Engineering Technology Industrial Design Marine Biology Mathematics Mechanical Engineering Microbiology Physical Therapy

Vocational Education Bachelor of Vocational Education Degree

Refer to specific departments in the courses of study section for detailed descriptions of each program.

You may complete two baccalaureate programs concurrently; however for both to appear on the diploma, both programs must be under the same degree designation, i.e., Bachelor of Arts or Bachelor of Science. Only one degree will be conferred and only one diploma issued. The fact that the requirements of another program have been completed will be noted on the transcript.

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 second semester senior, with advance approval of the Academic Appeals Committee, may earn a maximum of six 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 51 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. 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 Recreational Resources Administration of Volunteer Services Administration of Travel and Tourism American Indian Studies Asian American Studies Asian Studies Biomedical Art Biotechnology Black Studies Cartography and a control of the con Child Development Community Physical Fitness Computer Applications in the Liberal Arts Corrective Therapy Energy Conversion and Power Systems Engineering Environmental Studies Facilities Operations Foodservice Systems Administration Gerontology Health Care Administration Honors English International Business Japanese Latin American Studies Legal Studies in the Liberal Arts

Medieval and Renaissance Studies

Nurse Practitioner Peace Studies

Pre-Athletic Training
Quantitative Methods
Safety Operations
Teaching English as a Second Language
Technical and Professional Writing
Therapeutic Recreation
Urban and Regional Studies
Waste Engineering and Management
Wilderness Studies

Minors

A minor consists of a minimum of 18 units at least nine of which must be upper division. 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. You should refer to the requirements of the department and College of your major to see whether a minor is required with that major. Even if a minor is not required, you may elect to complete requirements for one or more minors from those available and have that so noted on your transcript.

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 *Bulletin*. Specific information and applications to individual programs are available in program offices of the Graduate School of Education and departmental offices through which they are offered. Application 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

General

- File a Request to Graduate form with Admissions and Records within stated deadlines prior to the semester of graduation. Include a completed and approved Program Planning Guide.
- Complete of an appropriate number and distribution of units for the degree.
- Complete of 30 units in residence at CSULB of which 24 must be upper division, and 12 in the major.
- Meet minimal scholarship requirements including an overall grade point average of 2.0.
- Writing skills evaluations: EPT and WPE. Mathematical skills evaluation: ELM.
- Complete of University 100, The University and Your Future.
- Complete of the General Education program including requirements in United States History, Constitution and American ideals and English Composition.
- Complete of requirements for major (refer to specific departments).
- Formal approval by the faculty of the University.

- Submit all required documentation prior to July 1 for May graduation, October 1 for August graduation, and February 1 for December graduation.
- Changes in degree/major sought, or in anticipated graduate date, are subject to a re-filing fee. Changes are not automatically accommodated.
- All incomplete grades must be resolved before students will be cleared for graduation.

These requirements and related information are described below:

Unite

A minimum total of 124 units is required for the Bachelor of Arts and the Bachelor of Vocational Education degrees. Each must include a minimum of 40 units of upper division work (courses numbered 300 to 499).

The Bachelor of Science degree, which requires from 124 to 132 units (135 to 140 for engineering programs), is designed for curricula where a more intensive major field of study is considered a requisite background for professional competence. The total number of units and individual subjects required to satisfy specific majors are described in the departmental sections of this *Bulletin*. In every instance, a minimum of 40 units of upper division work (courses numbered 300 to 499) must be included.

Ten-Year Rule

To assure that a student's preparation in the major is coherent and current, effective 1996 all upper division courses required for a major must be completed within the tenyear 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.

Residence

A residence requirement states that a certain number of units must be taken on the campus from which the student expects to receive a degree. To fulfill the residence requirement at CSULB, you must earn a minimum of 30 semester units at CSULB. Twenty-four of these units shall be earned in upper division courses and 12 of the units shall be in the major. Units earned in Extended Education cannot be counted toward fulfillment of the residence requirement.

Grade Point Average

In order to qualify for graduation with a bachelor's degree from California State University, Long Beach, a student must demonstrate a 2.0 (C) grade point average in all of the below:

- (1) The entire college record;
- (2) All units attempted at CSULB;
- (3) All courses in the major;
- (4) All upper division courses in the major completed at CSULB.

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.

Faculty Approval

Proficiency of a student in any and all parts of a curriculum is properly ascertained by the faculty of the University. A favorable vote of the faculty is required for a student to be eligible to receive a degree. Faculty denials must be cleared by the student prior to the deadline to submit all required documents.

WRITING SKILLS EVALUATIONS

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 *Bulletin* 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. EPT registration does not require a fee. Failure to take the English Placement Test during 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, (310) 985-4006.

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 Bulletin must pass the Writing Proficiency Examination (WPE) to be certified proficient in written composition in English. Students under bulletin 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 you earn 75 or more units. Students 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 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. You must take the WPE prior to filing your Request to Graduate. The responsibility for acquiring the skills necessary to pass the examination is yours. 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-112, and Academic Advisors in your major department. The examination may be retaken as many times as necessary. A WPE Workbook is available for purchase at the CSULB Copy Center. Two 3hour 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, (310) 985-4007. To cover the costs of administration and scoring, a fee will be charged each time you take the examination.

Supplemental Instruction

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. Students should contact the Learning Assistance Center for permission to enroll in these classes.

SI 050A-E. 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 050 B and C are designed for students who have failed the WPE. Students will be assigned to two hours a week in the course appropriate to their performance level. Credit/No Credit grading only. Each course is repeatable until the WPE is successfully passed. (Activity)

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 p. 34). Transfer students may be granted an exemption based upon satisfactory examination scores (see p. 34) 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, (310) 985-4006.

Special Course Requirement

UNIV 100. University 100 (1) F,S

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 topics: (a) history, missions, and structures of higher education (b) career planning (c) the use of the University Library. This course must be completed during the first or second semester on campus.

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.

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.

UNIV 400. The University in Your Future — Student Leadership (1) F,S

Prerequisites: Selected by University 100 Director. Students assist University 100 faculty in presentation of course. May be repeated for a maximum of 3 units.

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—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 Administrative Code). Of these, a minimum of 9 semester units must be upper division 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.

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). The 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 Administrative Code. (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 may be used to satisfy G.E. requirements with these exceptions: all courses in Category A, Category B.1 for life science majors, Category B.2 for mathematics majors, Category D.1.a for history majors, Category D.1.b. for political science majors, interdisciplinary courses (IC) and human diversity courses (HD) for all majors.

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.



Credential Programs

Credentials

Public school teaching and service credentials in the State of California are regulated by the State Legislature and administered by the Commission on Teacher Credentialing (CTC). Credential programs offered at CSULB have been developed to meet current requirements which are complex and continually being 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, not only to be familiar with the program requirements contained in this catalog, but also to obtain current information from departments offering individual programs. For information on credentialing, pending changes and new legislation, as well as information regarding admission, academic requirements, and field work, contact the specific credential program coordinator.

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 junior and senior high schools. The Multiple Subjects Credential (usually for elementary schools) authorizes the holder to teach all subjects in a selfcontained classroom. Instruction in this situation occurs most frequently in elementary and early childhood education. A teacher authorized for multiple subjects instruction may be assigned to teach in any self-contained classroom - preschool, kindergarten, grades 1 through 12, or classes for adults.

Basic Credential Programs Offered by CSULB:

- Multiple Subjects Teaching Credential
- Multiple Subjects with Bilingual Emphasis/Spanish
- Single Subject Teaching Credential with Bilingual Emphasis/Spanish
- Single Subject NTE Waiver Programs: Art, English, Foreign Language (French, German, Spanish), Health Science, Home Economics, Life Science, Mathematics, Music, Physical Education, Physical Science, and Social Sciences.

Specialist Teaching Credentials:

Early Childhood, Special Education, Learning Handicapped, Learning Handicapped Internship (Bilingual focus), Severely Handicapped, Resource Specialist Certificate of Competence.

Services Credentials:

Administrative Services (Preliminary and Professional), Library Media Teacher Services, Clinical Rehabilitative Services (CD), Health Services (Nursing), School Counseling, School Psychology.

Other Credentials and Authorizations:

Designated Subjects: Adult, Vocational, and Designated Subjects Supervision; Adapted Physical Education.

Additional Authorizations for Elementary and Secondary Teachers:

Elementary and secondary teachers wishing to diversify their teaching authorizations may do so by fulfilling certain requirements to qualify for add-on and/or supplementary authorizations. Further information may be obtained from coordinators of the credential programs.

Obtaining a Credential

The current credentialing law provides for a two-step program for the basic teaching credential — Preliminary and Professional Clear. The Preliminary Credential is issued when the candidate has met University and CTC requirements:

- (1) A baccalaureate or higher degree in any subject completed in an accredited institution;
- (2) A program of professional preparation approved by the Commission on Teacher Credentialing.

The Professional Clear credential is granted when the candidate has completed all remaining requirements which must be done within five years after the preliminary is issued. A Professional Clear credential requires a minimum of 30 semester units beyond the baccalaureate degree in an approved fifth-year program. The Professional Clear credential cannot be acquired by direct application, but must be recommended by the University. To obtain this institution's recommendation for the Professional Clear credential, the candidate must meet the requirements or equivalent of its approved credential program and complete a minimum of 15 of the 30 units of the fifth-year program at CSULB.

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 five-year credential. This permits the teacher a maximum of five years to complete the fifth-year approved program for the 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 requirements then completed at the post-baccalaureate level. The preliminary five-year credential is issued after completion of the credential program.

Note: Post-Baccalaureate Credential Credit in Senior Year — By petition only, up to six 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 competion of the course. Petitions submitted after completion of the course will not be approved. Criteria and petition forms are available in the Graduate Studies Office, ED-1, Room 7.

(3) Graduate Level — The entire credential program may be completed at the post-baccalaureate level, thus fulfilling requirements for both the preliminary and professional clear credential.

Application to Credential Programs

Application to a particular credential program may be obtained from the appropriate Department or area offering the credential program. 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 fall semester and summer session must apply by March 1. Spring candidates must apply for field work and student teaching by October 1.

Appeal Process:

A student has the right to address an appeal to the appropriate committee with reference to 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.

More Information:

For further information on Single Subject Credentials refer to the College of Education — Single-Subject Teacher Education section of this catalog.

For further information on the Multiple Subjects Credentials refer to the College of Education — Teacher Education Department.

For information concerning Specialist and Service credentials refer to the appropriate department section.



Associate Vice-President for Academic Affairs and Dean of Graduate Studies: Keith Ian Polakoff

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 curriculum is designed to provide the student 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 as determined by the appropriate department and/or college. 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 pro-

The following graduate degrees are offered:

Civil Engineer Degree

Master of Arts Degrees in: Anthropology had sell to priorite boot in residence (S)

Communicative Disorders
Economics

Education

English

French

Geography

German History

Graduate Degrees and Other Post-Baccalaureate Studies

Home Economics

Interdisciplinary Studies Linguistics

Music

Philosophy 21 and 16 mag on emarging elastifies will prove

Physical Education Political Science

Psychology Psychology Psychology

Spanish

Speech Communication

Theatre Arts

Vocational Education

Master of Business Administration

Master of Fine Arts

Dance

Theatre Arts

Master of Music

Master of Public Administration

Master of Public Health

Master of Social Work

Master of Science Degrees in:

Aerospace Engineering Biochemistry Biochemistry

Biology Chemistry

Civil Engineering Computer Science

Counseling

Criminal Justice

Electrical Engineering Engineering
Geology

Gerontology

Health Science

Health Care Administration Health Care Administration Interdisciplinary Studies

Mathematics

Mechanical Engineering

Nursing Nutritional Science

Psychology Recreation Administration

Special Education

Ph.D. in Engineering 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.

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 Career Guidance Specialist Chicano and Latino Studies Honors in Business Instructional Systems Technology International Business Language Development Specialist Law Office Administration Leisure Counseling Museum Studies Public Management Analyst Public Sector Employer-Employee Relations and Personnel Management Public Sector Financial Management Quantitative Methods Religious Studies Russian and East European Studies Teaching of Reading and Language Arts Transportation Transportation Policy and Planning Urban Executive Management

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 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 *Bulletin* and in the separate departmental sections of this *Bulletin*.

Graduate and Post-Baccalaureate Admission Requirements

Graduate and credential applicants may apply with the objective of completing a degree, a credential, 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 inconditionally classified graduate standing, a student must: (a) 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; (b) have attained a gradepoint average of at least 2.5 (A = 4.0) in the last 60 semester (90 quarter) units attempted; (c) have been in good standing at the last college attended; and (d) be accepted into a graduate degree curriculum on a conditional basis, subject to the requirement that you remedy any deficiencies 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 you will be 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:

- 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), 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 Admissions and Records in the Admissions section of this catalog. NOTE: Graduating undergraduate CSULB students may not automatically continue as graduate students. They must apply under the same conditions as non-CSULB undergraduates. Once applications are received, they will be evaluated at appropriate offices, and students will be advised whether or not they have been accepted into the University. 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 (a final transcript must be on file) prior to the student's second semester of attendance. If it is not, provisional 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 Admissions and Records and to the Department advisor of graduate studies.

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 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 a separate application being made to the department or college. Following review the department or college will determine whether or not the student meets its requirements for admission to its degree program. Those students who meet all departmental and University requirements will be admitted as classified graduate students in that degree program.

Students who do not meet all requirements may, nevertheless, be accepted by the department as a conditionally classified graduate student, subject to meeting various University, college, and departmental requirements for classified status.

Special Action

In rare and compelling circumstances, an applicant who does'nt 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.

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 *Bulletin* 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.

(10) Students pursuing a master's degree who already possess a graduate degree at an equivalent or more advanced level are subject to duplicate degree tuition.

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 re-

quirements 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 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 in the Records Office;
- (2) obtain the signatures of the faculty advisor, the graduate advisor and/or the chair of the department or dean of the college or designee 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 will be withdrawn from the graduate degree program.

If a student wishes to resume graduate study after withdrawal, a petition for reinstatement in the graduate degree program must be filed in the department or college and be approved by the Dean of Graduate Studies.

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 post-baccalaureate 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
- (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 com-

prehensive 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 coursework prior to the semester of graduation. All incomplete grades must be resolved before students will be cleared for 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 Admissions and Records, although transcripts provided by the student may be used to develop a tentative student program and discuss degree requirements. When the Admissions Office's 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 a basis for the Records Office's 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 *Bulletin*, 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 Admissions and Records. 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 requirements 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

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 Records Office.

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 *Bulletin*.

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 Records Office 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 Records Office 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 sum-

marized 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 tenured or tenure-track faculty member from a department authorized to offer a graduate degree. 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 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 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

Students shall consult the University thesis reviewer for information, advice, and assistance on the mechanics of preparing a completed thesis. The thesis reviewer shall verify that each thesis meets the format criteria prescribed by the department or degree program and by the University, and that it meets all procedural requirements for theses of the University.

All theses must be acceptable for deposit in the University Library.

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 classified 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 director of 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 may be either from further registration in a particular degree program or from further enrollment at the campus as determined by the appropriate department and/or college.

. Other Post-Baccalaureate Students

A conditionally unclassified 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 Admissions before the dates established by the University for filling applications.

Grievance Procedures

The steps required in a grievance are available from the Office of the Dean of Graduate Studies (SS/A 309).

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 *Bulletin*. 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/school 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/school 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 tranfer 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 sixunit 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/school 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 re-

quire 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 coordinators. Students must be familiar with the rules governing residency (see previous section on Advancement to Candidacy).

Academic Load

Eight graduate-level units per semester is a normal academic load for a full-time graduate student engaged in study toward a master's degree. For purposes of calculating "full-time enrollment" for graduate students, a weighting factor of 1.5 is applied to each unit of enrollment in graduate courses (500/600/700-courses). 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 dean or director of graduate studies. Petition forms and information may be obtained in the college offices.

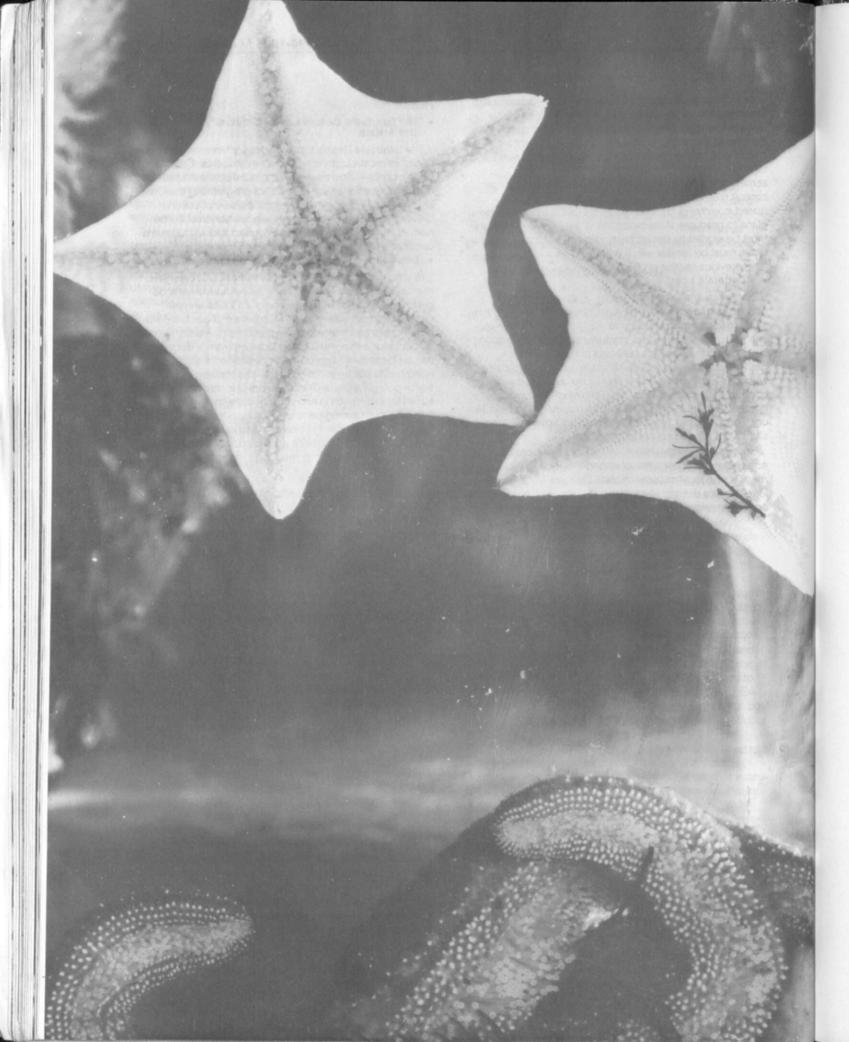
Honors

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.



University Programs

Office of the Vice President for Academic Affairs Dean of Undergraduate Studies: Marilyn Jensen

University Programs is the administrative designation for a group of University-wide academic programs that are interdisciplinary in nature. The Associate Vice President functions as Dean for these programs. These programs are:

The Liberal Studies Program, a broad program of liberal education appropriate for students wishing to teach in the primary schools or to expand their breadth of knowledge over many liberal arts and sciences disciplines;

The University Scholars Program, which provides enriched instruction for students who wish to pursue studies leading to the General Honors Certificate or Honors in the major as they complete the baccalaureate:

The Interdisciplinary Studies Program, which offers students an opportunity to devise unique bachelor's or master's degree programs in areas not specifically addressed by the regular departments and programs;

The Ocean Studies Institute, which coordinates teaching, research, and community service in ocean studies;

The Cooperative Education Program (COOP), an academically related program of paid and volunteer internships and other work experiences off campus;

The Sports, Athletics, and Recreation Program provides opportunities for students to participate in major sports competition as well as in intramural athletic activities.

Liberal Studies
Program
Director: Kristi Slayman Jones

Program Office: Library E, Rm 127 Telephone: 310-985-4228

Bachelor of Arts in Liberal Studies (code 2-0300)

The Liberal Studies major provides a rich, rigorous and integrated cross-disciplinary liberal arts program of study to meet the differing but related needs of two distinct populations: (1) Those with professional aspirations in the field of elementary education and (2) Those with more varied professional aspirations and career goals who would prefer a sound generalist program of study to one requiring early specialization.

General Education and Liberal Studies Major

The general education requirements for the Liberal Studies major are unique. By completing the Liberal Studies major students also satisfy General Education requirements. Partial completion of the major may or may not satisfy G.E. requirements Students changing to another major from Liberal Studies 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 individuals who seek the preprofessional subject matter preparation for elementary school teaching consistent with the standards established by the California Commission on Teacher Credentialing. See Track I overview and requirements on this page.

Track II of the Liberal Studies Program is designed for those individuals who seek a rich, nonspecialized, multidimensional and cross-disciplinary course of studies as a foundation for a wide range of academic and career opportunities. See Track II overview and requirements on page 99.

Track I

The minimum unit requirement for the Liberal Studies Major, Track I, is 117 units which includes both Core and Concentration. University General Education requirements are satisfied upon completion of the requirements of this major.

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).

The Track I Concentration consists of 15-16 units of integrated course work 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.

Requirements For The Bachelor Of Arts In Liberal Studies:

Track I - Core

A minimum of 102 units distributed as specified in Areas I, II, III, IV, V and VI

Area I: Language Studies 3(minimum 22 units)

Group 1. Composition in English: a) Choose one course from ASAM 170, B/ST 170, ENGL 100, CHLS 104; b) ENGL 309

Group 2. Oral Communication in English: Choose one course from SPCH 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, SPCH 352

Group 4. Language Acquisition: Choose one course from either a OR b. a) C/D 329, 361, 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

Group 2. Higher Math: Choose one course from MATH 111, 122

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: NSCI 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
required of and limited to students
who have met the U.S.
Constitution/Government
requirement in a state other than
California and who must meet the
California State and Local
Government requirement.)

Group 3. Multicultural
Dimensions: Choose one course
from AlS 319, AMST 319, ANTH
421, ASAM 319, B/ST 319, CHLS
319, C/LA 320, SOC 445, W/ST
319

B. World History, Culture, Society Group 1. Geography: GEOG 100 Group 2. World History: Choose

one course from HIST 110, 111, 112

Group 3. Cultural Anthropology: Choose one course from ANTH

Group 4. Integration and Assessment: C/LA 403

120, 314, 412

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 379, THEA 113, 122, 124, 324I

B. Humanities

Group 1. Ethics, Values and Beliefs: Choose one course from PHIL 100, 160, 203, 204, 305, R/ST 100, 291, 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) PED 476

Group 3. Access to Learning:
a) Choose one course from
ASAM 190, ENGL 200, HIST 201,
PHIL 170, PSY 230, SPCH 131,
*USP 100 (USP 100 is limited to
those students in the University
Scholars Program); b) Choose
one course from ENGL 337, EDST
450, MATH 278

Track I - Concentration

A minimum of 15 units, 12 of which must be at the upper division (300-400) level, in one of the approved thematic programs of study identified below:

Bilingual-Spanish/English:

Subject preparation for a Multiple Subjects Teaching Credential with a bilingual, cross cultural emphasis requires students to demonstrate proficiency in a targeted language and understanding of the culture history of a targeted group. This Concentration focuses on the Spanish language and Mexican culture to be consistent with the chosen bilingual emphasis of the credential program at CSULB. The primary subject matter focus of this Concentration is on the necessary language skills, although opportunity is provided for those students with demonstrated language proficiency to focus more on Mexican culture studies. (The following CORE courses are highly recommended for students choosing this concentration

CHLS 319 in Area IV, Group A3; ANTH 412I in Area IV, Group B3; EDP 301 in Area VI, Group 1b.)

Area 1. Language Foundations: SPAN 312, 313, 322

With advisor approval, students who can demonstrate Spanish language proficiency at the SPAN 313 level may have SPAN 312 and 313 waived as specific requirements, applying the units to additional culture study. CHLS 340 and 420 are recommended in addition to Group B in Area II for these students.

Area 2. Selected Upper Division Study: Choose either Group A or Group B to complete six units.

Group A. Language Study: CHLS 402, 420;

Group B. Culture Study: Choose one course from (a) and one course from (b): a) Humanities: Choose one course from CHLS 310, 405; b) Social Studies: Choose one course from CHLS 300/HIST 470, 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.)

Area 1. Overview: Choose two courses from ECON 368, POSC 220, 306, SOC 100, 142, 327

Area 2. Development and Ideology: Choose one course from ANTH 307I, B/ST 304, GEOG 307I, 460, HIST 307I, POSC 461I, 494I, I/ST 319I, SOC 350, 410I

Area 3. Inequality and Social Change: Choose one course from ANTH 305I, B/ST 404, HIST 303I, 438, POSC 303, 412, 455, SOC 420, 445, 450, W/ST 425

Area 4. Conflict and Deviance: Choose one course from B/ST 332, POSC 371, 483, PSY 300I, I/ST 317I, 423, 441I, 461I, 463, W/ST 430 (No more than one course from Areas 2, 3, 4 may be taken in any one department.)

Cultures, Values and Beliefs :

Focus 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 intellectual ideas that have given meaning to human life and structured human relationships. Special attention is given to philosophical, religious and ethical perspectives. (No course used to meet the 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.)

Area 1. Western Culture: Choose one course from AMST 350I, 477A, 477B, CLSC 310I, C/LT/HIST 414I, C/LT/HIST 310I, 331, 335, 337, 339, 400I, 414I, 477A, 477B, C/LA 350I, MUS 365I, PHYS 400I, R/ST 316

Area 2. Non-Western Cultures: Choose one course from ANTH 321, 323, 324, 331, 332, 333, 335, 336, A/ST 300I, 301I, 495I, HIST 382A, 382B, 383A, 383B, 385, 431, 441, 461, CHLS 380, RUSS 410

Area 3. Values and Beliefs/ Western: Choose one course from HIST 438, 482I, PHIL 100, 203, 204, 330, 342, 352, 361, R/ST 111, 324, 383I, 391, 396, 425I, 482I, 485

Area 4. Values and Beliefs/ Non-Western: Choose one course from AIS 320, ASAM 380, B/ST 353, PHIL 306, 307, R/ST 152, 3311, 3411, 343, 344, 351

Area 5. Ethical Values: Choose one course from PHIL 302I, MICR 302I, PHIL 160, 360, 363

Foreign Language:

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 relationship between language, cognition and culture. (Students select one language in which to complete the following requirements.)

Area 1. Advanced Language Study: Choose two courses 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: Choose one course from CHIN 490, FREN 214,

GERM 305, ITAL 214, JAPN 311, RUSS 205A, SPAN 314

Area 3. Literature: Choose one course from CHIN 370, FREN 335, 336, GERM 315, 316, ITAL 490, JAPN 370, RUSS 310, SPAN 330, 341

Area 4. Additional Study: Choose one course from CHIN 490, FREN 314, 411, 414, GERM 303, 401, ITAL 314, 490, JAPN 350, 312, 421, RUSS 314, 499, SPAN 322, 425

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 425l or HEC 419, but not both.)

Area 1. Health: Choose one course from HSC 421, 423, 425l, 427, 433

Area 2. Physical Education: PED 477

Area 3. Life Management Skills: Choose one course from HEC 232, 319, 419, REC 482

Area 4. Additional Selected Study: Choose two additional courses from those listed in Areas 1 and 3 above.

Historical Perspectives:

Prepares students in the subjects identified in the new 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 people. (The following Core courses are recommended for students choosing this Concentration: HIST 110 in Area IV, B2; ANTH 314 in Area IV, B3 and either C/LA 320 (or equivalent AIS 319, AMST 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319) or SOC 445 in Area IV. A3.)

Area 1. Peoples of the World: Choose one course from ANTH 321, 323, 324, 331, 332, 333, 335, GEOG 309I, 312I, 316, 318, 320I, 326 Area 2. Ancient World Civilizations: Choose one course from ANTH 313, 345, 347, A/ST 300I, HIST 313, 314, 316, 382A, POSC 301

Area 3. U.S. Emerges as a Nation: Choose one course from HIST 372, 373, 375, 477A, 485A, W/ST 485A

Area 4. California: Choose one course from ANTH 322, 349, GEOG 303, 304, HIST 470, CHLS 300, POSC 326

Area 5. American Society Today: Choose one course from GEOG 306, 466, HIST 380, 474I, W/ST

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 335l, but not for both.)

Area 1. Basic Principles: Choose two courses from ANTH 311I, PSY 351, 356, 370, SOC 100, 335I

Area 2. Application/Race and Ethnicity: Choose one course from ASAM 340, B/ST 310, 325, 410, W/ST 310

Area 3. Application/Gender Roles: Choose one course from ANTH 351, HIST 309I, PSY 352, 354, PSY 366/HEC 358, SOC 325, W/ST 314, 325, 420

Area 4. Application/Social Environments: Choose one course from ANTH 436, ECON 309I, FIN 309I, HEC 309I, 410, 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 biological, 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: C/LA 320 (or equivalent AIS 319, AMST 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319) in Area IV, Group A3; ANTH 120 in Area IV, B3.)

> Area 1. Biological, Intellectual, Social Development: Choose one course from A/P 400, EDP 305, HEC 314, PSY 463

Area 2. Adult Development: Choose one course from GERN 400I, HDEV 357I, PSY 365, SOC

Area 3. The Child In The Family: Choose one course from ASAM 340, B/ST 410, HEC 319, 412, 413, SOC 423

Area 4. Social Ecology Of Child Development: Choose two courses from B/ST 420, 425, CD 361, EDP 302, 350, HEC 411, 430, HDEV 401, CHLS 350/SOC 340, NRSG 4811, SOC 345

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 crosscultural and world perspective. Provides for greater understanding of various cultures and their literature as well as a finer appreciation of literature as documentation of the highest aspirations of the human 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.)

Area 1. English Traditions/English Literature: Choose one course from ENGL 363, 455, 456, 458, 462, 467A, 467B

Area 2. English Traditions/ American Literature: Choose one course from ENGL 370A, 370B. 474, 476, 477A, 477B

Area 3. World Traditions: Choose one course from CHIN 370, C/LT 234, 330A, 330B, 403, 440, FREN 335, 336, GERM 315, 316, 470, JAPN 370, RUSS 310, SPAN 300, 330, 341

Area 4. Other Voices and Traditions: Choose one course from AIS 340, B/ST 140, 343, C/LT 404, ENGL 382, 498 (Images of Blacks in American Literature), CHLS 405, W/ST 382

Area 5. Other Forms and Genres: Choose one course from B/ST 346, C/LT 342, 401, 402, 410, 453, 454I, ENGL 481, 482, JOUR 315, R/ST 494

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 courses are highly recommended for students selecting this Concentration: SPCH 335 in Area I. Group 2; ANTH 412I in Area IVB, Group 3; PHIL 100, 160, 203, 204 or 305 in Area VB, 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.)

Area 1. Language and Culture: Choose one course from ANTH 413, ANTH/W/ST 475, B/ST 180, ENGL 423, 426, LING 3631, SOC 485I, SPCH 309, 451

Area 2. Language and Literature: Choose one course from AIS 340, A/ST 320, B/ST 140, 343, C/LT 403, 404, 410, 440, 453, CHIN 370, CLSC 291, ENGL 382, 431, FREN 335, 336, GERM 315, 316, 470, JAPN 370, CHLS 405, RUSS 310, SPAN 330, 341, W/ST 382

Area 3. Language/Theory and Criticism: Choose one course from C/LT 361, ENGL 318I, 384, 410, 484, PHIL 361, 484, R/ST 301, RTVF 318I, SPCH 300, 301, 306, 333, THEA 426

Area 4. Language and Process: Choose one course from B/ST 450, ENGL 205, 206, 317, 405, 406, 417, SPCH 331, 358, THEA 380, 480

Area 5. Additional Study: Choose one additional course from those listed in Areas 1, 2, 3 or 4 above.

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 RE-QUIRED selections for students choosing this Concentration: MATH 122 in Area II, Group 2; MATH 278 in Area VI. Group 3b.)

Area 1. Calculus: MATH 123

Area 2. Geometry: MATH 355

Area 3. Additional Selected Study: Choose three courses from MATH *310, 311, 317, 340, *341 (*Especially recommended for those considering adding on a Single Subjects Mathematics Credential at a later time.) A max. of one other upper division mathematics course may be substituted for one of the courses in Area 3 with advisor's permission.

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 an ability 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 are exposed to chemistry as taught by chemists, to molecular or microbiological (micro) systems, the biology of large scale (macro) systems and to physics. (Students should complete all lower division Core requirements in Area III, Groups 1, 2, 3 and in Area II. Groups 1 and 2 prior to entering upper division Concentration work.)

Area 1. Foundation Chemistry: CHEM 201A

Area 2. Micro-Systems: Choose one course from CHEM 201B, MICR 300I, 301

Area 3. Macro-Systems: Choose one course from A/P 308I, 400, **BIOL 328**

Area 4. Physical Science: Choose one course from PHSC 331, 491

Area 5. Additional Selected Study: Choose one course from GEOL 340, HIST 400I, PHIL 302I, MICR 302I, NSCI 375I, 376I, 377I, PHYS 4001 - 064 MHO most earlies

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 experiences of men and women of different racial, religious and ethnic groups in our pluralistic society. (The following Core course is a REQUIRED selection for students choosing this Concentration: C/LA 320 (or equivalent AIS 319, AMST 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319) in Area IV, Group A3. No more than 3 units of lower division (100-200) course work may applied toward the Concentration.)

Area 1. Education in an Ethnic Perspective: Choose one course from AIS 361, ASAM 310, B/ST 420, CHLS 340

Area 2. Multicultural Perspectives: Choose one course from ANTH 412I, 421, HEC 336, HDEV 401, HIST 469, SPCH 451, W/ST 4011

Area 3. Ethnic Studies: No more than one course may be selected from any one department. Choose three courses from AIS 100, 101, 200, 320, 340, 420, ASAM 220, 340, 345, 350, 370, 380, B/ST 110, 180, 370, 400, 410, CHLS 300/HIST 470, CHLS 310, CHLS 350/SOC 340, CHLS 352/SOC 341, CHLS 3901, 400

Visual and Performing Arts:

Allows students to develop skills in responding to the arts as well as in creating and performing. Courses will also 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. (If DANC 379 was taken in the Core, students should select ART 302 and MUS 385A and a Theatre course in the Concentration.)

Area 1. Perception, Expression, Heritage, Valuing: Choose two courses from ART 302, DANC 379, MUS 385A

Area 2. Fine Arts History: (If a Theatre course was taken in the Core and DANC 379 not taken in Area 1, include at least one Dance course here.) Choose two courses from ART/MUS 375I, ART 401. 408, 409, 410, 416, 417, 423, 424, 425, 426, 427, 436, 437, C/LT/THEA 421I, 422I, DANC 435I, MUS 3631, 3641, 390, 393, THEA

Area 3. Multicultural and Ethnic Arts: Choose one course from AIS 320, 420, ART 3351, 455, 456, 457, 466, 467, 468, 469, 470, B/ST 346, 360, 361, 363, C/LT/THEA 325, 326, DANC 318, MUS 490

Track II

Students in this track are required to complete a Core Program (87 units minimum) and a Concentration (24 to 27 units). 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*. (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 therefore from 99-111 units. University General Education requirements are satisfied upon completion of this major.

The Track II Core consists of a minimum of 87 units distributed across seven areas: I. Language/ Communication Studies (minimum 18 units); II. Natural Science and Mathematics (minimum 18 units); Ill. 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, Beliefs (minimum 9 units) and VII. Health, Well-Being, Life Management (minimum 3 units).

The Track II Concentration consists of 24-27 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, Geology and Mathematics Concentrations where only 12 upper division units are required.

Requirements For The Bachelor Of Arts In Liberal Studies:

Track II - Core

A minimum of 87 units as specified in Areas I, II, III, IV, V, VI and VII.

Area I: Language and Communication Studies (minimum 18 units)

Group 1. Composition in English: a) Choose one course from ASAM 170, B/ST 170, ENGL 100, CHLS 104; 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 SPCH 130, 132, 210 + 210W, 331, 334, 335

Group 3. Language and Critical Thought: Choose one course from ASAM 190, ENGL 200, HIST 201, PHIL 170, PSY 230, SPCH 131, *USP 100 (*USP 100 is limited to students in the University Scholars Program)

Group 4. Foreign Language Study: 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, 331A-B, ITAL 101A-B, 201A-B, JAPN 101, 102, 201, 202, LAT 101A-B, 331A-B, RUSS 101A-B, 201A-B, SPAN 101A-B, 201A-B (Students with more advanced language competencies substitute appropriate higher level language courses for those listed here.)

Area II: Natural Science and Mathematics (minimum 18 units)

Group 1. Mathematics: Choose two courses from MATH 103, 112 114, 115B, 119A, 119B, 117, 122,

Group 2. Natural Sciences: a) Choose one course from A/P 107, 207, BIOL 200, 210A, MICR 100; b) Choose one course from ASTR 100 + 100L, 101, CHEM 100. 111A. 201A. 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 above, or from: A/P

308I, 400, 401, ASTR 200A, BIOL 201, 210B, PSY 346, BIOL 328, CHEM 201B, GEOG 140, GEOL 160, 160 + 160L, 163, 190, 191, 340, MATH 224, 233, 247, 310, 317, 330, 340, 341, 355, 370A, 380, MICR 101, 300, 301, MICR/PHIL 302I, NSCI 375I, 376I, 377I, PHYS 100B, 152, PHYS/HIST 400I, PHSC 331.

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 and must
meet Title V state and local
government requirements); (c)
Choose one course from ECON
300, 303, 368

Group 2. U.S. Diversity: Choose one course from AIS 319, AMST 319, ASAM 200, 319, 350, B/ST 210, 319, 325, HIST 469, CHLS 319, 350, 352, C/LA 320, SOC 340, 352, 445, W/ST 319

Group 3. National Citizenship: Choose one course from B/ST 381, GEOG 466, HIST 474I, POSC 308, 327, 328, 420, 482, 486, PSY 375, SPCH 442I

Group 4. World Citizenship: Choose one course from ANTH 307I, 314, B/ST 304, GEOG 307I, 470, HIST 307I, 478, PHIL 351, POSC 215, 220, 306, 348, 371, 483, 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/Anthropology: Choose one course from ANTH 120, GEOG 100

Group 3. History: Choose one course from HIST 110, 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, 112A, 112B, 113A, 113B, 335, ART/MUS 375I, B/ST 155, 160, 346, 363, DANC 200, 435I, MUS 190, 290, 363I, 364I, MUS/PHIL 378, MUS 390, 490, THEA 113, 122, THEA/C/LT 124, 324I, 421I

Group 2. Literature: a) Choose one course from B/ST 140, C/LT 230, 234, ENGL 180, 184, 250A, 250B, CHLS 205; b) Choose one course from AIS 340, B/ST 343, CHIN 370, C/LT 330A, 330B, 342, 346, 401, 403, 404, 430, 440, ENGL 363, 370A, 370B, 382, 385, 386, FREN 335, 336, GERM 315, 316, 470, JAPN 370, JOUR 315, CHLS 405, R/ST 425I, SPAN 330, 341, W/ST 382

Area VI: Cultures, Values, Beliefs (minimum 9 units)

Group 1. Western Tradition:
Choose one course from either (a) or (b). a) AMST/HIST 477A, 477B, CLSC 310I, C/LT/HIST 310I, C/LT/HIST 414I, HIST 335, MUS 365I, R/ST 316; b) PHIL 100, 160, 203, 204, 330, 352, 360, 361, 363, R/ST 111, 324, 383I, 396, R/ST/HIST 482I

Group 2. Non-Western Traditions: Choose one course from either (a) or (b). a) ANTH 321, 323, 324, 331, 332, 333, 335, 336, A/ST 3001, 3011, 4951, HIST 341A, 341B, 382A, 382B, 383A, 383B, 385, 386, 431; b) ASAM 380, B/ST 353, PHIL 306, 307, R/ST 152, 3311, 3411, 343, 344, 351

Group 3. Additional Study: Choose another course from any of those listed in Area VI, Group 1a, 1b, 2a or 2b above.

Area VII: Health, Well-Being, Life Management (minimum 3 units)

Choose one course from ANTH 150, ECON 308, 309I, EDP 191, 357, HSC 420I, 422, 423, 425I, 427, 429, HEC 232, 312I, 323, 412, HDEV 307I, 357I, TED 388I, NRSG 481I, PED 157, REC 320, 340I, SW 330, 331, SOC 461I, 462, 463, W/ST 101

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.

American Indian Studies: Area 1. Foundation Study: Choose two courses from AIS 100, 101, 200 Area 2. Selected Area Study: Choose four courses (3 units each) from AIS 320, 340, 361, 420, 490, 497, 499

Area 3: Additional Support and Area Study: Choose two additional courses from any of those in Areas 1 or 2 not completed or from ANTH 321, 322, 347, 349, ART 456, 457, HIST 372, CHLS 380, 420

American Studies: Area 1. Foundation Study: AMST 300, 490, 498

Area 2. Emphasis: Choose five courses from one of the following groups:

Group A) History: Choose from HIST 172, 173, 174, 372, 373, 375, 376, 378, 379, 471, 472, 473, 4741, 477A, 477B, 478, 479, 485A, 485B:

Group B) Political Science: Choose from POSC 100, 314, 315, 322, 327, 391, 412, 423, 482, 486;

Group C) English: Choose from ENGL 370A, 370B, 474, 475, 476, 477A, 477B, 478

Anthropology:

Area 1. Lower Division Foundation Studies: ANTH 110, 120

Area 2. Additional Lower Division Study: Choose one course from ANTH 140, 170, 202

Area 3. Upper Division Foundation Study: ANTH 313, 314

Area 4. Biological Anthropology. Choose one course from ANTH 318, 363, 435

Area 5. Sociocultural
Anthropology: Choose one course
from ANTH 351, 416, 421, 436

Area 6. Comparative Cultures: Choose one course from ANTH 321, 322, 323, 324, 331, 332, 333, 335, 336, 345, 347, 349

Art/Art History Emphasis:

Area 1. Foundation Study: Choose three courses from ART 112A, 112B, 113A, 113B

Area 2. Principles and Practices: Choose one course from ART 307, 308, 309, 335I, 435

Area 3. Western Art: Choose one course from ART 401, 408, 409, 410, 416, 417, 423, 424, 425, 426, 427, 436, 437, 438, 439

Area 4. Non-Western Art: Choose one course from ART 455, 456, 457, 465, 466, 467, 468, 469, 470

Area 5. Additional Upper Division Study: Choose two additional courses from any listed in Areas 3 or 4 above.

Art/Studio Emphasis: Area 1. Foundation Study: ART 181. DESN 121

Area 2. Selected Lower Division Study: Choose one course from: ART 131, 187

Area 3. Art History: Choose one course from: ART 436, 437, 438, 439

Area 4. Selected Upper Division Study: Choose four courses from either group A or group B (Choice of groups depends upon Area 2 prerequisite course):

Group A: Choose from ART 327A, 327B, 328, 354A, 354B, 355A, 355B, 356, 357A, 357B, 370, 376, 377, 378, 379, 381;

Group B: Choose from ART 327A, 327B, 348A, 348B, 370, 376, 377, 378, 379, 381, 385A, 387, 388, 389

Asian American Studies:

Area 1. Lower Division Foundation Study: ASAM 200, 220

Area 2. Upper Division Foundation Study: ASAM 345, 380

Area 3. Additional Selected Study: Choose four courses (3 units each) from ASAM 310, 330, 340, 350, 370, 490, 499

Biology:

Area 1. Lower Division Foundation: BIOL 210A, 210B, CHEM 111A:

Area 2. Selected Upper Division Study: Choose three or four courses as needed to meet 12 unit minimum from A/P 335, 336, BIOL 313, 314, 315, 316, 324, 332, 333, 351, 360, 413, 417, 421, 423, 424, 425, 427, 438, 439, 450, 453, 460

Black Studies:

Area 1. Introduction: B/ST 110
Area 2. History: Choose one course from B/ST 120, 121

Area 3. Selected Lower Division Study: Choose one course from B/ST 155, 160, 200, 210

Area 4. Humanities: Choose two courses from B/ST 340, 343, 346, 450

Area 5. Social Studies: Choose three courses from B/ST 304, 325, 330, 332, 335, 337, 400, 410 Comparative Literature: Area 1. Foundation Study: C/LT 261

Area 2. Folklore, Mythology, Fairy Tales: Choose one course from C/LT 232, 453, 454l

Area 3. Theatre and Drama: Choose one course from C/LT/THEA 124, 324l, 325, 326, 421l, 422l, 428

Area 4. Literature and the Other Arts: Choose one course from C/LT 250, 410, 411I, 412I, 413I, 420I, 451I, HIST 310I

Area 5. Literatures: Choose one course from C/LT 330A, 330B, 346, 349, 401, 403, 404, 430, 431, 432, 437, 438, 440

Area 6. Additional Selected Study: Choose three additional courses from any of the above or from any other Comparative Literature course.

Economics:

Area 1. Lower Division Foundation Study: ECON 201, 202

Area 2. Upper Division Foundation Study: ECON 308, 360

Area 3. Additional Selected Study: Choose four 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 4 unit Economics course may be substituted for ECON 201 and 202.)

English/Creative Writing Emphasis:

Area 1. Foundation Study: ENGL 184, 370B

Area 2. Introductory Study: Choose one course from ENGL 205, 206

Area 3. Advanced Study: Choose two courses from ENGL 405, 406, 407

Area 4. Additional Selected Study: Choose two courses from ENGL 370A, 384, 385, 386, 459, 467A, 467B, 469, 474, 475, 476, 477A, 477B, 479, THEA 380, 480 to a minimum total of 24 units in the Concentration.

English/Language and Composition Emphasis:

Area 1. Foundation Study: ENGL 184, 325, 420, 421

Area 2. Literature: Choose one course from ENGL 250A, 250B, 370A, 370B

Area 3. Additional Selected Study: Choose two courses from ENGL 300, 317, 410, 423, 426

English/Literature Emphasis: Area 1. Foundation Study: ENGL 184, 363

Area 2. American Literature Survey: Choose one course from ENGL 370A, 370B

Area 3. British Literature: Choose one course from ENGL 451, 452, 453, 455, 456, 458, 459, 462, 463, 467A, 467B, 468

Area 4. American Literature: Choose one course from ENGL 474, 475, 476, 477A, 477B, 478

Area 5. Additional Selected Study: Choose two additional courses from those listed in Areas 2, 3 or 4 above or from C/LT 330A, 330B, ENGL 250A, 250B, 384, 469, 479, 481, 482 (One course must be at the upper division (300-400) level.)

English/Technical Writing Emphasis:

Area 1. Foundation Study: ENGL 184, 317

Area 2. Report Forms: Choose two courses from ENGL 417, 418, 491

Area 3. Language Study: Choose one course from ENGL 320, 325

Area 4. Additional Selected Study: Choose two additional courses from ART 307, 309, CE 305, ET 300, ENGL 303, 384, 405, 406, 407, 419, 423, 498 (Science as Literature), HIST 400I, NSCI 376I, IS 301, 305; RTVF 204, 380, 404 (One course must be at the upper division (300-400) level.)

French:

Area 1. Foundation Study: FREN 312A, 312B, 314, 411

Area 2. Additional Selected Study: Choose three additional courses in French at least one of which is at the upper division (300-400) level. (Lower division (100-200) courses are only appropriate if taken prior to FREN 312A or its equivalent.)

Geography:

Area 1. Lower Division Foundation Study: Choose three courses from GEOG 100, 140, 152, 160

Area 2. Methods and Techniques: GEOG 380

Area 3. Systematic Geography: a) Choose one course from GEOG 460, 466, 470; b) Choose one course from GEOG 440, 442, 444, 452, 455, 460, 466, 470 (No course used to satisfy Area 3, Group (a) may be used to meet Group (b).)

Area 4. Regional Geography: a) Choose one course from GEOG 304, 306; b) Choose one course from GEOG 304, 306, 3091, 3121, 316, 318, 3201, 326 (No course used to satisfy Area 4, Group (a) may be used to meet Group (b).)

Geology:

Students choosing this
Concentration must select the
following courses in the Core:
Math 122, 123, PHYS 151, or
complete them as prerequisite
units to this Concentration and
elective units toward the degree).

Area 1. Foundation Study: GEOL 102, 104, 105, 340, 341

Area 2. Additional Selected Study: Choose four to five additional courses to a 12 unit minimum from GEOL 321, 324, 372, 373, 431, 433

German:

Area 1. Foundation Study: GERM 301, 302, 315, 316, 401

Area 2. Additional Selected Study: Choose additional German courses to a minimum of 24 units. (Lower division (100-200) courses are only appropriate if taken prior to GERM 301 or its equivalent.)

History:

Area 1. Foundation Study: HIST 301

Area 2. Area Study: Choose two courses each from three different areas:

World Area: Choose from HIST 110, 111, 112, 492; European Area: Choose from HIST 131, 132, 313, 314, 316, 317, 318, 332, 333, 335, 336, 337, 339, 341A, 341B, 411I, 432, 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, 466; United States Area: Choose from HIST 172, 173, 300, 372, 373, 375, 376, 378, 379, 380, 469, 472, 473, 474, 475, 477A, 477B, 478, 479, 480, 482l, 486, 489; Asian Area: Choose from HIST

382A, 382B, 383A, 383B, 385,

386, 406, 407, 488

Area 3. Additional Selected Study: Choose an additional course from any of those listed above or from any History Department offering.

Human Development:
Students choosing this
Concentration must complete the
following courses in the Core: A/P
107 or 207, ANTH 120, PSY 100,
or complete them as prerequisite
units to the Concentration and
elective units toward the degree.

Area 1. Foundation Study: HDEV 307I, 357I, 401, 402

Area 2. Foundation Methodologies: HDEV 250, 320

Area 3. Area Study: Choose two courses from one area. Biological Foundations Area: Choose from A/P 400 or ANTH 319, A/P 401, ANTH 318, 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, HEC 312I, 412, 413, CHLS 350, SOC 100, 320,

345, 464; Child Development Area: Choose from HEC 311, 312I, 314, 411, 412, 413, 433;

Gerontology Area: Choose from A/P 401, GERN 4001, SOC 464

Italian:

Area 1. Foundation Study: ITAL 312A, 312B, 314

Area 2. Additional Selected Study: Choose five additional courses, a minimum of two at the upper division (300-400) level from Italian Department courses. (Lower division (100-200) courses are not appropriate unless completed prior to ITAL 312A or its equivalent.)

Japanese:

Area 1. Foundation Study: JAPN 201, 202, 311, 301

Area 2. Additional Selected Study: Choose three courses, at least one of which is at the upper division (300-400) level, from departmental offerings. (Lower division (100-200) courses are only appropriate if completed prior to JAPN 201 or its equivalent.)

Latin American Studies: Area 1. Language Study: SPAN 201A, 201B

Area 2. Discipline Emphasis:
Choose two courses from one
department from ANTH 323, 324,
345, HIST 162A, 162B, 362, 364,
POSC 358, 359, 459, 4611* (*Only
those semesters when content
emphasizes Latin American
development.) One course must
be at the upper division (300-400)
level.

Area 3. Breadth Study: Choose two additional courses from two additional departments from those in Area 2 not completed or from GEOG 320I

Area 4. Additional Selected Study: Choose two additional courses from those in Area 2 or 3 or from HIST 433, 462, 463, 466, SPAN 312, 313, 314, 341, 430, 441, 445, 491, 492

Mathematics:

Area 1. Lower Division Foundation Study: MATH 122, 123, 224, 233

Area 2. Upper Division Foundation Study: MATH 364A, 380

Area 3. Additional Selected Study: Choose two courses from MATH 310, 317, 340, 341, 355, 361A, 381

Chicano-Latino Studies: Area 1. Foundation Study:

Area 1. Foundation Study: Choose three courses from CHLS 100, 203, 205, 230

Area 2. Humanities: CHLS 310, 405, 420

Area 3. Social Sciences: Choose two courses from CHLS 300/HIST 470, CHLS 340, CHLS 350/SOC 340, CHLS 352, 400

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 elective
units toward the degree.

Area 1. Foundation Study: MUS 300, 390, 490

Area 2. Selected Foundation Study: Choose one course from MUS 363I, 391, 393 Area 3. Additional Selected Study: Choose additional courses to a minimum of 14 units from those listed in Area II or from MUS 300, 320, 350, MUS/ART 375I, MUS 421, 425A, 450, 460, 492, 469, 493, 495

Philosophy:

Area 1, Foundation Study: Choose two courses from PHIL 342, 363, 382

Area 2. Historical Focus; Choose one course from PHIL 413, 414, 421, 422, 423, 424

Area 3. Movements and Perspectives: Choose one course from PHIL 416, 417, 418, 419

Area 4. Additional Selected Study: Choose four additional courses from any of those above or from other Philosophy Department offerings.

Psychology:

Area 1. Lower Division Foundation Study: PSY 100, 200, 210

Area 2. Basic Processes: Choose one course from PSY 331, 332, 333, 336, 337, 341, 342

Area 3. Personal and Social Processes: Choose one course from PSY 351, 356, 361, 365

Area 4. Processes/Additional Selected Study: Choose one additional course from any listed in Area 2 or 3.

Area 5. Applications: Choose one course from PSY 310, 314, 346l, 352, 354, 359, 366, 370, 375, 378, 381, 473

Area 6. Additional Selected Study: Choose one additional upper division (300-400) level course from Psychology Department offerings.

Religious Studies:

Area 1. Foundation Study: Choose two courses from R/ST 100, 152, 291

Area 2. Western Religious Traditions: Choose one course from R/ST 311, 312l, 314, 315l, 322, 324, 331l, R/ST 471l/HIST 411l, R/ST 472l, 485, 490, 494

Area 3. Eastern Religions: Choose one course from R/ST 341I, 343, 344, 351

Area 4. Selected Upper Division Study: Choose two additional courses from those in Areas 1, 2 or 3 not completed or from R/ST 301, 375, 376, 383l, 396, 425l, 487 Area 5. Additional Selected Study: Choose two additional courses from any in Areas 1, 2, 3 or 4 not completed or from ASAM 380, C/LT 342, HIST 333, PHIL 330, R/ST 499

Russian:

Area 1. Foundation Study: RUSS 310, 312, 314

Area 2. Additional Selected Study: Choose five additional courses from offerings in Russian. (Lower division (100-200) courses are only appropriate if taken prior to RUSS 310 or itsequivalent.)

Sociology:

Area 1. Foundation Study: SOC 100, 142, 3351

Area 2. Statistics: Choose one course from SOC 250, 255, C/ST 210

Area 3. Ethnic and Gender Issues: Choose one course from SOC/W/ST 325, SOC 340, 426, 445, 485I

Area 4. Deviance and Social Control: Choose one course from SOC/HDEV/SW 423, SOC 441I, 448

Area 5. Social Change and Global Issues: Choose one course from SOC 327, 350, 420

Area 6. Additional Selected Study: Choose an additional upper division (300-400) level Sociology course.

Spanish/Spanish American Literature Emphasis:

Area 1. Basic Language Study: SPAN 312, 313

Area 2, Foundation Study: SPAN 341, 445

Area 3. Selected Literary Study: Choose two courses from SPAN 410, 441, 491

Area 4. Additional Selected Study: Choose two additional Spanish courses. (Lower division (100-200) courses are only appropriate if completed prior to SPAN 312 or its equivalent.)

Spanish/Spanish Linguistics and Culture Emphasis:

Area 1. Basic Language Study: SPAN 312, 313

Area 2. Foundation Study: SPAN 425, 426

Area 3. Selected Study/Linguistics and Culture: Choose two courses from SPAN 412, 427, 430, 445 Area 4. Additional Selected Study: Choose two additional Spanish courses. (Lower division (100-200) courses are only appropriate if completed prior to SPAN 312 or its equivalent.)

Spanish/Spanish Literature Emphasis:

Area 1. Basic Language Study: SPAN 312, 313

Area 2. Foundation Study: SPAN 330, 430

Area 3. Selected Literary Study: Choose two courses from SPAN 410, 439, 491, 492

Area 4. Additional Selected Study: Choose two additional Spanish courses. (Lower division (100-200) courses are only appropriate if completed prior to SPAN 312 or its equivalent.)

Speech Communication:
Area 1. Lower Division Foundation
Study: SPCH 130, 131, 210 +
210W

Area 2. Upper Division Foundation Study: SPCH 300, 301, 309

Area 3. Selected Upper Division Study: Choose one course from SPCH 331, 335

Area 4. Communication Strategies: Choose one course from SPCH 436, 437

University Scholars Program

Director: Roberta Markman

Office: Library (See Directory for Location)

Phone: 985-4706

The University Scholars (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 Scholars 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 Scholars Program will receive a Certificate which marks 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 Scholars 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

The objectives of General Honors within the University Scholars Program are:

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 for General Honors

There are three ways a student may qualify for General Honors in the University Scholars 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, a SAT score of at least 1000, and a GPA of 3.2 or better. Stu-

dents 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 Scholars Program Director.

By university achievement: Any student who maintains a 3.2 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 Scholars Program Director. Students with a GPA of 3.2 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 Scholars 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 3.2 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 Scholars Council.

Requirements for the Certificate in General Honors in the University Scholars Program

Every student electing General Honors in the University Scholars 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 Scholar by fulfilling the following specified requirements:

A student must be enrolled as a member of the University Scholars 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 Scholar 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 Scholars Program."

A University Scholar who chooses General Honors would normally complete 30 units in the Program's offerings distributed as follows: 15 units of University Scholars Program courses which will serve partially to fulfill the University's General Education requirements. (These will be listed in the Schedule of Classes bulletin each semester under USP offerings.) In addition: USP 100, Angles of Vision (3); USP 200, Fireside Forum (1,1,1); USP 300, Junior Colloquium (3), USP 499, Synthesis (3): and at least one independent learning experience, i.e., USP 496, Undergraduate Research Participation (3) or USP 497, Directed Studies (3) and USP 498, Senior Thesis (3)

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 Scholars 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 Scholars Program Office and in participating departmental offices.

Admission Requirements

Please contact the department office or the University Scholars Program Office for information regarding admission. Normally, a student must be a declared major with at least sophomore (30 units) standing.

Requirements for the Certificate of Honors in the Major:

- (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;
- (3) Completion of the 3-unit capstone colloquium USP 499, Synthesis, as partial fulfillment of the University's requirement of 6 upperdivision interdisciplinary units (I);
- (4) A minimum overall GPA of 3.0 and of 3.3 in the major at graduation. Check with individual departments for special variations;
- (5) Students who have failed to enroll in courses for Honors credit for two consecutive semesters will normally be withdrawn from the program;
- (6) A University Scholar 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.

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 Scholars Program before their junior year. A course sequence leading to a major not routinely offered in the University may be ar-

ranged 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 Scholars 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 I Iniversity
- (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 Scholars Program director and University Scholars 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 (USP)

100. Angles of Vision (3) F,S

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 (1) F,S

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 (3) F,S

Studies of selected interdisciplinary topics, problems or issues with a view toward integration of the areas of study involved in lower-division courses.

496. Undergraduate Research Participation (3) ARR

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 (3) ARR

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 (3) ARR

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.

499. Synthesis (3) F,S

Prerequisite: Permission of the Director of the Program. This "capstone" course is required of all USP students and is normally taken after completion of all other GE requirements. The course is interdisciplinary and is concerned with the shaping of the modern mind. Consideration is given to how each of the participating disciplines impinges on an evolving conception of human nature and of the place of human beings in the universe. Explores the sources of modern mentality in literature, philosophy, political science, as well as socio-economic, psychological, biological, and physical sciences. The course will confer GE credit as one of the two required Interdisciplinary Courses (I) for USP students only. Credit may be taken in GE Categories B., C., or D.2.

Othe

Special honors sections of regular GE courses in various departments as listed under "University Scholars Program" to be found in the current Schedule of Classes.

Interdisciplinary Studies

Director: Margaret Costa Office: LIB-E Room 127 Phone: (310) 985-2396

Bachelor of Arts in Interdisciplinary Studies (code 2-0405)

The interdisciplinary studies 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 interdisciplinary studies 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 interdisciplinary studies 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 an interdisciplinary studies 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.

An interdisciplinary studies program must be justified by legitimate career, academic, and/or professional goals commensurate with the broader mission of the University in baccalaureate education. Interdisciplinary studies majors are considered on a case-bycase 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 interdisciplinary studies major.

Procedures

- Prepare a written statement:

 (a) Identifying the kind of interdisciplinary course of study you seek and your reasons for seeking it in terms of your academic and professional goals;
- (b) Explaining why these cannot be met through an existing major combined with other academic programs such as minors and/or certificate programs; and
- (c) 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 interdisciplinary 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 Interdisciplinary Studies Program form and any subsequent Program Addendum forms:
- (5) Submit the Interdisciplinary
 Studies 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 interdisciplinary studies program you proceed with projected course work at your own risk.

Requirements

(1) An interdisciplinary studies 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) A minimum of 12 upper-division units shall be taken in each of two disciplines (departments) of the interdisciplinary program. Exceptions to this requirement 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) Courses taken to satisfy General Education requirements, while they may relate to the interdisciplinary studies program, may not be double counted to meet interdisciplinary studies unit requirements.

Master of Arts and Master of Science Degrees (code 5-0405) (code 6-0405)

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) A minimum of 24 upper-division units (i.e., CSULB 300-400 courses or their equivalent at another institution) of preparatory course work related to the disciplines in which graduate program work is projected. An interdisciplinary master's program requires demonstration of potential for success in each of the disciplines relevant to the proposed degree work. The purpose of prerequisite course work is, therefore, both to prepare applicants for advanced study and to demonstrate their aptitude for it.

Applicants should be aware that 24 units is a minimum and that the individual's graduate advisory committee may determine that additional preparatory work in one or more disciplines is necessary to support the advanced degree proposal. An individual's graduate advisory committee determines the appropriate prerequisite courses; these are listed on the Prerequisite Sheet that accompanies the Application for a Master's Degree in Interdisciplinary Studies.

- (3) A 3.0 GPA (on a 4-point system) in the last 60 units of upper-division and/or graduate course 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; (2) Prepare a written proposal 6-8 pages in length:

(a) Identifying the interdisciplinary program of study in which you wish to engage by title (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.
- (3) 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. Additional procedures are identified in the Procedure for the Interdisciplinary Studies Master of Arts and Master of Science Degrees, available from the Interdisciplinary Studies Direc-
- (4) 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 Advisor or Chair of the committee chair's department; 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 of 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 Change of 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 for the Master of Arts

Requirements for the Master of Arts in Interdisciplinary Studies are as follows:

- 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 to 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 for the Master of Science

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 in the primary department is required.

Cooperative Education

Coordinator: Sally Cardenas

Office: SS/AD 250

Telephone: (310) 985-5553 Cooperative Education

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.

A fourth program, Human Corps, is also provided by the Cooperative Education Office in order to assist students with volunteer community service interests. These programs are available to students in all majors.

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 handson 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. Both lower- and 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 notfor-profit sector. Both lower- and upper-division Co-Op courses are available for up to 6 units of elective academic credit.

Human Corps

Established in 1987, the Human Corps program provides students with the opportunity to become involved in local community service activities. Students may volunteer in non-profit agencies in order to combat social problems and improve the quality of community life. Typical community service areas include: health care, literacy, child care, services to the elderly, substance abuse, and programs for the disabled. The Cooperative Education office can assist both individual students and student organizations seeking community service work.

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, fulltime positions and are available locally and nationally to all majors.

Curriculum

Lower Division

HHS 292. Career Exploration (1-3)

Prerequisites: Consent of instructor or Co-Op Office 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 issues common to the work setting.

EDEL 292. Exploring Elementary Education (1-3) F,S

Prerequisites: Consent of instructor or Co-Op Office and current employment, paid or volunteer, as an elementary school teacher's aide, and a minimum GPA of 2.0. Students who are accepted by a participating school district will be placed in a school to engage in paid work while enrolled in this seminar course. Through a series of 15 seminars, students will focus on specific aspects of classroom operation and on the responsibilities and activities of teachers in the elementary school. Twelve to 18 hrs of paid experience per week will be required for enrollment.

Upper Division

ENGR, NSCI, C/LA, ED P 492. Field Experience (1-3) F,S

Prerequisites: Consent of instructor or Co-Op Office. Qualifying students will be placed in a major-or career-related, community-based, pre-professional experience as an employee in private industry or in a public agency. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments.

CBA 493. Business Internship (1-3) F,S

Prerequisites: Status as classified business major and consent of instructor or Co-Op Office. Qualified 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.

Ocean Studies Institute

Director: Lon McClanahan Location:Fish Harbor, 820 S. Seaside Ave., Terminal Is., CA 90731

Telephone: (310) 830-4570 Fax: (310) 830-6328

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 Diego. 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 32 departments across seven 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

300. Introduction to Aquaculture(3) F, Odd Years

Prerequisites: BIOL 210A,B with grade "C" or better. Introduction to water systems criteria, nutrition, feeding, growth, reproduction, breeding, and diseases involved in the culture of aquatic organisms. Required field trip(s). Traditional grading only. (Lecture: 3 hours.)

460. Oceanographic Techniques (3) ,F,S

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) F,S,SS,EXED

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) F,S,SS,EXED

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) F,S,SS

Prerequisite: Consent of director. Research in a specific aspect of biology, water quality, geology, microbiolog, ocean engineering. This course is designed to allow students working on specific topics access to additional material through utilization of the research vessel <u>Yellowfin</u>. 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.

Sports, Athletics, and Recreation

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 club activities; 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, fencing, golf, cross-country, tennis, track and field, volleyball, and softball. Men's varsity sports are basketball, baseball, track and field, cross-country, fencing, 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 class students must participate in a minimum of 3 different intramural tournaments 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 may participate in any of the club sports activities funded by the Associated Students Inc. and administered through the SAR Department. These sports are crew, men's rugby, archery, badminton, fencing, sailing, judo, soccer, snow skiing, surfing, water skiing, aikido, cycling, Tae Kwon Do, karate, kung fu, women's water polo, and Hwa Rang Do. Students registering for SAR 210 must attend regular practices and competitions, assist the club with fund raisers and adhere to the rules and regulations.

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.

All SAR courses are taught on a Credit/No Credit grading basis.

Courses (SAR)

200. Intramural Activities (1) F,S

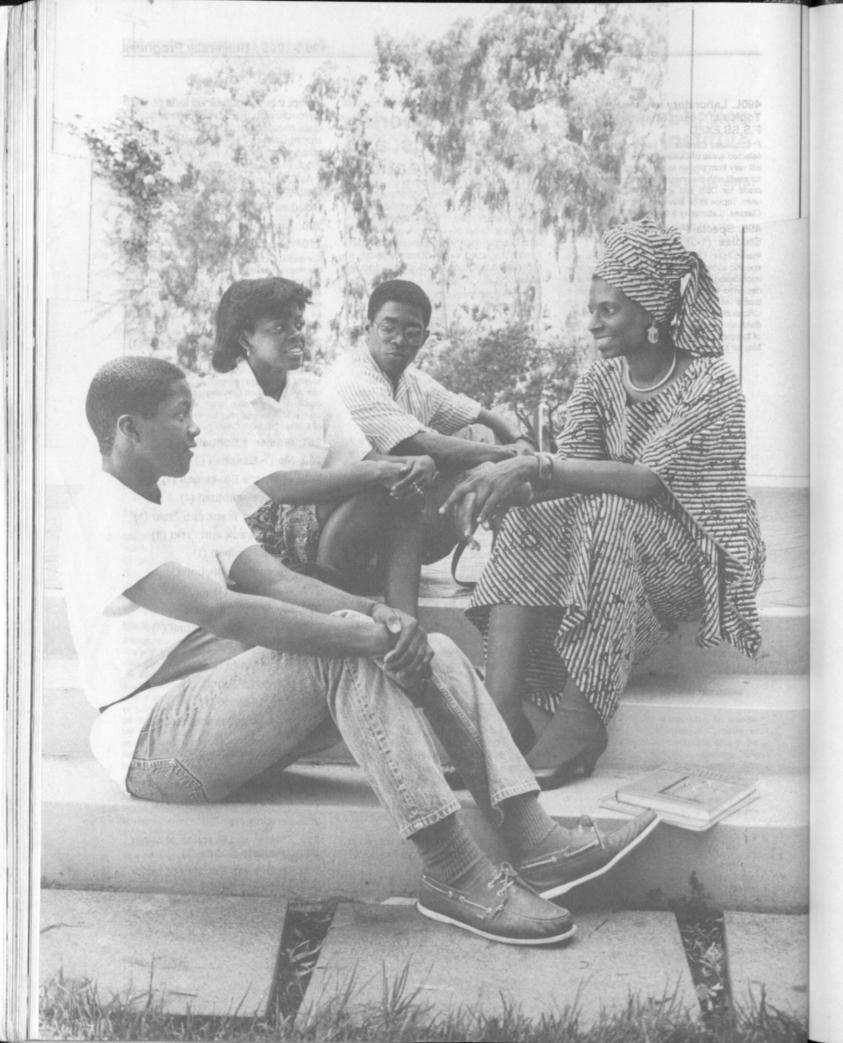
210. Sport Clubs (1) F,S

Competition in sport clubs as conducted under the respective national organizations. Enrollment subject to approval of the coach of the sport. Athletes enrolled who fail to qualify for the squad must withdraw from the course. May be repeated for credit to a maximum of 4 units. Credit/No Credit grading only.

260-299. Intercollegiate Sports (1) F.S

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. May be repeated for credit to a maximum of 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)
- 268. Men's Football (1)
- 269. Women's Volleyball (1)
- 271. Water Polo (1)
- 272. Men's Volleyball (1)
- 274. Men's Spring Football (1)
- 275. Women's Golf (1)
- 276. Men's Golf (1)
- 277. Women's Tennis (1)
- 278. Men's Tennis (1)
- 279. Women's Swimming and Diving
- 280. Men's Swimming and Diving(1)
- 281. Women's Cross-Country (1)
- 282. Men's Cross-Country (1)
- 283. Fencing (1)
- 319. Theory and Practice of Minor Intercollegiate Sports (2)
- 320. Theory and Practice of Major Intercollegiate Sports (2)



Center for International Education

American Language Institute

University Extension Services

Director — Center for International Education: Paul Lewis

Director — International Admissions: George LaDue

Assistant Director: — International Admissions: Merry Glumm

Acting Associate Director — International Programs and Exchanges: Grace Winchell

Immigration Specialist: Yvonne Correia Coordinator for Study Abroad

Programs: Cecilia Fidora
Assistant to the Director — Center
for International Education: Linda
Levy

Center Office: SS/AD 201 Telephone: (310) 985-4106

Acting Director — American Language Institute: Teresa Ross ALI Office: SS/AD 201 Telephone: (310) 985-8424

Mission and Program

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. These programs are designed to extend and deepen the international training, research and public service functions of CSULB.

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/schools. 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 cooperate with the Long Beach community, especially the local schools and the Long Beach business community;

—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 rograms and Exchanges, Office of Study Abroad and International Exchanges, administrators, and faculty to support students in pursuing their educational objectives.

International Student Services

Some 1,100 non-immigrant students, representing approximately 70 countries, attend CSULB. The primary mission of International Programs and Exchanges, 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 IPE 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 IPE staff works with international students, faculty, and members of the community to design international programs. International students are encouraged to participate in all University and community programs. During the academic year, IPE 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. IPE staff also serve as faculty liaisons with student nationality clubs on campus. These organizations add a special dimension to student life on campus by hosting various cultural events and providing leadership training opportunities for their members.

Office of Study Abroad

The Office of Study Abroad 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 information center, and sponsors special programs such as workshops, seminars, and speakers from off-campus.

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 en-rolled 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: Australia (University of Wollongong); Egypt (The American University in Cairo); England (Nottingham Trant University, Wolverhampton University); France (Institut International du Commerce, MICEFA, consortium of Universities in Paris); Germany (Universitat

Gesamthochschule Essen, Universitat Bielefeld, Universitat Oldenburg): Japan (Goto College of Medical Arts. Yokkaichi University, Kobe University): Jordan (University of Jordan); Mexico (Universidad Autonoma de Guadalajara); People's Republic of China (Huazhong Normal University, Quingdao University, Wuhan University, Zhongshan University); Philippines (University of the Philippines, Diliman); Republic of Korea (Kyung Hee University, Yonsei University); Taiwan (Tunghai University); and Thailand (Chiang Mai University, Siam University).

For more information and eligibility qualifications, please see the staff in the Office of Study Abroad, Center for International Education.

International Programs — CSU System

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. Close to 11,000 CSU students have taken advantage of this unique study option.

International Programs participants earn resident academic credit at their CSU campuses 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 36 recognized universities and institutions of higher education in 16 countries, the International Programs also offers a wide selection of study locales and learning environments.

The affiliated institutions are: the University of Western Sydney, (Australia), the Universidade de Sao Paulo (Brazil); the universities of the Province of Quebec (Canada); 13 institutions, including Universite de Montreal, Concordia University, Universite Laval, McGill University, Universite du Quebec System, Bishop's University, i.a.); Denmark's International Study Program (Denmark), (the international education affiliate of the University of Copenhagen); Institut des Etudes Françaises pour Etudiants Etrangers, Universite de Droit, d'-Economie et des Sciences D'Aix-Marseille (Aix-en Provence, France, Universities of Paris, Micefa), Mission interuniversitaire de coordination des

echanges franco-americains, Universites de Paris III, V, VI, VIII, X, XI, XII, XIII; Ruprecht-Karl-Universitat (Heidelberg, Germany) and Eberhard-Karl-Universitat (Tubingen, Germany); the Hebrew University of Jerusalem (Israel); CSU Study Center (Florence, Italy), Universita degli Studi di Firenze, and La Accademia di Belle Arti Firenze (Italy); Waseda University (Tokyo, Japan); Universidad Iberoamericana (Mexico City, Mexico); Lincoln University (Christchurch, New Zealand) and Massey University (Palmerston North, New Zealand); Universidad Complutense de Madrid and Universidad de Granada (Spain); Uppsala Universitet (Sweden); National Chengchi University (Taipei, Taiwan); Bradford University, Bristol University, Kingston University, Sheffield University, and University of Swansea (the United Kingdom); and the University of Zimbabwe (Harare, Zimbabwe). Information on academic course offerings available at these locations is in the International Programs Bulletin which may be obtained from the Study Abroad Office (SS/AD 201) or by writing to The California State University International Programs, 400 Golden Shore, Suite 300, Long Beach, CA 90802-4275.

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 elibible to apply directly from their Community College if they can meet this requirement. 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 or by writing to The California State University International Programs, 400 Golden Shore, Suite 300, Long Beach, California 90802-4275. Applications for the 1994-95 academic year overseas must be submitted by February 1, 1994.

Information and application materials may be obtained from the Center for International Education, (310) 985-4106. Applications for the following academic year must be submitted by February 1 to the Center for International Education.

Courses (INTL)

200. Division Coursework Taken at a Foreign University (1-4)

Beginning 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.

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. 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 both visa-bearing international students and permanently resettled refugees, immigrants, and citizens 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 semiintensive (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 American Language placement examination, 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.

Courses (ALI)

025A,B. American Language — Introductory I (non-credit) F,W,S,SS

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,B. American Language — Introductory II (non-credit) F,W,S,SS

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.

Courses ALI and ALP

024. English Pronunciation (3) F

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.

035. American Language — Intermediate I (6) F,S

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) F,S

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) F

Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing crosscultural 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) S

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.)

128. Employment Communication Skills (3) F

Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing preemployment 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.)

145. American Language — Advanced I (3) F,S

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) F,S

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.



(2) F.5
Preventioner COTA 510 Consquisse: COTA
520. On campus work encertance under faculty
acceptation in one of the programs in the College
of the Arts to be individually extected for each
studiest. May be individually extected for each

Dean: Wade Hobgood
Acting Associate Dean:
Richard Birkemeier
Director: University Art Museum:
Constance Glenn
Associate Director: University Art
Museum: Ilee Kaplan
Director of Development: Barbara
Bauer

Administrative Services
Manager: Ken Schilling
Assistant to the Deans:
Joan Slack
Secretary to the Deans:
Kimberly Daro
Fiscal Support: Diane Patterson
Instructional Support Technicial:
Larry Todd
College Office: LIB E-112
Telephone: 985-4364

FAX: 985-7883

The learning opportunities within the College of the Arts reflect its commitment to the arts in all forms. For performers, artists and scholars, the College of the Arts provides an environment designed for individual achievement. It offers programs to meet the needs of students who wish

- pursue professional careers in art; dance; design; music; radio, television and film; or theatre arts;
- teach one or more of the arts;
 follow a degree program that provides a broad education in the
- learn about the history and nature of the arts to complement studies in other disciplines;
- develop appreciation of the art forms and their lasting value to the quality of life.

The College of the Arts offers a variety of degree programs designed to meet high standards of excellence and to provide our students with appropriate backgrounds consistent with their academic objectives. These include professionally oriented degrees for those who plan to become visual or performing artists (the Bachelor of Fine Arts Degree in the Departments of Art, Dance, and Design; the Bachelor of Music in the Department of Music; the Master of Fine Arts Degree in the Departments of Art, Dance, Design, and Theatre Arts; and

the Master of Music Degree in the Department of Music).

For those students who are planning careers in secondary teaching, or prefer to obtain a more liberal education with the arts as a central component, the departments of Art, Dance, Music, Radio Television and Film, 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.

The quality of the programs in the College of the Arts is evidenced by the fact that each eligible department/program in the College has met the standards and 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 Association of Schools of Music, The National Association of Schools of Theatre, and the American Association of Muscians.

Other special programs include certificates in Arts Management, Biomedical Illustration, and Museum Studies. The University Art Museum presents exhibitions of professional stature focusing primarily on contemporary artists.

Major performance and exhibition facilities include The University Art Museum, the Art Department Galleries, the University Theatre, The Studio Theatre, the Gerald R. Daniel Recital Hall of the University Music Center, the Martha Knoebel Dance Theater, and the Richard and Karen Carpenter Performing Arts Center. The extensive performance calendar generated from the wide-ranging curriculum - concerts, films, theatre productions, dance performances and art exhibitions - has become a highly visible part of the campus, as well as an important cultural resource in the Long Beach/Los Angeles and Orange County areas.

The faculty of the College of the Arts are themselves accomplished scholars, artists or performers who bring their expertise and experience to their teaching assignments.

The College also enjoys the support of two long-established community or-

College of the Arts

ganizations: Fine Arts Affiliates and Dramatic Allied Arts Guild. These groups award student scholarships and provide assistance for special projects and events within the College of the Arts.

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:

- 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.
- Proof of completion of at least one course in Journalism. JOUR 270 -Introduction to Public Relations is preferred.
- 5. Three letters of recommendation.
- 6. Interview with a faculty committee.
- 7. Successful completion of COTA 510 -- Arts Management: Scope and Sources.

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 -- Introduction to Museums (3)
- DANC 441 -- History of Dance (3)
- MUS 390 -- Music in Western Civilization (3)
- THEA 324 -- World Theatre Today

 (3) Students interested in the
 Certificate program may contact
 Professor Pat Finot, Director of the
 Arts Management Certificate
 Program, College of the Arts,
 (310) 985-4269.

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.

College-Based Courses (COTA) 404. Arts and Values (3) F,S

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.

510. Arts Management: Scope and Sources I (3) F

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) S

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) F

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) F,S

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) F,S

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) F,S

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) S

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) F,S

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. College of the Arts

Department Chair: Patricia J. Clark Department Administrative Office: Fine Arts 4, Room 106

Department Student Services Office/Graduates/Undergraduates: Fine Arts 4, Room 110

Telephone: 985-4376

Faculty: Professors: Ingrid Aall, Archie Boston Jr., Patricia J. Clark, Gene R. Cooper, Domenic A. Cretara, John deHeras, A. Thomas Ferreira, Richard Danay, Jen Grey. Thomas E. Hall, Kristi E. Slayman Jones, Robert J. Kunst, Joseph H. Krause, Neil Lieberman, John R. Lincoln, Diane L. Martel, Dieter Muller-Stach, Cynthia A. Osborne, Alvin A. Pine, John J. Shaak, John C. Snidecor, James J. Van Eimeren, Stephen G. Werlick; Associate Professors: Faya Causey, David A. Hadlock, Elisabeth Hartung, Thomas J. Krumpak, James A. Kvapil, Anthony Marsh, Peter Mendez, Julia I. Miller, Beverly Naidus, Carol Shaw-Sutton;

Assistant Professors: Karen Kleinfelded, Roxanne Sexauer, Marie Thibeault.

Emeritus Faculty: Blair C. Archer, Bela L. Biro, David C. Borders, Robert E. Click, James S. Crafts, Donald Dame, Orval Dillingham, Betty A. Edwards, Kenneth Glenn, Herman H. Graff, Beatrice M. Greer, Calvin D. Gross, Howard G. Hitchcock, Mary Jane Leland, John Martin, Maxine Merlino, C. Douglas Moryl, Jane Purcell, Robert W. Ramsey, Josephine Schultz, Richard Swift, Charles M., Eugene C. Wallin, Thompson, L. Ward Youry. Department Secretary Merrie Martino

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.

The Department

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.

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, 3D 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 six professional specializations as follows: ceramics, drawing/painting, illustration, 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 eight specializations; in addition to the six studio areas listed above, the M.A. degree is granted in art history and art education. 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 reserves the right to keep for a period of up to three years work or projects completed by students for class credit.

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 ap-

plicant 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: 24 lower division, 35 upper division.

Requirements for the Bachelor of Arts in Art:

Lower Division Requirements: ART 111, 112A, 112B, 131, 161, or 184, 181, 187.

Upper Division Requirements: 1) ART 320

two courses from art history, only one of which may be ART 438 or 439;

3) one course from three of the following disciplines to total 9 units: Drawing and Painting, Printmaking, Illustration, Photography, Visual Communication:

4) one course from three of the following disciplines to total 9 units: Ceramics, Fiber, Metal, Sculpture, or Wood:

5) plus an additional 9 units upper division from one of the following disciplines: Art History, Ceramics, Drawing and Painting, Fiber, Illustration, Metal, Photography, Printmaking, Sculpture, Visual Communication (Graphic Design), Wood.

Plus additional lower division prerequisites may exist for some upper division discipline options.

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

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

Lower Division: ART 112A, 112B, 113A, 113B, 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, 335l; concentration in "major" field (3 courses from one of the following groups plus a recommended 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,

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)

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).

Requirements for the Bachelor of Arts in Art (Art Education):

Lower Division: ART 111, 112A, 112B, 131, 151A or 151B, 181, 184, 187, 182 or DESN 121.

Upper Division: ART 438 or 439, and one course selected from ART 455, 456, 457, 466, 467, 468, 469, or 470. ART 385 and one course selected from ART 328A, 350, 355A, 357A, or 428A. One course selected from ART 381, 383, 384, or 387. One course selected from ART 327A, 370, or 371A. One course selected from ART 327B, 356, 357B, 358A, 359A, 362A or 363. ART 341A or 341B. Also required: ART 300, 305, 407, and 499P.

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 4II; 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 professionallyoriented 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 for the Bachelor of Fine Arts in Art:

Programs of Specialization:

Option in Art Photography (code 4-5865):

Lower Division: ART 111, 112A, 112B, 131, 141, 161 or 184, 181, 187; DESN 121; and 3 units of elective courses in Lower Division Art.

Upper Division: ART 320, 340, 342, 344, 411, 413, 438, 439, 446, 449, 499V; pick from one of the following ART 414, 444, 448; 9 additional art units outside the specialization.

Option in Ceramics (code 4-5852)

Lower Division: ART 111, 112A, 112B, 131, 151A, 151B, 161 or 184, 181, 187; DESN 121.

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, 8 additional units of art outside specialization.

Option in Drawing and Painting (code 4-5858)

Lower Division Requirements in Art: ART 112A, 112B, 131, 181, 182, 184, 187. Nine units of Lower Division Elective.

Requirements in Art or Design: a minimum of one course selected from: ART 151A or 151B, 161, 263; and ART 141.

Upper Division Requirements in Art: 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 12 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.

Option in Illustration 3 members 9 (code 4-5855)

Lower Division: ART 111, 112A, 112B, 131, 161 or 184, 181, 187, 223, 271; DESN 121.

Upper Division: ART 320, 371A, 371B, 372; a minimum of 6 units from 373, 385, or 389; 471A, 471B, 374A or 499F; 6 units of art history, only three of which may be from ART 438 or 439; ART 387, ART 382A and 6 additional units outside the specialization.

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

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

Lower Division: ART 111, 112A, 112B, 131, 151A or 151B, 161 or 184, 181, 182 or DESN 121, 187 and 263.

Upper Division: ART 320, 350, 381 and one unit 491B; 21 units selected from 1 of 4 specializations: Fiber: ART 327A, 327B, 328A, 428A, 428B, 499N and 3 units selected from ART 428C or 430; Metal: ART 357A, 357B. 358A, 358B, 458A, 499J, and 3 units selected from ART 355A, 355B, 356, 359A, 359B, 458B; Wood: ART 354A, 354B, 454A, 454B and 9 units of 499B; Integrated 3-D Media: ART 328A, 354A, 354B, 357A, 328B or 430 and 3 units selected from ART 355A, 356, 358A, 359A and 3 additional units from ART 499B, 499J, 499N; Art History requirement: DESN 368 for all Options; 3 additional units for Metal/ Wood/Integrated 3-D Media in any upper division Art History; 6 additional units for Fiber 3 of which must be ART 366 and 3 from either ART 438 or 439. 9 additional units art out of specialization for Metal/ Wood/Integrated 3-D Media Options 3 of which must be ART 3351 plus 6 other units; 6 additional units outside of specialization for Fiber Option 3 of which must be ART

Option in Printmaking (code 4-5861)

Lower Division: ART 111, 112A, 112B, 131, 141, 161 or 184, 181, 187; DESN 121.

Upper Division: ART 320, 370, 18 units from ART 376, 377, 378, 379, 475, 480 and 499R; ART 365, 439 and 3 additional units of art history (not 438), ART 381 and 6 additional units of art outside specialization.

Option in Sculpture (code 4-5862)

Lower Division: ART 111, 112A, 112B, 131, 161 or 184, 181, 187; 263; DESN 121; 4 units of elective courses in Lower Division Art.

Upper Division: ART 320, 361, 362A, 362B, 363, 459, 461, 463, 6 units of art history only 3 units of which may be in ART 438 or 439; 12 units of art outside specialization.

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 the following required design/art courses or their 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)

Lower Division; ART 112A, 112B, 131, 181, 184, 187, 223, 225, DESN 121

Upper Division: ART 322A, 322B, 323, 329, 421, 422A, 422B, 499S; DESN 368 and 3 additional units of Design or Art History; 11 units of Design or Art outside of Graphic Design, approved by Major Advisor.

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 Biology 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 for the Certificate in Biomedical Art:

(1) A major in art or biology;

(2) A 2.75 overall GPA and 3.25 in the major;

(3) 37 units as listed: ART 181, 184, 271, 372, 374A, 374B, 499F; A/P 208, 365; BIOL 313 or 324, 364, 427 or 439. (Although CHEM 111A is a prerequisite for BIOL 210A and CHEM 111B is a prerequisite for BIOL 210B, these may be waived for art majors in the biomedical program by consent of the instructor concerned.)

Co-directors of the CSULB biomedical art program are in Art: Peter Mendez and in Anatomy and Physiology: and 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 for the Certificate in Museum Studies:

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 united 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.

Master of Arts in Art (code 5-5850)

The Art Department Master of Arts degree program provides 10 professional specializations under the following categories: 3-D Media: (Fiber, Metal, or Wood); Art Education; Art History; Ceramics; Drawing and Painting; Illustration; Integrated 3-D Media (Fiber, Metal, and Wood); Printmaking; Sculpture; and a special emphasis program under Drawing and Painting: Intermedia. Upon approval by the Intermedia faculty, 9 units of ART 599T Intermedia will be substituted for 9 required units in Drawing and Painting.

Prerequisites:

(1) A bachelor's degree from an accredited institution with a minimum of 24 units of upper division art comparable to those required of a major in art at this University. These should in-

clude completion of 15 units minimum of upper division work in the area of specialization for the Master of Arts degree program. If the area of specialization is Art Education, the 15 units will consist of art and education courses approved by the Art Education graduate faculty;

- (2) Completion of a minimum of 12 units in Art History, 6 units of which must be upper division. (Not applicable to the M.A. in Art History);
- (3) Successful completion of the writing proficiency exam (WPE).
- (4) Presentation to the student's specialization faculty of a body 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:

In lieu of a portfolio, Art History students must: (a) present college transcripts to the Art History graduate advisor; (b) pass the Graduate School Foreign Language Examination in French or German with a minimum score of 450, or complete two years of French or German with an average grade of "B" or better; (c) have completed ART 307 (Historiography) plus one course selected from ART 308 (Art Theory), ART 309 (Art Criticism), ART 3351 (Art and Anthropology) or their equivalents.

(5) A GPA of 3.0 or better in upper division Art. 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 M.A. program.

All prerequisites must be fulfilled before a student can become classified in a graduate degree program.

Requirements for the Master of Arts — Studio:

Completion of all program requirements as established by the student's graduate committee to include:

A Master's Graduate Program which totals at least 30 units and where a minimum of 18 of the 30 units are graduate courses (500/600 series). Program units are divided between courses in the specialization and elective courses as follows:

Specialization Requirements

 A minimum of 18 units in the area of specialization. At least 15 of the 18 units must be 500-600 series courses taken at this University. 2. ART 698 (6 units): a project and a project report. All students completing a project are required to exhibit the work done for the project and receive department and University approval and acceptance of a project report.

3. ART 692 (3 units): Public Exhibition.

Elective Requirements

A minimum of 12 units upper division or graduate courses. (Upper division courses approved for graduate credit have been asterisked in the University *Bulletin*.) These should include:

A minimum of 6 units of art history or related history beyond the 12 units listed as prerequisites. Additional upper division art history taken as an undergraduate may be included as art history prerequisites to meet the undergraduate and graduate cumulative total of a minimum of 18 units (i.e., if prerequisites in art history total 15 units only an additional 3 units would be required in the program.) Electives may be selected from within the specializations, or from outside the department. Not more than 6 units outside the department.

Requirements for the Master of Arts — Art Education

Completion of all Program requirements as established by the student's Master's Graduate Committee to include:

A Master's Program which totals at least 30 units and where a minimum of 18 of the 30 units are graduate courses (500-600 series). Program units are divided between courses in the specialization and elective courses as follows:

Specialization Requirements

A minimum of 18 units in the area of specialization. At least 15 of the 18 units must be 500-600 series courses taken at this University.

Elective Requirements

A minimum of 12 units upper division or graduate courses. (Upper division courses approved for graduate credit have been asterisked in the University *Bulletin*.) These should include:

A minimum of 6 units of art history or related history beyond the 12 units as listed as prerequisites. Additional upper division art history taken as an undergraduate may be included as art history prerequisites to meet the undergraduate and graduate cumulative total of a minimum of 18 units (i.e., if prerequisites in art history total 15

units, only 3 units would be required in the program.)

Electives may be selected from within the specialization, from other specializations, or from outside the department. (Not more than 8 units outside the department.)

Advancement to Candidacy

Before Advancement to Candidacy an examination must be successfully completed which (1) tests knowledge of literature relative to Art Education, and (2) shows evidence of writing skills

Requirements for the Master of Arts — Art History

Completion of all program requirements as established by the Art Department and the Art History Area, and approved by the student's Graduate Committee to include:

Art Department Requirements

At least 30 units of approved graduate and upper-division courses; a minimum of 18 of the 30 units are graduate courses (500-600 series). Program units are divided between courses in Art History and elective courses as follows:

Art History Requirements

- A minimum of 18 units in Art History. At least 15 of the 18 units must be 500-600 series courses taken at this University.
- 2. Art 698 (6 units): A thesis which must receive department and University approval and acceptance (the 6 units may fulfill part of the required 15 units in 500-600 series Art History courses).

Electives

A minimum of 12 units of electives which may be selected from within Art History, from other Art Department specializations, or from outside the department. (Not more than 8 units outside the department).

Upper division courses approved for graduate credit have been asterisked in the *University Bulletin*.

Additional Advancement to Candidacy requirements for the M.A. in Art History also include:

- (1) Approval of a qualifying paper demonstrating potential for success in thesis and research writing;
- (2) A distribution of course work in prerequisite and completed graduate units comparable to that required of the B.A. in Art History at CSULB (a course or its equivalent at another institution in each of six categories). (3) A minimum score of 600 in either French or German on the Graduate School Foreign Language Exam or

pass an Art History language competency test in reading French or German. Students may seek approval from the Art History faculty to substitute tested competencies in another language other than French or German if their graduate studies would justify the alternative language.

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

The Art Department Master of Fine Arts degree program provides professional specializations under the following categories: 3-D Media: (Fiber, Metal, or Wood); Ceramics; Drawing and Painting; Illustration; Integrated 3-D Media (Fiber, Metal, and Wood); Printmaking; Sculpture; and a special emphasis program under Drawing and Painting: Intermedia. Upon approval by the Intermedia faculty, 12 units of ART 599T Intermedia will be substituted for 12 required units in Drawing and Painting.

Prerequisites:

- (1) A bachelor's degree from an accredited institution with a minimum of 24 units of upper division art comparable to those required of a major in art at this University. These should include completion of 18 units of upper division work in the area of specialization for the proposed M.F.A.;
- (2) Completion of a minimum of 12 units of Art History, 6 units of which must be upper division;
- (3) Successful completion of the Writing Proficiency Examination;
- (4) Presentation of a body of studio work to the faculty in the student's area of specialization, with emphasis on work in that 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;
- (5) A GPA of 3.0 or better in upper division art. 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 requirements in the student's M.F.A. 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;(2) A graduate program approved
- (2) A graduate program approved by the student's committee, the Graduate Advisor, the 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 for the Master of Fine Arts in Art:

Completion of all Program requirements as established by the student's Master's Graduate Committee to include:

A Master's Graduate Program which totals at least 60 units and where a minimum of 36 of the 60 units are graduate courses (500/600 series). Program units are divided between courses in the specialization and elective courses as follows:

Specialization Requirements

A minimum of 36 units in the area of specialization. At least 30 of the 36 units must be 500-600 series courses taken at this University. Specialization courses must include ART 690A and 690B (6 units), 692 (3 units) and 699 (6 units).

Upon approval of the Graduate Advisor, ART 589 or 651 may be substituted for 690B.

Elective Requirements

A minimum of 24 units upper division or graduate courses. (Upper division courses approved for graduate credit have been asterisked in the University *Bulletin*.) These should include:

A minimum of 6 units of art history or related history beyond the 12 units listed as prerequisites. Additional upper division art history taken as an undergraduate may be included as art history prerequisites to meet the undergraduate and graduate cumulative total of a minimum of 18 units (i.e., if prerequisites in art history total 15 units only an additional 3 units would be required in the program.)

Electives may be selected from within the specialization, from other specializations, or from outside the department. Not more than 6 units outside the department.

M.F.A. Transfer and Residence Policy:

Transfer credit allowable on the M.F.A. is normally not to exceed 30 units. Exceptions up to an additional 6 units may be approved for outstand-

ing students by the Department Graduate Committee.

- 2. M.F.A. candidates must complete a minimum of 18 specialized units in residence (500-600 series courses).
- 3. All transferred credit used in the M.F.A. Program must be approved by the student's Master's Graduate Committee and the Graduate Advisor.
- 4. The CSULB Master of Arts degree will normally count for a maximum of 30 units (18 in the specialization) toward the M.F.A. degree. Exceptions up to an additional 6 units may be approved for outstanding students by the Master's Graduate committee and the graduate advisor.

Advancement to Candidacy Requirements:

- (1) Classified Graduate standing;
- (2) A graduate program approved by the student's committee, the Graduate Advisor, the Art 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 Ad-
- vancement Review;
 (6) Complete minutes of graduate committee meetings with the student which total a minimum of one meeting for each semester of program units.

Courses (ART) Lower Division

100. Introductory Studio Art for Non-Art Majors (3) F,S

Basic theory and concepts in drawing, painting, color and two-dimensional design. Use of various media with emphasis on developing perceptual skills. (2 hrs. lec., 3 hrs. lab.)

110. Introduction to the Visual Arts (3) F,S

Analysis, interpretation and evaluation of art forms; styles and themes in art; influences motivating art expression. Illustrated lectures supplemented by an art museum visit. For non-art majors.

111. Fundamentals of Art (2) F,S

Comparative study, through lecture, discussions and readings, of the considerations which are basic to an understanding of art and its relation to society.

112A,B. Survey of Western Art (3,3) F,S

Chronological survey of art as an integral part of Western culture.

112A: From Prehistory through the Middle Ages (CAN ART 2)

112B: From Proto-Renaissance to 1945 (CAN ART 4)

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

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

131. Three-Dimensional Form (3) F,S

Prerequisite: ART 181 or DESN 121. Investigation and problems in the organization of three-dimensional phenomena. (6 hrs. lab.)

141. Basic Photography (2) F,S

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) F,S

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

151B. Beginning Ceramics: Wheel Throwing (3) F,S,SS

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. Beginning Life Sculpture (3) F.S

Prerequisites: ART 181. Modeling from the human figure with emphasis on composition. (6 hrs. lab.)

181. Beginning Drawing (3) F,S

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) F

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. Beginning Life Drawing (3) F,S

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

187. Beginning Painting (3) F,S

Prerequisites: ART 181, 182, or DESN 121. Introduction to painting problems using opaque media. (6 hrs. lab.) (CAN ART 10)

222. Calligraphy (2) F

Prerequisite: ART 181 or DESN 121. 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 (2) F.S.SS

Prerequisite: ART 181 or DESN 121. Introduction to historic and contemporary letterforms, with emphasis on recognition, construction and repre-

sentation. Students apply design fundamentals to the modification, combination and composition of existing typographic forms. Computers may be utilized. (6 hrs. lab.)

225. Typographic Design (3) S

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.)

263. Beginning Sculpture (2) F,S

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

271. Rendering (2) F,S

Prerequisite: ART 181 or DESN 121. Graphic visualization for convincing representation. (4 hrs. lab.)

Upper Division

310. Creativity and Cognition for Non-Art Majors (3) F,S

A course designed for students from any major field, technical or non-technical. No special training in art or special capability in art is required. Emphasis is on creative problem-solving and on bringing the process of creative thinking under better control.

320. Practical and Theoretical Issues in the Visual Arts (3) F,S

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.

326. Computer Graphics (3) F,S

Prerequisite: ART 322A and 421 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.)

330. Cross Cultural Visual Literacy (3) S

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.

335l. Art and Anthropology: Theory and Practice (3) S

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.

348A-B. Stained Glass (3-3) F

A: The study of basic stained glass techniques involved with glass bonding, leaded glass and the copper foil process. An emphasis on design application and color theory will be stressed. (6 hrs. lab.)

B: Prerequisite: ART 348A. Advanced techniques relating to the art of stained glass. Sandblasting, glass slumping, glass painting, lead casting, glass sculpture and frame making will be among the techniques covered. (6 hrs. lab.)

349A-B. Microcomputer Art Studio (3-3) F,S

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) F,S

Prerequisites: ART 112A, 112B, 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.)

360l. Mythic Visions into Art (3)

Prerequisites: ENGL 100 and upper division status. Thematic polarities in art will be examined: Chaos and Cosmos; Microcosm and Macrocosm; Life and Death; Sacred and profane in relation to expression of the same in mythology. For I.C. credit, must be taken concurrently with

375l. The Avant-Garde: Radical Change in Art and Music in the 20th Century (3) F

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 in modern society. Same course as MUS 375l.

380A. Perceptual Skills in Drawing for Non-Art Majors (3) F,S

Use of various drawing media with an emphasis on developing drawing skill. (6 hrs. lab.)

380B. Perceptual Skills in Painting for Non-Art Majors (3) F,S

Use of various painting media with an emphasis on developing a personal approach. (6 hrs. lab.)

*382A-B. Production for Fine Art (3-3) F,S

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.)

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.

*489. Special Topics in Visual Art (1-3) F,S

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) F,S

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

491B. 3-D Media Fiber/Wood/ Metal and Integrated Media: Senior Project (1) F,S

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.

*495. Field Studies in Art (1-6) F,S An opportunity to study artistic monuments, ob-

An opportunity to study artistic monuments, objects, theories, techniques at appropriate off-campus locations.

499T. Special Studies Intermedia (3) F,S

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.)

ART EDUCATION COURSES

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

300. Art and the Child (3) F,S

Experiences in visual art appropriate to developing creative self-expression according to
guidelines found in the California <u>Visual and Performing Arts Framework</u>; 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.

302. Crafts and the Child (3) F,S

Prerequisite: ART 300 Art and the Child. Experience in crafts, sculpture, printmaking and other visual art forms appropriate to developing creative self-expression according to guidelines found in the California <u>Visual and Performing Arts Framework</u>; review of the children's artistic and aesthetic development. In addition, students will enhance aesthetic perception; strengthen skills of analysis, interpretation, and judgment for application to crafts, sculpture, and other forms of art; and enrich their understanding of the historical and cultural contexts of crafts and other visual art forms. Course is not repeatable and is not applicable to craft requirement under Art. (6 hrs. lab.) Course fee required.

303. Introduction to Art Therapy (3) F

An introductory overview of the theory, literature and practice of art therapy for those interested in this field as a potential career choice or as a personal therapeutic process.

304. Art for Recreational Programs (2) F,S

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) F,S

Course Description: 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.

306. Arts and Crafts for Exceptional Children (2) F,S

Methods and materials for teaching arts and crafts to mentally retarded, educationally handicapped, visually impaired, aurally impaired, multi-handicapped, orthopedically impaired and disadvantaged children. (4 hrs. lab.)

402. Art Therapy: Theory and Practice (3) S

Prerequisite: ART 303. Study of the theory of art therapy as revealed through case histories exploring art products in relation to therapeutic process involved. Emphasis on school and clinical settings ranging from pre-school to geriatric levels.

*407. Art Practicum (3) F,S

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.

*499P. Special Studies in Art Education (3) F,S

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.)

ART HISTORY COURSES

*307. Historiography in Art (3) S

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) F

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) F

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.

*364. History of Ceramics (3) S

Materials and techniques as they relate to the historical development of pottery styles and forms.

*365. History of Prints and Drawings (3) F

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.

*366. History of Textiles (3) F

Historical survey textile structure and design as they relate to use, materials and invention of processes in determining character, quality and stylistic concepts.

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

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

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

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) S Arts of Northern Europe from Merovingian

through the Romanesque periods.

410./598D. Gothic Art (3) F,S alternate even years

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) F

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

416./598E. Greek Art (3) F, Odd Yrs

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) S

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.

423./598F. Early Renaissance Art in Italy (3) F

Painting, sculpture and architecture in Italy during the 14th and 15th centuries: Giotto to Botticelli: Pisano to Verrochio.

424./598G. High Renaissance Art in Italy (3) S

Painting, sculpture and architecture in Italy during the 16th century. Classical High Renaissance and Mannerists styles; Leonardo da Vinci, Michelangelo, Bramante; Titian and Venetian painters, Sansovino and Palladio. Florence, Venice and Rome.

425./598H. Northern Renaissance Painting (3) S

Renaissance painting in Northern European Netherlands, Burgundy, France, Germany and Austria between 1400-1570. From French manuscript illuminators (Limbourg Brothers), Van Eyck to Breughel, Durer to Holbein, Fouquet to Clovet. Special attention to iconography.

426./598J. Baroque and Rococo Trends in Art (3) F

Mainstreams of art in Italy, Holland and Germany in the 17th and 18th centuries. Emphasis on art of Berinini, Borromini, Carravagio, Rembrandt, Vermeer, Piranese, 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) S

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.

436./598M. Neo-Classicism to Romanticism, 1789- 1850 (3) F

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) S

Analysis of the development of Impressionism and Post-Impressionism in France from 1850-1900.

438./598P. Twentieth Century Art to 1945 (3) F

Examination of Abstraction, Non-Objective art, Expressionism, Dada and Surrealism.

439./598Q. Twentieth Century Art from 1945 (3) S

Examination of Pop Art, Happenings, Minimal Art, Art and Technology, Environmental, Concept, Performance and Video Art.

455./598R. Traditional Art of Africa: A Thematic Approach (3) F

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) S

Prerequisite: ART 335l 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) F

A survey from the Olmec to the Aztec of the art and architecture of Mexico and adjacent areas prior to the Spanish conquest.

465./598U. Ancient Art of the Near East (3) S

Prehistoric, Near Eastern, Egyptian and Aegean

466./598V. Buddhist Art of India and S.E. Asia (3) F

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) S

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) F

The formation and development of Chinese art from the third millennium to the 10th century A.D.

469./598Y. Later Chinese Art (3) S 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

470./598Z. Japanese Art (3) F

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.

497. Special Studies in Art History (3) F,S

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.

*498. Independent Studies in Art History (3) F,S

Prerequisite: Senior Art History Major or consent of instructor. Opportunity for outstanding students to undertake independent art historical investigations. Limited to 3 units in one semester and a total of 6 units.

CERAMICS

*341A. Intermediate Ceramics: Handbuilding (3) F,S

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

*341B. Intermediate Ceramics: Wheel Throwing (3) F,S

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

*343A. Ceramics Sculpture (3) F,S Prerequisites: ART 341A. Advanced studies in ceramic sculpture. (9 hrs. lab.)

*343B. Advanced Wheel Throwing (3) F,S

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

*352A. Ceramics: Glaze Technology (3) F

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) S

Prerequisites: ART 151A or 151B. The use of plaster molds for making ceramic art including press molds, slip casting, and jiggering. (6 hrs. lab.)

*451A-B. Advanced Ceramics (3-3) F,S

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) F

Prerequisites: ART 341A or 341B. Ceramic equipment including kilns, their design and construction. (9 hrs. lab.)

453. Seminar in Ceramic Arts (3) F,S

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.

491A. Ceramics: Senior Project (1) F,S

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.

*499A. Special Studies in Ceramics (3) F,S

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.)

DRAWING AND PAINTING

381. Intermediate Drawing (3) F,S Prerequisites: ART 181; ART 182 or DESN 121. Problems and concepts in drawing using a

variety of media. (6 hrs. lab.)
383. Life Painting (3) F,S

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) F,S

Prerequisites: ART 181, 184, 182 or DESN 121. Continued study in drawing from the human figure from direct observation. (6 hrs. lab.) Course fee required.

*385. Watercolor Painting (3) F,S Prerequisites: ART 181, 187; ART 182 or DESN 121. Nature and use of the watercolor media. (6

*387. Painting (3) F,S

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

*388. Mural Painting (3) F,S

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) F,S

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.

*481. Advanced Drawing (3) F,S 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) F,S

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) F,S

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) F,S Prerequisite: ART 387. Continued study in studio painting, exploring advanced modes of pictorial structure with emphasis on individual expression.

*492F. Concentrated Studies in Life Drawing (3) F,S

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) F,S

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) F,S

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. Traditional grading only, (6 hrs. lab.)

*499D. Special Studies in Drawing (3) F,S

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.)

*499K. Special Studies in Painting (3) F,S

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.)

FIBER

*327A-B. Surface Design (3-3) F,S

Prerequisites: ART 181, 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.)

*328A. Beginning Fiber Structures (3) F,S

Prerequisites, ART 131, 181, 182, 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) F,S

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.)

*428A-B-C. Weaving (3-3-3) F,S

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 idom. For ART 428B and 428C 3-D Media/Fibers major or consent of the instructor. (6 hrs. lab.)

*430. Fiber Art: Paper (3) F,S

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.)

*499N. Special Studies in Fiber (3) F.S

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.)

ILLUSTRATION AND BIOMEDICAL ART

*371A-B. Illustration (3-3) F,S

Prerequisites: (371A) ART 111 or 161, 112 A,B, 131, 181, 184, 187, DESN 121; (371B) ART 271, ART 223. Editorial and advertising drawing; professional media, skills and techniques survey. (6 hrs. lab.)

*372. Anatomy for Artists (2) F,S

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) F,S

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) F,S

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.)

*471A-B. Advanced Illustration (3-3) F,S

Prerequisite: ART 371B. Illustration in part from live models. (6 hrs. lab.) Course fee required.

*499F. Special Studies in Illustration (3) F,S

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.)

METAL

355A. Enameling (3) F,S

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) F,S

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) F

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. Jewelry (3-3) F,S

Prerequisites, ART 131, 181, 182, 187. The design and creation of jewelry. (6 hrs. lab.) Course fee required.

*358A-B. Metalsmithing (3-3) F

Prerequisites: ART 357A, TED 282. The design and creation of flatware and hollowware. (6 hrs. lab.)

359A. Architectural Metalwork and Blacksmithing (3) F,S

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) F,S

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.

458A,B. Advanced Metalsmithing/ Jewelry and Enameling (3) F,S

Prerequisites: ART 350, 355B, 357B, 358B or consent of instructor. Individual problems in metalsmithing, jewelry, enameling and architectural metalwork and blacksmithing. (6 hrs. lab.)

*499J. Special Studies in Metalsmithing and Jewelry (3) F,S

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.)

MUSEUM STUDIES

*435. Introduction to Museums (3) F,S

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.

*499Q. Special Studies in Museum Studies (3) F,S

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.)

PHOTOGRAPHY

*340. Intermediate Photography (3) F,S

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 (4 hrs. lab.)

*342. Color Photography (2) F,S

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. (5 hrs. lab.)

*344. Alternative Photographic Processes (3) F

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.)

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

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.

*413. Photo Marketing/Portfolio (2) S

Prerequisites: ART 340, a minimum of four additional upper division units in photography. The art and craft of preparing a professional photographer's portfolio and the necessary techniques to display photographic skills, utilizing the portfolio as the chief marketing tool.

414./514. Documentary Photography (3) F

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.)

*444. Fine Print Photography (3) F,S

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.)

*446. Photographic Senitometry (3) S

Prerequisites: ART 340. Emphasizes photo graphic control of exposure, development and printing through sensitometric procedure. Examines control techniques such as the Zone, Sanders, and Davis systems. Lab and field experience in exposure, development and printing will be utilized to conform sensitometric data. (Lec. 2 hrs., lab 2 hrs.)

*447. Photography Studio Specialties (3) F

Prerequisite: ART 340. A course designed to give exploration of camera and laboratory techniques as applied to studio work in photography. (4 hrs. lab.)

*448. Nature Photography (2) F,S

Prerequisite: ART 340 or consent of instructor. Course directed toward a representative sampling of imagemaking within the world of nature. Students will work in color and black and white. Will include infrared photography and macro techniques. Field trips will be utilized. (4 hrs. lab.)

*449. Experimental Photography (2) S

Prerequisite: ART 340. Course work to generate experimental solutions to conceptual visual design problems. Both color and b/w films will be used for studio and location photography. (4 hrs. lab.)

*499V. Special Studies in Art Photography (3) F,S

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.)

PRINTMAKING

370. Printmaking (3) F,S

Prerequisites: ART 112A, 112B, 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.)

*376. Printmaking: Relief Printing (3) F,S

Prerequisites: ART 112A, 112B, 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) F,S

Prerequisites: ART 112A, 112B, 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) F,S

Prerequisites: ART 112A, 112B, 181, 187. Instruction in intaglio printing techniques and image development, including etching, engraving, drypoint, aquatint and alternative platemaking methods. In black and white and color. (6 hrs. lab.)

*379. Printmaking: Lithography (3) F,S

Prerequisites: ART 112A, 112B, 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.)

*475. Printmaking: Photo Processes (3) F,S

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. Advanced Printmaking (3) F,S

Prerequisites: One of the following: ART 376, 377, 378, 379 or consent of instructor. Continued study in one of the four areas of printmaking, with emphasis on technical and conceptual develop-

ment. May be taken for a maximum of 6 units in different topics. (6 hrs. lab.)

*499R. Special Studies in Printmaking (3) F,S

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.)

SCULPTURE

*361. Life Sculpture (3) F,S

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) F,S

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) F,S

Prerequisites: ART 131, 161, 181. Construction and use of flexible and plaster molds. (6 hrs. lab.)

*363. Sculpture: Carving and Fabrication (3) F,S

Prerequisites: ART 131, 161, 181 or consent of instructor. Composition in sculpture utilizing stone and woodcarving, metal and wood fabrication. (6 hrs. lab.)

*459. Sculpture Foundry: Shell Casting (3) F,S

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) F,S Prerequisites: ART 361, 362A,B, 363 or consent of instructor. Advanced composition in sculpture. (6

*499M. Special Studies in Sculpture (3) F,S

hrs. lab.)

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.)

VISUAL COMMUNICATIONS GRAPHIC DESIGN

321. Graphic Production (Non-Major) (3) F,S,SS

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) F,S,SS

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) F

Prerequisites: ART 322A or consent of instructor. 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.)

*324. Film Animation (Non-Major) (3) F,S

Prerequisite: ART 322A or consent of instructor. Design and production of color, super 8 mm and sound synchronized 16 mm animated films. (6 hrs. lab.)

*325. Packaging Design (3) F

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

329. Advertising Design (3) F

Prerequisites: ART 322A, 421; DESN 121, and consent of instructor. This course will explore small space advertising, television, and outdoor billboards from the conceptual stage through comprehensive layouts. (9 hrs. lab.)

*420. Visual Communication Design Workshop (3) F,S

Prerequisite: Consent of instructor and portfolio review. 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. (9 hrs. lab.)

*421. Visual Communications Design/Comping Skills (3) F,S

Prerequisite: DESN 121; ART 322A. 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.)

*422A-B. Advanced Visual Communications Design (3-3) F,S

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.)

*442. Internship in Visual Communications (3) F,S

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.)

*499S. Special Studies in Visual Communications Design (3) F,S

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 brs. lab.)

WOOD

*354A-B Wood (3-3) F,S

Prerequisites, ART 131, 181, 182, 187. Wood-working processes techniques and concepts in the design and making of utilitarian art objects. (6 hrs. lab.)

*454A-B. Handcrafted Furniture (3-3) F,S

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.)

*499B. Special Studies in Wood (3) F,S

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.)

Graduate Division

509A-B. Studio Problems in Art Education (2-2) F,S

Prerequisite. Art Education major or consent of instructor. Advanced individual graduate problems in art education with projects related to specific learning situations.

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

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

514./414. Documentary Photography (3) F

Prerequisites: ART 340. History, theory, practice, and production of still documentary photographic works with emphasis on the photograph as an in-

strument for social influence and change. (2 hrs. lec., 2 hrs. lab.)

542. Internship in Museum Studies (3) F,S

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.)

545A-B. Museum-Gallery Practices (3-3) F,S

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.

551A. Advanced Ceramics — Graduate (3) F,S

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.)

551B. Advanced Ceramics — Graduate (3) F,S

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)

554A-B. Handcrafted Furniture (3-3) F,S

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.)

558A. Metalsmithing, Jewelry and Enameling (3) F,S

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.)

558B. Metalsmithing, Jewelry and Enameling (3) F,S

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.)

559. Sculpture Foundry — Advanced Shell Casting (3) S

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.)

564A-B. Advanced Wood Studio (3-3) F,S

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.)

575. Printmaking: Advanced Photo Processes (3) F,S

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.)

580. Printmaking: Advanced Studio (3) F,S

Prerequisites: Print major or consent of instructor. Graduate level work in one of the four areas of printmaking, stressing directed individual research and image development. May be repeated for a maximum of 6 units with different topics. (6 hrs. lab.)

589. Special Problems in Visual Art (3) F,S

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.

590. Special Problems in Studio Art (1-3) F,S

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. A. Visiting Artists

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

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

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

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

598C./409. Romanesque Art (3) S Arts of Northern Europe from Merovingian through the Romanesque periods.

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

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

598E./416. Greek Art (3) F, Odd Years

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.

598F./423. Early Renaissance Art in Italy (3) F

Painting, Sculpture and architecture in Italy during the 14th and 15th centuries: Giotto to Botticelli; Pisano to Verrochio.

598G./424. High Renaissance Art in Italy (3) S

Painting, sculpture and architecture in Italy during the 16th century. Classical High Renaissance and Mannerist styles; Leonardo da Vinci, Michelangelo, Bramante; Titian and Venetian painters. Sansovino and Palladio. Florence, Venice and Rome.

598H./425. Northern Renaissance Painting (3) S

Renaissance painting in North European Netherlands, Burgundy, France, Germany and Austria between 1400-1570. From French manuscript illuminators (Limbourg Brothers), Van Eyck to Breughel, Durer to Holbein, Fouquet to Clovet. Special attention to iconography.

598J./426. Baroque and Rococo Trends in Art (3) F

Mainstreams of art in Italy, Holland and Germany in the 17th and 18th centuries. Emphasis on art of Bernini, Borromini, Carravaggio, Rembrandt, Vermeer, Piranese, Guardi. Examination of representative examples of the art of the period in the Norton Simon and Getty museums.

598K./427. Baroque Art: Court and Middle Class (3) S

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.

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

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) F

Examination of Neo-Classicism, Realism, Romanticism, photography and the academic tradition in art and culture of Europe from 1789-1850.

598N./437. Impressionism to Post-Impressionism, 1850-1900 (3) S

Analysis of the development of Impressionism and Post-Impressionism in France from 1850-1900.

598P./438. Twentieth Century Art to 1945 (3) F

Examination of Abstraction, Non-Objective art, Expressionism, Dada and Surrealism.

598Q./439. Twentieth Century Art from 1945 (3) F

Examination of Pop Art, Happenings, Minimal Art, Art and Technology. Environmental, Concept, Performance and Video Art.

598R./455. Traditional Art of Africa: A Thematic Approach (3) F

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.

598S./456. American Indian Art: Western Perspectives (3) S

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.

598T./457. Pre-Columbian Mexican Art (3) F

A survey from the Olmec to the Aztec of the art and architecture of Mexico and adjacent areas prior to the Spanish conquest.

598U./465. Ancient Art of the Near East (3) S

Prehistoric, Near Eastern, Egyptian and Aegean art.

598V./466. Buddhist Art of India and S.E. Asia (3) F

The formation and development of Buddhist art in Indian and its subsequent metamorphoses in Cambodia, Thailand and Indonesia will be examined.

598W./467. Hindu and Islamic Art of India (3) S

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.

598X./468. Early Chinese Art (3) F The formation and development of Chinese art from the third millennium to the 10th century A.D.

598Y./469. Later Chinese Art (3) S
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 ex-

598Z./470. Japanese Art (3) F

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.

599. Studio Problems in Art (3) F,S

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, (j) life drawing, (m) sculpture, (n) fiber, (q) museum studies, (r) printmaking, (s) visual communications, and (t) intermedia. Intermedia units will apply to the drawing and painting specialization. (6 hrs. lab.)

599V. Studio Problems in Art Photography (3) F,S

Prerequisite: Graduate student in Photography or consent of instructor. Advanced individual graduate projects, with faculty supervision, in an area of art specialization. Limited to 6 units in one semester and a total of 12 units. (6 hrs. lab.)

601A-B. Seminar in Art Education (3-3) F,S

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) F,S

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) F,S

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.

690A. Graduate Seminar in Studio Art (Critical Studies) (3) F

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) S

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) F,S

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) F,S

Prerequisite: Graduate student or consent of instructor. Independent studies in creative studio.

695. Field Problems in Art (1-6) F,S

Opportunity to study artistic monuments, objects, theories, techniques or literature at appropriate off-campus locations. May be repeated for a maximum of 6 units.

697. Directed Studies (1-3) F,S

Prerequisite: Advanced standing graduate student or consent of instructor. Independent studies in technical and/or historical aspects of art.

698. Thesis or Project (1-6) F,S

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) F,S

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.)

347. http://demonstrations/indemonstrations/indemonstrations/index.

Pyogram (2) S R (S) some Pyogram (2) S R (S) some Pyogram (2) S R (S) S (S)

Department Chair: Joan Schlaich
Department Office: Dance Center
Telephone: 985-4747
Faculty: Professors: Pat Finot, Joan
Schlaich, Tryntje Shapli, Rebecca
Wright; Associate Professors: Jeff
Slayton; Assistant Professor:
Susan McLain-Smith.
Department Secretary:

Melody Stott

The Department

Students desiring information should contact the department office for referral to one of the faculty advisors. The Dance Department provides an in-depth dance major program of studies including history and theory, choreography, and technique with emphasis on modern dance technique, composition and performance and with supporting coursework in ballet, jazz, and tap dance. The curriculum is designed to give students a basic dance background which prepares them as a performer in concert dance companies, television or in films, a choreographer, or as a teacher at the secondary, community college or university level in both public and private schools. The curriculum prepares students for graduate programs in dance. It gives the general education student and the student in closely related areas experience in dance as an art form. Nonmajor studio classes in ballet, modern dance, jazz and tap dance are open to all students on campus. Several courses are offered which meet the General Education requirements in categories C., E. and I.C. The CSULB dance major is one of five dance degree programs approved in the CSU system and the only BFA and MFA. 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 Theatre. 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 in October, January, March and August. 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.

Requirements for the Bachelor of Arts in Dance (code 2-5230)

Units required: 61

Lower Division: DANC 100, 112A, 112B, 114A, 114B, 120, 131, 212A, 212B, 220, A/P 202.

Upper Division: DANC 320, 331, 350, 360, 442A, 442B, 485, 488, 375 or 470, 380A or 380B, 381A OR 381B, 480A or 480B, 481A or 481B.

Bachelor of Fine Arts in Dance

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, in musical theatre, and in 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 advanced technical and/or choreographic skill in dance.

Requirements for the Bachelor of Fine Arts in Dance (code 4-5230)

The M.F.A. degree in Dance is a 60 unit degree. Options are in Performance, Choreography or Performance/Choreography.

Performance

45 to 47 units to include: DANC 412A, 412B, 414A, 414B, 512A, 512B, 514A, 514B, 562, 580A, 580B, 585A, 585B, 589, 595, 597, 642, 696, 699;

Electives: 13 to 15 units selected from DANC 518, 528, 520B, 520C, 520D, 525, 531, 540, 545, 583A, 583B, 591A, 591B, 599 or up to 15 units selected from other departments with approval of advisor.

Choreography

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;

Dance College of the Arts

Electives: 11 to 13 units selected from DANC 510C, 510D, 514A, 514B, 518, 531, 540, 545, 562, 581A, 581B, 595, 599 or up to 13 units selected from other departments with approval of advisor.

Performance/Choreography

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, 531, 540, 545, 562, 581A, 581B, 599 or up to 12 units selected from other departments with approval of advisor.

Minor in Dance (code 0-5230)

Requirements:

Lower Division: DANC 112A, 112B, 114A, 120, 220,

Upper Division: DANC 320, 331, 442A or B, 488 and a minimum of 1 unit of DANC 380A or B or DANC 480A or B and one unit of DANC 381A or B or DANC 481A or B.

Teaching Credential:

See advisor.

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 26 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.
- Advancement to Candidacy

 Attain fully classified status
 Remove all undergraduate deficiences
- 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
- e. 3.0 minimum G.P.A.

Requirements for the Master of Fine Arts in Dance:

The M.F.A. degree in Dance is a 60 unit degree. Options are in Performance, Choreography or Performance/Choreography.

Core courses: 15 to 21 units to include: DANC 531, 580, 585, 589, 597, 642, 696, 699.

Performance

Courses required for performance option: DANC 412A, 412B, 414A, 414B, 512A, 512B, 514A, 514B, 562, 595.

Electives: DANC 518, 520A, 520B, 520C, 520D, 525, 540, 545, 581A, 581B, 591, 599, and up to 15 units selected from other departments with approval of advisor.

Choreography

Courses required for choreography option: DANC 510, 520A, 520B, 520C, 520D, 525, 591.

Electives: DANC 514A, 514B, 518, 540, 545, 562, 581A, 581B, 595, 599 and up to 15 units selected from other departments with approval of advisor.

Performance/Choreography

Courses required for performance/choreography option: DANC 412A, 412B, 414A, 414B, 520A, 520B, 525, 591, 595.

Electives: DANC 512A, 512B, 514A, 514B, 518, 520C, 520D, 540, 545, 562, 581A, 581B, 599, and up to 15 units selected from other departments with approval of advisor.

Courses (DANC)

Dance Technique

Note: It is expected that dance majors will take technique courses in sequence. Major/minor students must 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.)

All Dance majors must be in a minimum of one modern dance technique or ballet technique class daily. Dance majors must be in a minimum of one modern dance or ballet technique class at CSULB every semester of enrollment.

Lower Division

100. Orientation to Dance (2) F,S

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.

111A. Beginning Modern Dance (2) F,S

Basic skills and techniques of modern dance. Not open to dance majors. (4 studio hours.)

112A-B. Modern Dance Technique I, II (3-3) F,S

A: Corequisite: DANC 100 and 381A or B. Dance majors and minors. Basic skills and techniques of modern dance. May be repeated once for Credit/No Credit grading. (6 studio hours.)

113A. Beginning Ballet (2) F,S Basic skills and techniques of ballet. Not open to

dance majors. (4 studio hours.) 114A-B. Ballet Technique I, II (3-3)

F,S

Dance majors and minors. Basic skills and techniques of ballet. May be repeated once for Credit/No Credit grading. (6 studio hours.)

115A. Beginning Jazz (2) F,S

Not open to dance majors. Basic skills and techniques of jazz. May be repeated once for credit. (4 studio hours.)

115B. Intermediate Jazz (2) F,S

Not open to dance majors. Prerequisite: 115A or consent of instructor. Intermediate skills and techniques of jazz dance. (4 studio hours.)

116A-B. Jazz Technique I, II (2-2) F,S

Prerequisite: Open to dance majors only. Basic theory and practice of modern jazz dance. May be repeated once for Credit/No Credit grading.

117. Tap Dance I (2) F,S

Basic technique in the tap dance idiom, time steps, stylistic patterns, rhythmic patterns and tap combinations.

120. Improvisation I (2) F

Use of improvisation as an introduction to structural form; individual and group problems. (4 studio hours.)

131. Introduction to Music for Dance (2) F

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.

200. Viewing Dance (3) F,S

Introduction to contemporary dance theatre through viewing dance films (modern dance, ballet and ethnic), dance performances, and lecture/discussions on dance.

212A-B. Modern Dance Technique III, IV (3-3) F,S

Dance majors and minors. Increased skill in the techniques of modern dance. May be repeated once for Credit/No Credit grading. (6 studio hours.)

220. Elements of Solo Choreography (3) S

Prerequisite or Corequisite: Dance 131. Theory and practice in the basic elements of dance composition. (Lecture 1 hour, 4 studio hours.)

Upper Division

312A-B. Modern Dance Technique V, VI (3-3) F,S

Prerequisite: Dance major or minor. Increased skill in the technique of modern dance. May be repeated once for Credit/No Credit grading. (6 studio hours.)

313. Modern Dance Workshop (2) F,S

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.

315. Ballet Workshop 2 F,S

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.

316. Jazz Technique III (2) F.S

Prerequisite: 116B or consent of instructor. Advanced theory and practice in jazz dance. May be repeated once for Credit/No Credit grading.

318. World Dance (1-3) F,S

Theory and technique of various ethnic dance forms. May be repeated up to 12 units, provided it is with a different instructor each time. (Lecture 1 hour, 4 studio hours.)

320. Small Group Composition (3)

Prerequisite: DANC 220. Development of theme and style in small group studies. (Lecture 1 hour, 4 studio hours.)

331. Music for Dance (3) S

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.)

347. Pilates-based Conditioning Program (2) S

Prerequisite: DANC 247. Intermediate level Pilates-based conditioning program for dance majors employs a prescribed series of exercises performed on the floor mat and augmented to various apparatus use. Traditional grading only.

350. Dance Notation I (3) F

Prerequisite: DANC 131. Theory and practice of notating movement through Labanotation. (Lecture 1 hour, 4 studio hours.)

*360. Prevention and Care of Dance Injuries (3) F

Prerequisite: A/P 202. Factors in injury prevention. Principles of injury care.

*361. Body Placement for the Dancer (2) F

Prerequisites: Open to Dance Majors and Minors. Body Placement and corrective exercises for modern dance and ballet classes. Credit/No Credit grading only.

362. Dramatic Concepts for Dancers (2) F.S

Prerequisite: Dance major or minor. Use of acting techniques to provide dramatic content to dance movements.

373I. Nonverbal Communication: Interaction of Mind and Body (3) F,S

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 3731.

375. Dance for Children (3) F

Prerequisites or corequisite: 212A. 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.

379. Exploring Dance: Theory and Practice (3) F,S

The historical and cultural background of dance, designed to develop critical thinking techniques for viewing dance, and to participate in the process of dance in order to gain aesthetic perception and self expression as outlined in the California Framework for the Visual and Performing Arts and Guidelines, Dance Component, grades K-8.

380A,B. Dance Performance (1,1) F,S

Prerequisite: Open to Dance Majors and Minors only. Participation as a performer and/or choreographer in Dance Department-approved, University-sponsored production. Concert participation is by audition only. A combination of 380A,B and 480A,B may be repeated for a total of eight units.

381A,B. Dance Production Technical (1,1) F,S

Corequisite: DANC 112A. 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.

398. Fieldwork in Dance Elementary (1-3) F,S

Prerequisite: DANC 375. 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) F,S

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. Modern Dance Technique VII, VIII (3-3) F,S

Prerequisite: Dance major or minor. Increased skill in the technique of modern dance (4-6 studio hours). Must be taken the first time for a grade and may be repeated once for Credit/No Credit grading.

*414A-B. Ballet Technique III, IV (2-2) F,S

Dance major or minor. Advanced skills in the techniques of ballet. May be repeated once for Credit/No Credit grading. (4 studio hours.)

*415. Ballet Pointe Class (1) F,S Prerequisite: DANC 114A or consent of Instructor. Development of the technique of dancing in

pointe shoes. May be repeated once for credit. *416. Ballet Variations (2) S

Prerequisites: DANC 114B. 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.

420. Advanced Composition (3) S

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.)

435l. Dance in Film (3) F

Examination of the relationship between dance and film; study of historical and theoretical connections placed in both aesthetic and cultural contexts.

440./540. Historical Dance Styles (3) F,S

Theories and techniques of various historical dance forms and styles of the Western tradition. Selected dances from the 15th C. Italian Renaissance through 18th C. French Baroque. Traditional grading only.

442A. History of Dance to 1925 (3)

Development of dance from primitive origins through Diaghilev.

442B. History of Dance Since 1925 (3) S

Prerequisite: DANC 442A. Development of Dance from the origins of modern dance to the present.

445. Movement Analysis (3) F

Prerequisite: 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.

470. Dance Methodology (3) S

Prerequisite or corequisite: DANC 212A. Methods for teaching dance in order to prepare for teaching in studios, recreation departments, companies, institutions, public schools, colleges and universities.

480A,B. Dance Performance (1,1) F,S

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

481A,B. Dance Production-Technical (1,1) F,S

Technical participation in Dance Departmentsponsored productions. A combination of 381A,B and 4381A,B may be repeated for a total of 8 units.

482. Intermedia Festival (2-3) S

Prerequisite: Audition. Combination repertory/composition class which culminates in a performance in collaboration with other departments of the College of the Arts. Repeatable to a maximum of 6 units with different topics.

483A,B. Performance Tour (3,3)

Prerequisite: Open to Dance Majors and Minors only. Students will audition at first class meeting. Development and performance of informal concerts for elementary, middle, and secondary schools. Students must enroll in 483A,B in consecutive semesters starting in Fall. May be repeated once for credit. Traditional grading only.

*485. Contemporary Dance and the Fine Arts (3) S

Prerequisite: DANC 331 or consent of Instructor. Advanced theory and practice relating contemporary dance to the fine arts.

488. Organization of Dance Production (3) S

Prerequisite: DANC 212A. Analysis and practice in the production elements of dance concerts. Course is coordinated with a department concert.

490. Special Topics in Dance (1-3) F,S

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 depart-

ment chair. Topics will be announced in the Schedule of Classes. (2-6 studio hours.)

491A. Design for Dance Lighting (3) S

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.

491B. Design for Dance Costuming (3) F

Prerequisites: Upper division status or permission of instructor. Designing and constructing costumes for dance.

492. Introduction to Dance Therapy (3) S

Readings and discussion of the history and philosophy of dance/movement as a therapeutic modality and its role as a profession in the field of mental health.

493. Computers for Dance (3) F,S

Prerequisite: 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.

495. Repertory (1-3) F,S

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.

499. Directed Studies in Dance (1-3) F,S

Prerequisite: Consent of Instructor. Independent projects and research of advanced nature in any area of dance. May be repeated for a maximum of six units. Credit/No Credit grading only.

Graduate Division

510A,B,C,D. Technique Laboratory (3,3,3,3) F,S,

MFA Choreography option students are required to take a technique class each semester. However, their technical ability will vary. By registering for Dance 510, they will be assigned to an appropriate level technique class and additional work will be required as appropriate to a graduate level course.

512A. Modern Dance Technique IX (3) F,S

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 6 units.

512B. Modern Dance Technique X (3) F,S

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 6 units.

514A. Ballet Technique V (3) F,S

Prerequisite: DANC 414B or equivalent. Graduate level skills in the technique of ballet. Traditional grading only.

514B. Ballet Technique VI (3) F,S

Prerequisite: DANC 414B or equivalent. Graduate level skills in the technique of ballet. Traditional grading only.

518. Ethnic Dance Forms II (3) S

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.

520A. Choreography A (3) F

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.

520B. Choreography B (3) S

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.

520C. Choreography C (3) F

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.

520D. Choreography D (3) S

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.

525. Dance in Video/Film (3) F,S Basic camera techniques. Exploration of move-

ment within the confines of the camera. Perspective in filming/taping dance.

531, Music for Dance II (3) F,S

Prerequisite: 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.

540./440. Historical Dance Styles (3) F.S

Theories and techniques of various historical dance forms and styles of the Western tradition. Selected dances from the 15th C. Italian Renaissance through 18th C. French Baroque. Traditional grading only.

545. Movement Analysis (3) F,S

Prerequisite: A/P 107. Study of the principles underlying movement and their application. All areas of movement study. Traditional grading only.

562. Dramatic Concepts for Dancers II (2) F,S

The application of the techniques of acting to the needs of dance. Traditional grading only.

580A,B. Dance Performance (1) F,S

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.

581A. Performance Tour II (3) F

Prerequisite: Audition. The course is to give graduate students the experience of developing dance programs which use language and movement materials appropriate to audiences of elementary or secondary school children. It will also provide the advanced student the experience of performing for young audiences. Traditional grading only. Course may be repeated for a maximum of 6 units.

581B. Performance Tour II (3) S

Prerequisite: Audition. The purpose of the course is to give graduate students the experience of developing dance programs which use language and movement materials appropriate to audiences of elementary or secondary school children. It will also provide the advanced student the experience of performing for young audiences. Traditional grading only. Course may be repeated for a maximum of 6 units.

585A,B. Dance Performance (1) F.S

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.

589. Works in Progress (1-2) F,S

Prerequisite: DANC 420A, DANC 562. Specialized individual performance projects: Preparation for MFA thesis/project. Traditional grading only. Course may be repeated for a maximum of 4 units.

590. Special Topics (3) F,S

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/Mirrors. Course may be repeated for a maximum of 6 units with different topics.

591B. Design for Dance Costume II (3) S

The course is to provide graduate students with advanced coursework in designing costumes for dance, and for students to develop the skills necessary to execute the designs. Traditional grading only.

592. Special Topics (3) F,S

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.

595. Repertory (1-3) F,S

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.

597. Criticism and Analysis of Dance (3) F,S

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) F,S

Prerequisite: Consent of Instructor. Individual research or project under the guidance of a faculty member. May be repeated for a maximum of six units. Credit/No Credit grading only.

642. Seminar in Dance History (3) F.S

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.

696. Research Methods (3) F,S

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 (3 or 6) F,S

Prerequisite: DANC 696, Approval of student's project/thesis and consent of student's graduate committee. 6 units to be scheduled as 6 units in one semester or two semesters at 3 units each semester.

141

DesignCollege of the Arts

Department Chair:

Herbert H. Tyrnauer

Department Office: Fine Arts 3,
Room 100

Telephone: 985-5089

Faculty: Professors: Joan T.
Hoff-Templeton, Michael J.
Kammermeyer, Bhupendra K.
Singhal, Herbert H. Tyrnauer, Jerry
W. Yates; Associate Professors:
Mamdouh Fayek, Lydia E. Sondhi;
Assistant Professor:
Maureen Sullivan.

The Department

Department Secretary:

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, and the Master of Fine Arts, with 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 involving 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 his 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. Student demand for these programs is high. Requirements for admission and degree requirements are given below.

Bachelor of Fine Arts

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 70 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

Requirements for the Bachelor of Fine Arts in Art:

Option in Interior Design (code 4-5854)

Lower Division: ART 112A, 112B; 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 and 11 units of upper division electives outside of major as approved by major advisor.

Bachelor of Science in Industrial Design (code 3-5853)

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.

Requirements for the Bachelor of Science in Industrial Design:

Lower Division: ART 112A, 112B; 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 elec-

tives, 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:

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 for the Master of Arts:

Completion of all requirements established by the student's graduate advisory committee, including:

- (1) A minimum of 30 units of approved upper division and graduatelevel 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 for the Master of Fine Arts Specialties:

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 upperdivision 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 30 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)

DESN 120A-B. Fundamentals of Design (3) F,S,SS

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.

Lower Division

132A-B. Perspective & Rendering Systems (3) F,S,SS

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) F,S

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) F,S

Prerequisites: DESN 141. Functional, human, and aesthetic factors of space planning for interiors. (Laboratory 6 hours.) Traditional grading only.

220. Principles of Color (2) S

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) F,S,SS

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) F,S,SS

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) F,S

Prerequisites: DESN 120B, 132B, 142, 151. Building of interior/architectural models for construction, design analysis and presentation. (Laboratory 6 hours.) Traditional grading only.

243. Materials of Interiors (3) F

Prerequisites: DESN 1208, 1328, 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) F,S

Prerequisites: DESN 120B, 132B, 143. 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) F

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) F,S

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) F,S,SS

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, 3D modeling and paint programs. (6 hours laboratory.)

*331A-B. Industrial Design (3) F.S

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) F

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) F.S

Prerequisites: for 341A: DESN 232, 243; ART 112A, 112B; 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) F,S

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) F,S

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) F,S

Prerequisites: ART 112A, 112B; 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) F,S

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) F,S

Prerequisites: DESN 343, 350A. Advanced work in computer aided design for interiors and architecture. (6 hours laboratory.) Traditional grading only.

367. History and Theory of Architecture (3) F

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) S

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) S

Study of the history of furniture, finish materials, and accessories. (Lecture-discussion 3 hrs.) Traditional grading only.

370. Design in Contemporary Society (3) F,S

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 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) F,S

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) S

Prerequisites: DESN 232 or consent of instructor. Advanced idea generation and visualization for industrial design. (6 hours laboratory.)

*435. Furniture Design (3) F,S

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.)

440. Professional Practices for Interior Architecture (3) F,S

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) F,S

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) F,S

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) F,S

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.)

*489. Special Topics in Design Theory (1-3) F,S

Prerequisite: Consent of instructor. 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.

*490. Special Topics in Design (1-3) F,S

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 laboratory.)

*495. Field Studies in Design (1-6) F.S

An opportunity to study design movements, objects, theories, techniques at appropriate offcampus locations. Up to six units of cumulative credit may be earned in DESN 495.

*497. Special Studies in History of Design (3) F,S

Prerequisite: Consent of instructor. Opportunity for extensive work under faculty supervision on individual problems in history of design. May be repeated to a total of six units.

*499C. Special Studies in Display and Exhibition Design (3) F,S

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) F,S

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) F,S

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.)

Graduate Courses

541. Design of Human Environments (3) S

Prerequisites: H EC 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) F,S

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) F,S

Prequisite: 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 ara. Areas will be designated by letter at the time of registration: (c) display and exhibition, (g) industrial design, and (h) interior design. (6 hours laboratory.)

690A. Seminar in Design (3) F

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) S

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) F,S

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. There 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) F,S

Prerequisite: Consent of instructor. Independent studies in creative studio.

695. Field Problems in Design (1-6) F,S

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 cos.

697, Directed Studies (1-3) F,S

Prerequisite: Consent of instructor, Independent studies in technical and historical aspects of design.

698. Thesis or Project (1-6) F,S

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) F,S

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.

Music

College of the Arts

Department Chair: Donald J.Para Department Office: University Music Center (MUC), Room 306 Telephone: (310) 985-4781 Faculty: Professors: Barbara C. Allen, Richard P. Birkemeier, Michael R. Carney, Larry G. Curtis, Kristine K. Forney, Roger C. Hickman, Edith Hirshtal, Justus F. Matthews, Donald J. Para, John H. Prince, Kay L. Roskam; Associate Professors: John T. Barcellona. Lynn D. Bielefelt, H. Martin Herman: Assistant Professor: John Carnahan, Applied Music: Barbara Allen, Piano: Alan Baer, Tuba; John Barcellona, Flute: Robert Becker, Viola; Richard Birkemeier, Trumpet; Gary Bovyer, Clarinet; Trarivelee Cariaga, Voice; Michael Carney, Percussion; Adriana Chirilov, Viola; Kathleen Darragh, Voice; Charley Davis, Trumpet; James Decker, Horn; Marcia Dickstein, Harp; Greg Donovetsky, Oboe; Ronald Eschete, Guitar: Dave Evans. Trumpet; Leaine Gibson, Piano: Patrick Goeser, Voice; Greg Goodall, Percussion: Endre Granat. Violin; Donald Green, Trumpet: Edith Hirshtal, Piano: Elizabeth Holborn, Violin: Christopher Kollgaard, Double Bass; Joan LaRue, Trumpet; Natalie Limonick, Voice; Josephine Lott, Voice; Jonathan Mack, Voice; Roy Main, Trombone; Loren Marsteller, Trombone/Euphonium; Shigemi Matsumoto, Voice; James McCormick, Piano; Joe Meyers, Horn; David Muller, Bassoon; Arpine Pehlivanian, Voice; Leo Potts, Saxophone; Jeff Reynolds, Bass Trombone; Kurt Schuster, Guitar; Jon Walz, Cello; John Wittenberg, Violin. Emeritus Faculty: Robert E. Anderson, Charles Becker, Leon Dallin, Nadyne C. Gibson, Sanford M. Helm, Hans Lampl, Julien Musafia, Frank M. Pooler, Clare G. Rayner, Russel N. Squire, W. Paul Stroud, Henri Temianka, Robert Tyndall, Robert W. Winslow. Department Secretary: Carol A. Peters

General Information

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, guitar or other orchestral instrument), develop ability in this area, appear in student recitals and demonstrate progress to the satisfaction of the faculty.

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).

Bachelor of Arts in Music

Requirements for the Bachelor of Arts in Music (code 2-5820)

Music history and literature (MUS 160, 260, 360); 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 (equivalent to MUS 220B) and completion of the piano proficiency examination; Semester Recital (MUS 110) each semester in residence [exception only when taking MUS 423 (Senior Recital)]; Applied Music: 129/329 or X129/X329 for 8 units; Senior Project (MUS 423) or (MUS 428).

Bachelor of Music

A minimum of 72 music units including the core and one area of concentration is required, which must include at least 24 upper division units in music. Concentrations include Music History and Literature, Composition, Instrumental Music (Music Education) Choral-Vocal Music (Music Education) and Performance. Admission to the concentration is determined by audition and approval of the chair of the department. Application for admission to concentration 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.

Core: Music history and literature (MUS 160, 260, 360); music theory (MUS 141A-B, 142A-B, 240, 241, 341, 342); major performance organization (MUS 100/300 -- one unit each semester in residence; the performance ensemble must be approved by the department); keyboard proficiency (equivalent to MUS 220B) and completion of the piano proficiency examination; semester recital (MUS 110 -- each semester in residence); senior project (MUS 423).

Option of Instrumental Music (code 4-5826)

(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, 471 or 490, 480, 482, 484B.

Option in Choral — Vocal Music (code 4-5821)

(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 (equivalent to MUS 222B); 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, 422B, 426, 471, or 490,

473, 483A-B, 485; 1 unit from the following: 131/331 (Music Theatre) or 130/330 (Opera) or 200G/400G Studio Ensemble IV-Voc.

Option in Performance (code 4-5828)

Individual instruction (MUS 129, 229/429, or X129, X229/X429) required each semester in residence with an achievement of senior level on major performance medium. Junior Project (MUS 323) required of all students except those in the piano pedagogy concentration.

Piano: Core Curriculum: MUS 200/400 (4 units); 477A; 478A; 492. Electives: ten units chosen from the following courses: 373, 422A, 427A-B, 434A-B, 436, 477B, 478B and 479.

String Instruments: MUS 200/400 (4 units); MUS 425A-B, 460, 493.

Wind Instruments: MUS 200/400 (4 units, 2 of which must be either Woodwind or Brass Chamber Music): MUS 425A-B, 460, 493.

Percussion: MUS 200/400 (4 units, 2 of which must be Percussion Ensemble); MUS 425A-B, 460, 493.

Voice: MUS 373, 422A, 426, 434A-B, 436, 460, 473. 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, 469, 473; completion of the Music Department foreign language examination in French, German or Italian (may be waived by completion of 101 B-level course in French, German or Italian); THEA 262 and 3 units of theatre elective; 2 additional units chosen from DANC 111A or 113A, MUS 130/330 allowed for 2 units of activity credit.

Commercial Music: MUS 200/400 (at least 4 units of Studio Ensemble); MUS 271, 370, 371, 372, 393, 442, 446A, 474.

Students in commercial music, whose primary performance medium is in 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)

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 four units is required), MUS 442, 443, 444, 445 (must be taken three times), 446A-B, MUS 400 (New Music Ensemble) two units: Five units chosen from MUS 422A, 422B, 425A, 425B, 441 or 499; One course chosen from MUS 375I, 460, 469, 471, 491, 492 or 493.

Option in History and Literature (code 4-5824)

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); MUS 200R/400R or 200S/400S. 2 units: elect 18 units from MUS 3631, 3641, 3651, 3751, 391, 393, 460, 469, 471, 490, 492 or 493. 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).

Requirements for the Minor in Music (code 0-5820)

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 with a major in music or 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 an official copy of transcripts directly to the Office of Admissions and Records and 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. 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 Advisory

Advancement to Candidacy:

The prerequisites for advancement to candidacy are the same as those for the Master of Music.

Requirements for the Master of Arts:

- (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 560, 561, 562, 563, 564, 565; MUS 698 (for 4-6 units; dependent upon concentration).
- (3) Additional courses for Musicology concentration; 3 units from MUS 560, 561,562, 563, 564, 565 (other than one taken in core); 6 units elected from MUS 560, 561, 562, 563, 564, 565, 566, 569, 571, 592,

- 593, (not taken in the core); 6 units of music electives to include whichever was not taken above (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 548, 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, 550, 575, 580, 582, 584, 585, 587, 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 and in Performance with three options: Conducting, Opera and Instrumental and Vocal Performance.

Prerequisites:

- (1) A Bachelor of Music degree, or a Bachelor of Arts degree with a major in Music or the equivalent, 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 an official copy of transcripts directly to the Office of Admissions and Records and 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;

- (3) 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);
- (4) Criteria according to con-
- (a) 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;
- (b) Performance Conducting: successful completion of a conducting examination and approval by the conducting faculty;

Performance — Opera 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;

(5) A GPA of 3.00 or better in upper division Music. 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

Advancement to Candidacy:

- (1) Satisfy all the general University requirements, including passing the CSULB Writing Proficiency Examination:
- (2) Remove all undergraduate deficiencies, which were determined by the departmental Graduate Placement Examination and/or the Dean of the College of the Arts;
- (3) Pass the Department of Music Qualifying Examinations;
- (4) 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;

Requirements for the Master of Music Degree (code 7-5820)

- (1) 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);
- (2) Core Curriculum (13 units): MUS 541, one course from MUS 560, 561, 562, 563, 564, 565, 566; MUS 696 (should be taken the first time it is offered during the student's residency); MUS 698;
- (3) 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; MUS 542 or MUS 640, MUS 546; and 5 units of Music electives selected by advisement.

Conducting - Instrumental: 2 units of MUS 500 or 600; 4 units of 529W or 629W; 520, 680; 5 units of music electives selected by advisement.

Conducting - Choral: 2 units of MUS 500 or 600: 4 units of 529W or 629W; 522B, 575; 6 units of music electives by advisement.

Opera Performance: 4 units of MUS 529Q or 629Q; 2 units each of MUS 530, 536, 573; 7 units of electives chosen by advisement, 6 units of which must be taken from approved list of upper division or graduate courses in Theatre Arts and/or Dance. Students in this concentration are strongly encouraged to take MUS 569.

Instrumental/Vocal Performance:
4 units of MUS 500 or 600; 4 units of MUS 529 or 629 (section by advisement). Vocal specialization: 2 units of MUS 573; 7 units of electives selected by advisement. Keyboard specialization: 3 units of MUS 592; 6 units of electives selected by advisement (MUS 575, and 578A-B strongly encouraged). Other instrumental specializations: 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. 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) F,S

Prerequisite: Consent of Instructor, A. Concert Band, 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.

101. Marching Band (2) F

Performance in the University Marching Band, half-time shows and other special marching events. Required attendance at all performances (see note on music performance). (6 hours or more laboratory.)

110. Semester Recital (1) F,S

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

120A-B. Class Piano (1,1) F,S

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) F,S

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, O) Voice, R) Bassoon, S) Clarinet, T) Flute, U) Oboe, V) Saxophone.

130. Opera (1) F,S

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) F.S

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 (1) F,S

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 (1) F,S

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 harmonic dictation through modulation and chromatic harmony. Computer assisted instruction is available.

142A. Harmony I (3) F,S

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) F, S

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)

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.

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) F,S

Non-technical course open to all students except music majors. Materials, forms and styles of music with extensive listening.

200. Chamber Music (1) F,S

Prerequisite: consent of instructor. A. Brass Ensemble, B. New Music Ensemble, C. String Ensemble, D. Studio Ensemble I, E. Studio Ensemble II, F. Studio Ensemble III, G. Studio Ensemble IV-Voc, J. Studio Ensemble V-Voc, K. Performance, L. Brass Chamber Music, M. Percussion Ensemble, N. Steel Drum Orchestra, O. Woodwind Chamber Music, P. String Chamber Music, Q. Piano Ensemble, R. Collegium-Voc, S. Collegium-Inst, T. Saxophone Ensemble, U. Directed Accompaning, V. Recital Accompaning, W. Varsity Band.

220A-B. Class Piano (1,1)

Continuation of 120A-B. (2 hours laboratory.)

222A-B Class Voice (1,1)

Continuation of 122A-B. (2 hours laboratory.)

229. Individual Instruction for Music Major (2) F,S

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 (1) F.S

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) F.S

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.

250A. Introduction to Music Therapy (3) F

Prerequisite: PSY 100. A course designed to provide a broad overview and introduction to the field of music therapy including history, theory, and current practice.

250B. Introduction to Music Therapy (3) S

Prerequisites: MUS 250A. This course has been designed for the student accepted into the music therapy program. Focus is on development of entry-level clinical skills, as well as orientation to various pathologies and interventions used in music therapy.

260. History of Music: Nineteenth/ Twentieth Centuries (3)

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.

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.

282. Beginning Instrumental Ensemble Lab (1) F, Odd Years

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 or '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) F,S

Prerequisite: Consent of instructor. A. Concert Band, 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.

301. Marching Band (2) F

Performance in the University Marching Band, half-time shows and other special marching events. Required attendance at all performances (see note on music performance). (6 hours or more laboratory.)

323. Junior Project (1) F,S

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) F.S

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.

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) F,S

Prerequisites: MUS 241. Small, large, multimovement, variation, and contrapuntal forms in instrumental and vocal music

342. Materials of Modern Music (3) F,S

Prerequisite: MUS 341. Continuation of intensive analysis of representative compositions of the 20th Century with emphasis on writing in selected 20th Century styles.

350. Influence of Music on Behavior (3) S

View of historical and contemporary uses of music to influence behavior.

352. Music Therapy — On-Campus Clinic (3) F

Prerequisite: MUS 250A. Content designed for music therapy students to receive clinical experience in a closely supervised and highly controlled setting on campus.

360. History of Music: Medieval/Renaissance (3)

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.

363l. 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.

364l. 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.) Same course as HIST 3231.

370. Recording and Electronic Techniques (2)

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).

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. Same course as ART 375I.

378. Aesthetics of Music (3)

Introduction to some central concepts and principles in aesthetics, with specific application to music. Detailed discussions on musical representation, musical expression, and meaning in music.

382A. Intermediate Instrumental Ensemble Lab (1) S Even Years

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) F Even Years

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) S, Odd Years

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.

384. Music in Special Education (3)

Prerequisite: MUS 180 or consent of instructor. Open to music majors, music minors, music therapy and liberal studies students. Planning, developing and evaluating musical procedures and materials for the special learner. Topics covered include the use of music to foster growth in the following areas: basic skills, auditory awareness, communication skills, perceptual- motor skills, visual-motor coordination, and enhancement of self-image.

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 Learning (3) F

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.

390. Music in Western Civilization (3)

Music from the Renaissance to the present; lectures, readings and listening. Not open to music majors.

391. Studies in Musical Criticism (3)

Prerequisites: ENGL 100 and upper division status. An historical review of the development of musical taste and concurrent literary styles with practical application to modern performances through written critiques.

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) F,S

Prerequisite: consent of instructor. A. Brass Ensemble, B. New Music Ensemble, C. String Ensemble, D. Studio Ensemble I, E. Studio Ensemble III, F. Studio Ensemble III, G. Studio Ensemble IV-Voc, J. Studio Ensemble V-Voc, K. Performance, L. Brass Chamber Music, M. Percussion Ensemble, N. Steel Drum Orchestra, O. Woodwind Chamber Music, P. String Chamber Music, Q. Piano Ensemble, R. Collegium-Voc, S. Collegium-Inst, T. Saxophone Ensemble, U. Directed Accompaning, V. Recital Accompaning, W. Varsity Band.

422A. Choral Conducting (2) F

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) S

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) F,S

Prerequisites: MUS 341, 342. Corequisite: Concurrent enrollment in MUS 329 or 429 (excluding students in Music History, Composition and Music Therapy options). 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) F

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.)

425B./525B. Instrumental Conducting II (2) F,S

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, 260, 360, 341. 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) F,S

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.

435./535. Advanced Performance — Piano (2)

Prerequisite: Consent of instructor. Advanced study in a performance medium with equal emphasis on concert repertoire and technique. Includes special training for a performing career. May be repeated for credit to a maximum of 8 units. (4 hours laboratory.)

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 1018 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.

444. Composition in Selected Forms (3) F, S

Prerequisite: MUS 342 or consent of instructor. Compositions in selected styles and forms from various historical periods with readings of student works where possible. Private instruction included.

445. Composition (3) F,S

Prerequisite: MUS 444 or consent of instructor. (Students wishing to compose in the electronic medium must complete MUS 446A as a prerequisite.) Composition with emphasis on the development of an individual style. Course includes study of representative major compositions of the 20th Century. Private instruction

included. Composition majors take a minimum of 3 forms.

446A. Electronic Music Composition (3) F

Prerequisite: MUS 342 or consent of instructor. Introduction to digital electronic music in MIDI systems. Overview of MIDI, Sound Synthesis, acoustics, sequencing, samples & SMPTE, with practical application on studio equipment.

446B. Advanced Electronic Music Composition (3) S

Prerequisite: MUS 446A or consent of instructor. Advanced instruction in digital electronic music in MIDI/SMPTE based systems. Introduction to interactive and object oriented programing languages in computer music with practical application on studio equipment. Traditional grading only. Course may be repeated for a maximum of 6 units.

450./550. Psychology of Music (4) F

Introduction to the physical aspects of music with emphasis on psychological and perceptual responses to music. Primarily for music therapy majors.

451. Music in Therapy (3) F

Prerequisites: MUS 250 A, B. Continued development of clinical skills in music therapy, emphasizing the use of materials and equipment to be utilized in various treatment settings.

452. Clinical Experience (1) Demand

Prerequisite: MUS 451. Supervised clinical experience within one area of disability for the duration of the semester. May be repeated once for credit.

453. Music Therapy Internship (3) F,S

Prerequisite: All music therapy coursework. Extension of academic preparation involving the supervised application of learned therapeutic principles to provide assistance to human beings defined as "handicapped."

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.

469./569. Music of the Theater (3) S

Prerequisite: MUS 360 or MUS 390 or consent of instructor. 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)

Prerequisite: MUS 360 or consent of instructor. 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.

475./575. Studies in Choral Music (3)

Prerequisites: 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. Traditional grading only. Course may be repeated for a maximum of 6 units.

477A-B./577A-B. Piano Accompanying (2-2)

Prerequisite: Piano major 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)

478A-B./578A-B. Score and Sight Reading (2-2)

Prerequisite: Consent of instructor. Instruction in reading piano music at sight and in reducing vocal and instrumental scores at the piano. Studies in transposition.

479./579. Theory of Piano Techniques (2)

Prerequisite: Consent of instructor. Physiological mechanics and psychology of piano playing; theory of fingering; memorization; teaching, with reference to graded materials. (4 hrs laboratory.)

480./580. Marching Band Techniques (2) F

Marching fundamentals, charting formations, precision drills, parade technique and half-time pageantry.

482./582. Instrumental Rehearsal Techniques and Literature (3) S

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.

*486. Jazz Ensemble Techniques (2)

Prerequisite: Music 141B, 142B and the following secondary instrument classes (or proficiency equivalent): Piano 220A, Guitar, Low Strings, and Percussion. Introduction to the basic skills, techniques, and materials required in order to teach an instrumental or vocal jazz ensemble program in grades 4-12.

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.

*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. A) Classroom Music Program, B) Folk Music in Soc St, C) Joy Folk Dancing/Singing, D) Multicultural Mus Cls, E) Orff-Schulwerk, K) Tk Mus Back Basic, L) You Instr Classrm.

490. Introduction to Music Cultures (3) F,S

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 360 or consent of instructor. 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.

*495. Special Topics in Music (1-3)

Prerequisite: Consent of instructor. Topics of current interest in the various fields of music selected for special presentation and development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes. (2-6 hours laboratory.)

496. Research Methods (3) F

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.

*499. Special Studies (1-3) F,S

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

500. Major Performance Organization (1) F,S

Prerequisite: Consent of instructor. A. Concert Band, 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.

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

525B./425B. Instrumental Conducting II (2,2) S

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

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.

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.

535./435. Advanced Performance — sPiano (2)

Prerequisite: Graduate standing and consent of instructor. Advanced study in piano performance with equal emphasis on concert repertoire and technique. Includes special training for a performing career. (4 hours laboratory.)

536./436. Opera Repertoire (2) F

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 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. Tratidional grading only.

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) F,S

Corequisite: MUS 529A. Graduate level composition in various forms and genres with readings of student works where possible. Traditional grading only.

545. Composition (2) F,S

Corequisite: MUS 529A. Graduate level composition with emphasis on the development of an individual style. Students wishing to compose in the electronic medium must complete MUS 446A or 546 as a prerequisite. May be repeated for a maximum of 6 units. Traditional grading only.

546. Electronic Music Composition (3) F,S

Prerequisite: MUS 446A or consent of instructor. Advanced instruction in digital electronic music in MIDI based systems. Overview of MIDI, sound synthesis, acoustics, sequencing, sampling, SMPTE. Introduction to interactive programming languages in computer music with practical application on studio equipment. May be repeated for a maximum of 6 units. Traditional grading only.

548. Seminar in Twentieth Century Musical Analysis (3)

Prerequisite: MUS 342. Advanced analysis of the melodic, harmonic, rhythmic and contrapuntal techniques of twentieth-century music. Analysis of representative compositions and writing in typical contemporary styles.

550./450. Psychology of Music (4) F

Introduction to the physical aspects of music with emphasis on psychological and perceptual responses to music. Primarily for music therapy majors.

560. Music of the Middles Age (3)

Prerequisites: MUS 360 or consent of instructor. Survey of medieval music from the beginnings of polyphony to approximately 1450. Both monophonic and polyphonic will be covered. Traditional grading only.

561. Music of the Renaissance (3)

Prerequisite: MUS 360, or consent of instructor. Stylistic analysis and inquiry into the cultural background. Reference to notation, sources, bibliography, and editions.

562. Music of the Baroque Period (3)

Prerequisites: MUS 341, 360, or consent of instructor. Stylistic analysis and inquiry into cultural background.

563. Music of the Classic Era (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.

564. Music of the Romantic Era (3)

Prerequisites: MUS 341, 360 or consent of instructor. Music from Beethoven to the end of the nineteenth century. Traditional grading only.

154

565. Twentieth Century Music (3)

Prerequisites: MUS 342, 360, or consent of instructor. Stylistic analysis and music; aesthetic and socioeconomic problems of contemporary music; survey of new music.

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)

Prerequisite: MUS 360 or MUS 390 or consent of instructor. 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) Demand

Prerequisite: MUS 360 or consent of instructor. 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./475. 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. Traditional grading only. Course may be repeated for a maximum of 6 units.

577A,B./477A,B. Piano Accompanying (2,2)

Prerequisite: Piano major or consent of instructor. Instruction and training in the art and the techniques of accompanying for singers, instrumentalists and ensembles.

578A-B./478A-B. Score and Sight Reading (2-2)

Prerequisite: Consent of instructor. Instruction in reading piano music at sight and in reducing vocal and instrumental scores at the piano. Studies in transposition.

579./479. Theory of Piano Techniques (2)

Prerequisite: Consent of instructor. Physiological mechanics and psychology of piano playing; theory of fingering, memorization; teaching, with reference to graded materials. (4 hours lab)

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 tropics.

582./482. Instrumental Rehearsal Techniques and Literature (3) S

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.)

584. Music in Special Education (3)

Open to graduate music majors only. A survey of music materials and methods suitable for use with special learners. Topics covered: the use of music with mentally retarded, hyperactive, learning disabled, physically disabled and emotionally disturbed children. Course requirement: a major research paper dealing with one of the previously cited topics.

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. Traditional grading only.

588. Quantitative Issues and Research in Music Education (3)

Prerequisites: Music 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. Traditional grading only.

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)

Prerequisite: MUS 360 or consent of instructor. 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.

595. Special Topics in Music (1-3) F,S

Prerequisite: Consent of Graduate Advisor and instructor: Topics of current interest in various fields of music selected for special presentation and development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

599. Special Studies (1-3) F,S

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) F,S

Prerequisite: Consent of instructor. A. Brass Ensemble, B. New Music Ensemble, C. String Ensemble, D. Studio Ensemble I, E. Studio Ensemble II, F. Studio Ensemble III, G. Studio Ensemble III, G. Studio Ensemble IV-Voc, J. Studio Ensemble V-Voc, K. Performance, L. Brass Chamber Music, M. Percussion Ensemble, N. Steel Drum Orchestra, O. Woodwind Chamber Music, P. String Chamber Music, Q. Piano Ensemble, R. Collegium-Voc, S. Collegium-Inst, T. Saxophone Ensemble, U. Directed Accompaning, V. Recital Accompaning, W. Varsity Band.

629. Individual Instruction for Music Majors (2) F,S

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. Traditional grading only.

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. Traditional grading only. Course may be repeated for a maximum of 6 units of degree credit.

645. Seminar in Advanced Composition (3) F,S

Prerequisites: MUS 443, 444, 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: MUS 446 and/or 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.

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.

155

Radio, Television, and Film

College of the Arts

Department Chair:
John T. Caldwell
Department Office: University
Telecommunications Center (UTC),
Room 208
Telephone: 985-5404
Faculty: Professors: Robert G.
Finney, J. David Viera: Associate

Faculty: Professors: Robert G.
Finney, J. David Viera; Associate
Professor: Sharyn Blumenthal,
John T. Caldwell, Saundra
McMillan, Micheal C. Pounds, Jose
Sanchez-H., Maria Viera; Emeritus
Faculty: Dan F. Baker, Howard S.
Martin, Hubert P. Morehead.
Premajor Advisor:
John T. Caldwell
Department Secretary:

Karen Burman The Department

Radio, Television, and Film 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 Radio, Television, and Film exceeds the number that can be accommodated by the Department's facilities and resources. For this reason, the Radio, Television, and Film program has been designated as impacted by the California State University.

Applicants for admission to the University with a major in Radio, Television, and Film 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 RTVF 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 (code 2-6846) 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 GPA of 2.80 or higher:
- 2. Completion of RTVF 200 with a grade of "B" or higher;
- Completion of the general education requirement in mathematics.
- 4. Successful completion of the CSULB Writing Proficiency Examination (WPE) requirement.
- International student applicants are required to complete the Test of English as a Foreign Language (TOEFL) with a score of 550 or higher.
- Priority admissions will be given to legal residents of the State of California.

To apply for admission to the Radio, Television, and Film 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.

The Curriculum

The lower division core emphasizes principles, aesthetics and procedures of the production process common to all film and electronic media while providing the student with a foundation for further study at the upper division level.

Upon completion of the lower division core, the student elects either an electronic media or film upper division track, and may seek one or more areas of specialization, including theory, critical studies, writing, production, and management. Admission to the major does not guarantee access to or enrollment in intermediate or advanced production courses.

Requirements for the Bachelor of Arts in Radio, Television, and Film (code 2-6846)

Lower Division: RTVF 200 and one of the following: RTVF 220, 230, or 240.

Upper Division: Students must complete one of the following 15 unit tracks:

Film Studies: RTVF 302, 305; two courses chosen from 310, 317, 318l, 380, 392, 394 (up to six units), French Cinema (FREN), or Italian Cinema (ITAL); and either 401 or 402.

Electronic Media: RTVF 300, 301, two courses chosen from 363, 376, 403, 420, or 430.

Departmental Electives: Students must also complete at least 12 but no more than 24 units of upper division elective courses in the major. Students with 24 units of upper division elective courses completed may not enroll in any courses offered by the Department except courses required to complete the major.

Interdisciplinary/Minor Requirement: In addition to the requirements for the major and for general education, Radio, Television, and Film majors must complete 18 units of breadth courses from other disciplines or a Minor in another discipline. Courses taken to meet the university GE requirements may not be counted toward this.

Courses (RTVF)

Lower Division

150. Introduction to Electronic Media and Film (3) F

An overview of the cable, film, radio, and television fields; emphasis on history, economics, technology, policy, regulation, programming, and social impact of these media.

200. Media Arts Principles and Practices (3) S

Requires concurrent enrollment in RTVF 202. Study of production principles and procedures common to all media productions. (Lecture 3 hours) Traditional grading only.

202. Media Arts Planning and Production (3) F, S

Requires concurrent enrollment in RTVF 200. Emphasizes the principles of film, video and audio production in both studio and location situations. Traditional grading only.

204. Film and Electronic Media Writing (3) F,S

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.

205. Media Aesthetics (3) F,S

Prerequisite: Major status or consent of instructor. Study of aesthetic principles governing media productions. Emphasis upon relationships between various art forms and development of visual/critical vocabulary. Traditional grading only.

220. Audio Production (3) F

Prerequisite: Major status or consent of instructor. Corequisite: RTVF 301 or 302. Basic principles and techniques of audio production. (Act 4 hrs to be arr.) Traditional grading only.

230. Video Production (3) F

Prerequisite: Major status or consent of instructor. Corequisite: RTVF 301 or 302. Basic principles and techniques of video production. (Act 4 hrs to be arr.) Traditional grading only.

240. Film Production (3) F

Prerequisite: Major status or consent of instructor. Corequisite: RTVF 301 or 302. Basic principles and techniques of film production. (Act 4 hrs to be arr.) Traditional grading only.

Upper Division

300. History of Radio and Television Programs (3) F

Prerequisite: Major status or consent of instructor. Development of radio-television programming in America. Traditional grading only.

301. Electronic Media: Theory and Culture (3) S

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) F,S

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.

304. Writing the Short Script (3)

Scriptwriting with emphasis on adaptation and dramatic fiction. Traditional grading only.

305. Film History (3) F,S

Prerequisite: Major status or consent of instructor. Historical development of the motion picture. Traditional grading only. Course fee required.

310. Film and Culture (3) F,S

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. Same course as C/LA 310. Course fee required.

312. Television Programing Symposium (3) F,S

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.

314. Theatrical Film Symposium (3) F,S

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) F.S

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) F,S

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.)

318l. Theory of Fiction and Film (3) F,S

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. Advanced Audio Production (3) F,S

Prerequisites: RTVF 220 with a 'B' or better or consent of instructor. Planning and producing original programs for broadcast and other means of delivery to the public. (Production laboratory 9 hours.) Traditional grading only.

325. Radio Station Activity (2) F,S

Prerequisite: RTVF 220 or consent of instructor. Experience in administering and programing the University radio station. Credit/No Credit grading only. Course may be repeated for a maximum of 4 units. (Act hrs to be arranged.)

326. Intermediate Electronic Cinematography (3) F,S

Prerequisites: RTVF 230 or 240 with a "B" or better or consent of instructor. Theory and practical experience in directing, shooting, and editing video documentaries. Emphasis on electronic field production. Traditional grading only. (Production laboratory 9 hours.) Course fee required.

327. Production Management (3) F,S

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. Traditional grading only. (Lecture 3 hours; activity hours to be arranged.)

328. Film and Video Lighting (3) F,S

Prerequisites: RTVF 230 or 240 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. Film Into Video (3) F,S

Prerequisites: RTVF 326 or 336 or 415 or consent of instructor. Application of the principles and practices of narrative image making for video. Topics include: directing, cinematography, and electronic editing. Traditional grading only. Course fee required. (Production laboratory 9 hours.)

335. University Television Activity (2) F,S

Prerequisites: RTVF 330 or consent of instructor. Experience in administration and production of video projects at the University Television facility. Hours to be arranged. May be repeated once for a maximum of 4 units. (Activity hours to be arranged.) Credit/No Credit grading only.

336. Intermediate Film Production (3) F,S

Prerequisites: RTVF 240 with a 'B' or better or consent of instructor. Preparation for the advanced level of film production through research and exercises designed to develop essential filmmaking skills. Course fee may be required. Traditional grading only. (Production laboratory 9 hours.) Course fee required.

340. Advanced Film Production (3) F

Prerequisites: RTVF 336 with a "B" or better or consent of instructor. Experience in the group production of original films. Emphasis is on narrative short films resulting in public performance. Course may be repeated for a maximum of 6 units. Course fee required. (Production laboratory 9 hours.)

342. Advanced Film Post Production (3) S

Prerequisites: RTVF 340 with a "B" or better or consent of instructor. Course may be repeated for a maximum of 6 units. Course fee required. (Production laboratory 9 hours.)

344. Advanced Directing (3) S

Prerequisites: RTVF 340, 342, or consent of instructor. Theory and practical experience in the directing of narrative film. Emphasis on directing actors in fictional work. (Activity hrs to be arranged.)

355. Audio-Video-Film Activity (1) F,S

Prerequisite: Consent of instructor. Group and individual experience in areas of audio-videofilm 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) F,S

Prerequisites: RTVF 301 or 302 or consent of instructor. Comparative analysis of internal and external electronic media systems with emphasis on their motives, origins, technologies, and programing. Consideration of political, economic, regulatory constraints, and the potential impact of new technologies.

376. Broadcast Sales (3) S

Prerequisite: Major status or consent of instructor. Study of the sales function in commercial broadcast stations and networks. Theory and application in media research. sales and promotion.

380. Documentary History and Theory (3) F,S

Prerequisites: RTVF 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. Traditional grading only. Course fee required.

392. International Cinema (3) F,S

Prerequisites: RTVF 302 and 305 completed or consent of instructor. Variable topics course which explores the domain of international cinema. Topics will include: European Cinema, 1930-1960; European Cinema, 1960-1990: Asian, Japanese, Latin American, Post Colonial/Pan African, Spanish, and German cinemas. Traditional grading only. 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.

- A. Europe Cinema 1930-1960
- B. Europe Cinema 1960-1990
- C. Latin American Cinema

394. American Film Genres (3) F,S

Prerequisites: RTVF 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. Traditional grading only. May be repeated for a maximum of 6 units with different topics.

401. Film Critical Theory (3) S

Prerequisites: RTVF 302, 305, and an additional 6 units in the film studies track. 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. Traditional grading only. Course fee re-

402. Television Critical Theory (3) S

Prerequisites: RTVF 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, postmodernism, and feminism, as well as narrative, ideological, and psychoanalytic theories of criticism. Traditional grading only.

403. Electronic Media in Education and Industry (3) F,S

Prerequisite: Major status or consent of instructor. Development and utilization of radio, television and film in education and industry with emphasis upon instruction, training and public relations. Traditional grading only.

404. Advanced Scriptwriting for Film and Electronic Media (3)

Prerequisite: RTVF 204 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. (May be repeated for credit to a maximum of 6 units.)

405. Comedy Writing (3) F,S

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.

412. American Television and African-Americans (3) F,S

Prerequisites: Upper division status or consent types of programs. Traditional grading only.

415. Computerized Video Editing (3) F,S

Prerequisites: RTVF 230 or 240 or consent of instructor. Principles of computerized editing in video post production.

420. Electronic Media: Labor and Management (3) S

Prerequisites: Junior or senior status and at least 12 completed units in the RTVF 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. Electronic Media: Policy and Regulation (3) F

Prerequisites: 12 units in the electronic media track including RTVF 300 and 301. Current issues, policies, and regulations affecting the cable, film, radio, television industries, including the impact of new technologies.

486l. Alternative Media (3) F,S

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

490. Special Topics in Radio, Television, and Film (3) F,S

Prerequisite: Major status or consent of instructor. Topics of current interest in radiotelevision-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) F,S

Prerequisites: Senior standing in major or consent of instructor. Students intern with cooperating media facilities. Credit/No Credit grading only.

498. Senior Seminar (3) F,S

Prerequisites: Senior standing in major or consent of instructor, Intensive study of significant issues in the film and electronic media.

499. Special Projects in Radio. Television, and Film (1-3) F,S

Prerequisites: Senior standing in major or 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.

of instructor. Comparative examination of the depiction of African Americans in American network and syndicated television in a variety of

Department Chair: Howard Burman

Department Office: Theatre Arts. Room 221

Telephone: 985-5356

Professors: Herbert L. Camburn, Ashley Carr, Stanly Kahan, Bernard J. Skalka, Nancy Jo Smith; Associate Professors: Joanne Gordon, Holly Harbinger, W. Jeffrey Hickman.

Emeritus Faculty: Gerald R. Bailor, Ralph W. Duckwall, Robert F. Eggers, John H. Green, Michael C. Lyman, David E. MacArthur, Kenneth W. Rugg, Gail L. Shoup, Harry E. Stiver, Edward A. Wright. Department Secretary: Elizabeth Martin

The Department

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 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 Bulletin, as well the specific departmental requirements stated here and, more fully, in the Department Program Planners, available upon request from the depart-

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 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 Theatre Arts Department holds division II membership in the National Association of School of Theatre. 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 University/Resident Theatre Associa-

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 for the Bachelor of Arts in Theatre Arts:

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 101, 114A, 142, 144, 146, 148.

Upper Division: THEA 321, 322, 374, 452, 476.

Theatre Arts College of the Arts

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 eight 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 in 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 each 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)

Choose 6 units from (A) Acting/Directing: 112, 214, 262, 271, 375; choose 6 units from (B) Tech/Design: 342, 346, 385, 444, 446, 448; choose 9 units from (C) Hist/Lit/Crit: 380, 4211, 4221, 426, 523; and choose 3 units from (D) Production: 310B, 340B, 410A, B, 440A, B, 471, 498 for a total of twenty-four units.

Option in Performance: Acting/Directing (code 2-5847)

THEA 112, 114B, 214, 262, 426, and 9 units from THEA 216, 271. 310B, 312, 316, 318, 361, 375, 380, 410A, 410B, 413, 414, 462, 471, 498.

Option in Technical Theatre: Scenery/Costume/Lighting Design (code 2-5848)

THEA 341, 346, 444, 446, 448 and 9 units approved from THEA 271, 340B, 342, 343, 348, 355, 357, 385, 440A,B, 441, 442, 443, 445, 446, 447, 449, 451, 454, 459, 464, 471, 482, 484, 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 for the Master of Arts:

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 696A-B, 621A or 694J, 523, 426, 514 or 542, and 698. The graduate student also will include specialized studies and/or course work in dramatic theory and criticism and theatre history. (Determination of the specific courses to 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 six 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 four 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 30 units of credit from an MA degree program may be acceptable after review of the faculty evaluation committee and approval by the Dean:
- (3) 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;
- (4) In order to obtain full classified status, a committee from the Theatre Arts graduate faculty will evaluate academic progress, individual skills development, and review of perfor-

mance or portfolio at the end of the student's first full year of residence.

Advancement to Candidacy:

- (1) Attain fully classified status;
- (2) Remove all undergraduate deficiencies determined by the departmental evaluation and the Dean of the College;
- (3) Submit a program for approval by the department chair, the graduate advisor and the Dean of the College.

Requirements for the Master of Fine Arts in Theatre Arts:

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: 513, 514, 515, 516, 517(6), 518(6), 519, 520A,B, 521A,B, 522, 564A,B, 565A,B, 566, 614, 696A,B, 699.

Option in Technical Theatre/ Design (code 7-5848)

Core Courses in all areas: 24 units to include THEA 541, 544, 570 (6 units), 696A, 696B, and 699 (6 units).

Scenery Concentration 18 Units to include: THEA 540, 547, 555, 581, 584, and 585. Electives: 18 units under advisement approved from THEA 342, 346, 451, 542, 545, 546, 547, 549, 554, 557, 587, 590, 642, 684, 685, and 694.

Costume Concentration 15 Units to include: THEA 546, 554, 586, 587, and 590M. Electives: 21 units under advisement approved from THEA 343, 346, 385, 451, 540, 542, 543, 545, 556, 582, 584, 585, 590, 656, 686, 694, and ART 366, 598F, 598G, 598H. 598J, 598K, 598M.

Lighting Concentration 12 Units to include: THEA 545, 548, 549, 557. Electives: 24 Units under advisement approved from THEA 342, 346, 451, 540, 542, 546, 547, 554, 555, 581, 584, 585, 587, 590, 642, 648, 684, and 694.

Electives: 15 units approved from the following: THEA 498C, 498D, 498M, 498N, 549, 586, 590, 642, 694C, 694D, 694M, and 694N.

Both 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.

(1) 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:

(2) 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 30 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) F,S

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) F,S

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) F,S

Participation in acting projects, open to students cast in University-sponsored productions.

112. Beginning Voice and Speech for the Actor (3) F

Theory and practice in developing command of oral techniques for stage including breath support, resonation, free vocal release, and articulation. (CAN DRAM 6)

113. Introduction to Acting (3) F,S 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 re-

114A,B. Fundamentals of Acting (3,3) F,S

quired.

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) F,S

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) F,S

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) F,S

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) F,S 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) F,S

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) F,S

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) F,S

Theory and practice of modern stage lighting; functions of light; design of lighting layout; properites 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) F,S

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) F,S

Prerequisite: 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. Repeatable to a maximum of 6 units. (6 hrs lab.)

216./316. Rehearsal and Performance (3) F,S

Prerequisite: 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. May be repeated once for credit. (6 hrs lab.)

240A,B. Theatre Arts Activity-Crew (1,1) F,S

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) F,S

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) F,S

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) F,S

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) S

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./216. Rehearsal and Performance (3) F,S

Prerequisite: THEA 216. 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. (6 hrs lab.)

318. Advanced Scene Study (3) F

Prerequisites: THEA 214, 216, 316A,B 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. (6 hrs lab.)

*321. History of the Theatre and Drama to 1660 (4) F

Prerequisite: THEA 101 or concurrent enrollment or consent of instructor. Development of Theatre Arts from primitive origins to 17th Century. Traditional grading only.

*322. History of the Theatre and Drama Since 1660 (4) S

Prerequisite: THEA 101 or concurrent enrollment or consent of instructor. Development of Theatre Arts from the 17th Century to the present. Traditional grading only.

*324l. Western Theatre Today (3) F.S

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 CAT 3241

325. Theatre and Drama of India and Southeast Asia (3) F

Prerequisites: ENGL 100 and upper division status. History and social background of the classical genres, as well as contemporary forms, of dance and theatrical production, including puppetry and masked ritual. Representative selections, in translation, from the great Indian epics and Sanskrit dramas. Same course as CALT 325

326. Theatre and Drama of China, Korea and Japan (3) F,S

Prerequisites: ENGL 100 and upper division status. History and social background of selected genres, both classical and modern, of dance, folk plays, musical and theatrical production, including puppetry and masked ritual. Readings, in translation, of dramatic, comedic and lyrical works comparing cultures. Same course as C/LT 326.

340A,B. Theatre Arts Activity-Crew (1,1) F,S

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. Graphics for the Theatre (3)

Introduction to graphic techniques and media for the theatre designer. Emphasis on perception and interpretation of line, form, color and light for typical scenic, costume and lighting design. Basic drawing, watercolor and mixed media techniques. (6 hrs lab.)

*342. Advanced Technical Theatre (3) S every third year

Prerequisite: THEA 142 or permission of the 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

*343. Pattern Drafting I (3) F

Prerequisite: THEA 146 or consent of instructor. Principals and application of draping fabric on the dress form and of flat pattern creation from master pattern blocks. Supervision in the practical application of these elements in University sponsored productions. Traditional grading only. (6 hrs lab.)

*346. Costume History for the Stage (3) S even years

Chronological study of fashions, modes and mores of major historical periods and their application in theatre. Traditional grading only. (6 hrs lab.)

*348. Stage Lighting II (3) S

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.)

361. Improvisations for the Actor (3)

Prerequisite: THEA 114A,B. Intensive workouts in improvisations to free and enrich the creative process of the actor. Course includes exercises to develop skills in adaptability, directness, imagination, immediacy and spontaneity. Traditional grading only. (6 hrs lab.)

364. Stage Combat (3) S

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.)

*374. Fundamentals of Directing (3) F

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) S

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. Instensive scene work with student actors focussing on rehearsal techniques. (6 hrs lab.)

*380. Playwriting (3) F

Creative writing for the stage. Study of character, concept, theme, dialogue and structure.

*385. Stage Make-Up II (3) S

Prerequisite: THEA 144 or equivalent. 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) F,S

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) F,S

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) F,S

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) F,S

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, interivew, audition, agent, casting, director, unions, contracts, job market and career strategies. Traditional grading only. (6 hrs lab.)

421I. Classical Drama (3) F

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 C/LT 421I.)

422I. Renaissance Theatre and Drama (3) F

Prerequisite: 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. Texts are treated both as literature and theatre. (Same course as C/LT 422L)

*426. Dramatic Theory and Criticism (3) F,S

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.

440A,B. Theatre Arts Activity-Crew (1,1) F,S

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./581. Scenographic Techniques (3) F

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.

442./540. Stage Property Construction (3) S

Prerequisite: THEA 342 or consent of instructor. Application of both basic and advanced concepts of stage property, set dressing and furniture construction. Study of property shop organization. Includes the use of non-traditional materials and construction methods. (6 hrs lab.)

443./582. Stage Make-Up III (3) S

Prerequisite: THEA 385 or equivalent. Advanced make-up techniques for characterization and style, design and rendering techniques. Students must be clean-shaven due to the nature of this course. Supervision in the practical application of these elements in University sponsored productions. (9 or more hrs lab.)

444. Scene Design I (3) S

Prerequisite: THEA 342 or consent of instructor. 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 for the single set production. (6 hrs lab.)

445./585. Scene Design II (3) S

Prerequisite: THEA 444 or consent of instructor. Advanced projects in scene design for the multiset show. Consideration of stylistic unity, shifting problems and current trends and approaches. Rendering, model development and presentation for the play, musical, opera, and ballet. (6 hrs lab.)

446./546. Costume Design I (3) F

Prerequisite: THEA 101 or consent of the instructor. Development of costume design through character and script analysis and understanding of line, space, color, and texture. Planning and presentation of the costume rendering. (6 hrs lab.)

447./587. Costume Crafts II (3) S, Even years

Prerequisite: THEA 146 or equivalent. Advanced technical projects in costume accessory construction. Supervision in the practical application of these elements in University sponsored productions. (6 hrs lab.)

448./548. Lighting Design I (3) F

Prerequisite: THEA 148, Techniques of designing lighting for various stage forms; creative planning and projection of designs for specific productions. (9 or more hrs lab.)

449./549. Sound Design for the Theatre (3)

Introduction to the scope, tools, materials and practices of sound in the theatre today.

450./642. Seminar in Theatre Decor (3) F

Prerequisites: Minimum of 9 units of work in theatre history, design and costuming or consent of instructor. Intensive study of the historical aspects of stage decoration, textiles and properties.

*451. Computer Applications for the Theatre (3) F

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) F,S

Writing non-fiction prose, with emphasis on particular features of writing in the Theatre Arts.

Traditional grading only. (6 hrs lab.)

453./586. Pattern Drafting II (3) F

Prerequisite: THEA 343 or equivalent, Analysis of structure and patterns of clothing from various historical periods. Reproduction of these garments for the theatre using draping and flat pattern techniques. Supervision in practical application of these elements in University sponsored productions. (6 hrs lab.) Traditional grading only.

454./554. Fabric Dyeing and Painting (3) S, Odd Years

Prerequisite: Senior standing in major or consent of Instructor. Exploration and practical application of the techniques of painting and dyeing textiles. Offers a wide range of creative possibilities to the theatrical designer. Traditional grading only. (6 hrs. lab)

455./555. Metal Fabrication for the Stage (3) S

Prerequisite: THEA 142 or consent of instructor. A study of metalworking for the designer and technician in the theatre. Traditional grading only. (6 hrs lab.)

456./556. Costume Design II (3) S

Prerequisite: THEA 446 or equivalent. Development of skills in research, interpretation, conceptualization, and visual communication. Problems in fabric rendering, developing style and integrating multiple sources in design. (6 hrs lab.) Traditional grading only.

457./557. Projection Workshop (3) S

Prerequisite: THEA 148 or consent of instructor. A study and application of new and traditional techniques of scenic and lighting projection for the stage. Traditional grading only. (6 hrs lab.)

458./543. Advanced Costume History (3) S every third year

Prerequisite: THEA 346 or equivalent. Detailed examination of historical costume periods, styles, and accessories. Emphasis on research sources. Traditional grading only.

459./544. Visual Conceptualization for the Theatre (3) F every third year

Prerequisite: THEA 341 and/or consent of the instructor. Techniques in visual conceptualization for the stage, costume, makeup and lighting designer. Emphasis on exploratory approach to presentation, media and rapid-visualization techniques. Traditional grading only. (6 hrs lab.)

*462. Intermediate Movement for the Actor (3) S

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.)

464./584. Scene Painting I (3) F

Prerequisite: THEA 142 or consent of instructor. Theatrical scene painting techniques,materials and methods through specialized technical projects. Supervised paint crew assignment required in University sponsored productions. May be repeated for a total of 6 units. Traditional grading only. (9 or more hrs lab.)

*471. Stage Management Crew (3) F,S

Prerequisite: THEA 271 and/or consent of instructor. Stage management of a University Theatre or a CalRep production. Student will be responsible for all stage management functions involved with the mounting and performance of a production. He or she will work closely with the director, the cast, the designers and the theatre management staff. Traditional grading only. (6 hrs lab.)

*474. Advanced Play Direction (3)

Prerequisite: THEA 374 and 375. Directing a one act play or one act of a play. Preparation, audition, rehearsal, coordination with designers, and responsibility for a fully-mounted University sponsored production. May be repeated for a maximum of 6 units. (6 hrs lab.)

*476. Theatre Management (3) F,S

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) S

Prerequisite: THEA 380 or consent of instructor. Advanced creative writing for the stage. Emphasis on an examination and creation of alternate theatre forms; scripts from improvisation and/or non-matrix material; one of the Absurdist styles; political theatre; material suited to environmental theatre. Selection material to be produced as part of an annual Spring Festival of Alternate Theatre.

*482. Three-Dimensional Makeup (3)

Prerequisite: THEA 385 or consent of instructor, Fabrication of theatrical three-dimensional make-up prosthetic pieces; coloring and painting techniques. (6 hrs lab.)

484. Wigmaking (3)

Prerequisite: THEA 385 or permission of instructor. Fabrication and styling of theatrical hairgoods including wigbases, hairline and facial hair ventilation. (6 hrs lab.)

485. Mask Making (3)

Craft of maskmaking in a wide variety of materials ranging from paper to vacuum-form plastics. Traditional grading only. (6 hrs lab.)

490. Special Topics in Theatre Arts (1-3) F,S

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.

494./684. Scene Painting II (3) F,S

Prerequisites: THEA 464 or consent of instructor. Advanced development of skills in theatrical scene painting techniques, materials and methods through specialized technical projects. Supervised paint crew assignment required for Cal Rep and/or University Theatre sponsored productions. Traditional grading only.

*498. Special Studies in Theatre Arts (3) F,S

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 six 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, (g) children's theatre, (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

512. Advanced Voice for the Actor (1-6) F,S

Prerequisite: Acceptance into the MFA program. Emphasis on the contemporary techniques used for speech and vocal production. Individual study in areas of dialects, projection, and language. (2-12 hrs lab.)

513. Acting in Repertory I (3) F,S

Prerequisite: Acceptance into the MFA program. Exploration of the acting process as demanded by a variety of scripts and situations. (6 hrs lab.)

514. History and Theory of Acting (3) S

Prerequisite: Minimum of size units of acting or consent of instructor. Selected areas of study in the history, theories and criticism of acting.

515. Advanced Acting Process (1-6) F,S

Prerequisite: Acceptance into the MFA program. Variable areas and topics of study within the acting process depending upon the needs of the performer. May be repeated for a total of 6 unites. (2-12 hrs lab.)

516. Audition Techniques (3) S, Odd Years

Prerequisites: THEA 114A,B and 214 or consent of instructor. This course is designed to acquaint the student with auditioning materials and practical auditioning techniques. Included are guest speakers, preparation of resume and tapings of scenes. May be repeated for a total of 6 units. Traditional grading only. (6 hrs lab)

517. Repertory Theatre I (3) F,S

Prerequisite: Acceptance into the MFA Program. Preparation, rehearsals and public performances of selected plays in California Repertory Company. Traditional grading only. May be repeated for a max of 6 units. (6 hrs lab)

518. Repertory Theatre II (3) F,S

Prerequisite: Acceptance into the MFA Program.
Preparation, rehearsals and public performances
of selected plays in California Repertory Company. Traditional grading only. May be repeated
for a max of 6 units. (6 hrs lab)

519. Repertory Theatre III (3) F,S

Prerequisite: Acceptance into the MFA Program. Preparation, rehearsals and public performances of selected plays in California Repertory Company. Traditional grading only. May be repeated for a max of 6 units. 6 hrs lab.)

520A. Voice I (2) F

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) S

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) F

Prerequisites: Acceptance into MFA Progrm. 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) S

Prerequisites: Acceptance into the MFA Program. Analysis and development of dialects and accents for performance: Traditional grading only. (4 hrs lab.)

522. Voice III (2) F.S

Prerequisites: Acceptance into MFA Program. Advanced study of dialects. Exploration of microphone techniques. Traditional grading only. (4 hrs lab.)

523. Contemporary Theatre (3) F

Intensive study of a major area of contemporary theatre. Problems of modern movements in playwriting, production, acting, design and theatre philosophy.

540./442. Stage Property Construction (3) S

Prerequisite: THEA 342 or consent of instructor. Application of both basic and advanced concepts of stage property, set dressing and furniture construction. Study of property shop organization. Includes the use of non-traditional materials and construction methods. (6 hts lab.)

541. Portfolio Development (3) S

A study of the content and presentation of the designer's portfolio, resume and cover letter. Acquaints the designer/technician with interview skills and practical business information. (6 hrs lab.)

542. History and Theory of Design for the Theatre (3) F

Critical exploration of the evolution of design theory and styles through historical evidence from the Renaissance to the present.

543./458. Advanced Costume History (3) S every third year

Prerequisite: THEA 346 or equivalent. Detailed examination of historical costume periods, styles, and accessories for the theatre designer. Emphasis on research and sources. (6 hrs lab.) Traditional grading only.

544./459. Visual Conceptualization for the Theatre (3) F every third yr.

Prerequisite: THEA 341 and/or consent of the instructor. Techniques in visual conceptualization for the stage, costume, makeup and lighting designer. Emphasis on exploratory approach to presentation, media and rapid-visualization techniques. (6 his lab.) Traditional grading only.

545. Computer Aided Design for the Theatre (3) F,S

The application of two and three dimensional computer aided design and drafting programs to problems in technical theatre and design. The course will concentrate 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.

546./446. Costume Design I (3) F,S

Prerequisite: THEA 101 or consent of the instructor. Development of costume design through character and script analysis and understanding of line, space, color, and texture; planning and presentation of the costume rendering. (6 hrs lab.)

547. Technical Direction (3) F,S

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. Project work in the areas of scenery construction processes, rigging, pneumatics and hydraulics, shop organization and layout, and crew training and mangement will comprise a major part of the course. Traditional grading only.

548./448. Lighting Design I (3) F

Prerequisite: THEA 148. Techniques of designing lighting for various stage forms; creative planning and projection of designs for specific productions. (9 or more hrs lab.)

549./449. Sound Design for the Theatre (3)

Introduction to the scope, tools, materials and practices of sound in the theatre today.

554./454. Fabric Dyeing and Painting (3) S Odd Years

Prerequisite: Acceptance into MFA Program in Theater or consent of Instructor. Exploration and practical application of the techniques of painting and dyeing textiles. Offers a wide range of creative possibilities to the theatrical designer. Traditional grading only. (6 hrs. lab)

555./455. Metal Fabrication for the Stage (3) S

Prerequisite: THEA 142 or consent of instructor. A study of metalworking for the designer and technician in the theatre. Traditional grading only. (6 hrs lab.)

556./456. Costume Design II (3) S Prerequisite: THEA 446 or equivalent. Development of skills in research, interpretation, conceptualization, and visual communication. Problems in fabric rendering, developing style and integrating multiple sources in design. (6 hrs lab.) Traditional grading only.

557./457. Projection Workshop (3) S

Prerequisite: THEA 148 or consent of instructor. A study and application of new and traditional techniques of scenic and lighting projection for the stage. Traditional grading only. (6 hrs lab.)

564A. Movement I (2) S

Prerequisite: Acceptance by audition 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. (4 hrs lab.)

564B. Movement I (2) S

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. (4 hrs lab.)

565A. Movement II (2) F

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, in-

cluding the performance of scenes that include combat. (4 hrs lab.)

565B. Movement II (2) S

Prerequisite: Acceptance into MFA Program. A practical study of armed combat for the stage, including foils, eppes, broadswords, canes, quarterstaffs, rapiers and daggers. Coursework covers technique, safety, choreography, and the performance of armed, choreographed scenes. (4 hrs lab.)

566. Movement III (2) F,S

Prerequisite: Acceptance into MFA Program. Historical and practical study of movement styles from selected theatrical periods. Coursework covers social dancing, movement, manners, and the handling of period costumes, props, and accessories. (4 hrs lab.)

570. Production Practicum (2-3) F.S

Prerequisite: Consent of instructor. May be repeated for a total of 6 units. Advanced individual projects and research for technician/designer under appropriate faculty supervision. Practical experience in University sponsored productions. (6-9 or more hrs lab.)

581./441. Scenographic Techniques (3) F

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.

582./443. Stage Make-Up III (3) S

Prerequisite: THEA 385 or equivalent. Advanced make-up techniques for characterization and style, design and rendering techniques. Students must be clean-shaven due to the nature of this course. Supervision in the practical application of these elements in University sponsored productions. (9 or more hrs lab.)

584./464. Scene Painting I (3) F

Theatrical scene painting techniques, materials and methods through specialized technical projects. Supervised paint crew assignment required in University sponsored productions. May be repeated for a total of 6 units. Traditional grading only. (9 or more hrs lab.)

585./445. Scene Design II (3) S

Prerequisite: THEA 444 or consent of instructor. Projects in scene design for the multi-set show. Consideration of stylistic unity, shifting problems and current trends and approaches. Rendering, model development and presentation for the play, musical, opera, and ballet. (6 hrs lab.)

586./453. Pattern Drafting II (3) F

Prerequisite: THEA 343 or equivalent. Analysis of the structure and patterns of clothing from various historical periods. Reproduction of these garments for the theatre using draping and flat pattern techniques. Supervision in the practical application of these elements in University sponsored productions. Traditional grading only. (6 hrs lab.)

587./447. Costume Crafts II (3) S Even Years

Prerequisite: Advanced technical projects in costume accessory construction. Supervision in the practical application of these elements in University sponsored productions. (6 hrs lab.)

590. Graduate Design (3) F,S

Prerequisite: Acceptance into MFA program in Theater. 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.

614. Advanced Period Scene Study (3) F,S

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.

621A. Seminar in Theatre History and Dramatic Literature (3,3) S

Prerequisite: THEA 321 or consent of instructor. Intensive study of one major playwright or period in the history of the theatre.

642./450. Seminar in Theatre Decor (3) F

Prerequisites: Minimum of 9 units of work in theatre history, design and costuming or consent of instructor. Intensive study of the historical aspects of stage decoration, textiles and properties.

648. Lighting Design II (3) F,S

Prerequisites: THEA 548 or consent of instructor. Development of advanced skills in the design process and the direct application of cueing and the structuring of the total lighting design in a real-time situation. Traditional grading only.

656. Costume Design III (3) S

Prerequisite: Consent of instructor. Development of skills in costume design for the musical, modern dance, ballet and opera. (6 hrs lab.) Traditional grading only.

684./494. Scene Painting II (3) F.S

Prerequisites: THEA 584 or consent of instructor. Advanced development of skills in theatrical scene painting techniques, materials and methods through specialized technical projects. Supervised paint crew assignments required for CalRep and/or University Theatre sponsored productions. Traditional grading only.

685. Scene Design III (3) F,S

Prerequisites: THEA 585 or consent of instructor. Advanced development of skills in scene design for the multi-set play, musical, ballet and opera. Professional modes of design presentation and production detailing. Traditional grading only.

686. Pattern Drafting III (3) F

Research and analysis of historical tailoring techniques. Projects in traditional hand and contemporary machine tailoring methods. Supervision in the practical application of these elements in University sponsored productions. (6 hrs lab.) Traditional grading only.

694. Advanced Studies in Theatre Arts (3) F,S

Advanced individual projects with faculty supervision in an area of Theatre Arts specialization. Limited to three units in any one area per semester and no more than six units in one semester with a total of nine units in any one area. 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, (p) stage management, (q) theatre management, (s) technical direction. Traditional grading only.

696A. Research Aesthetics and Conceptualization I (3) F

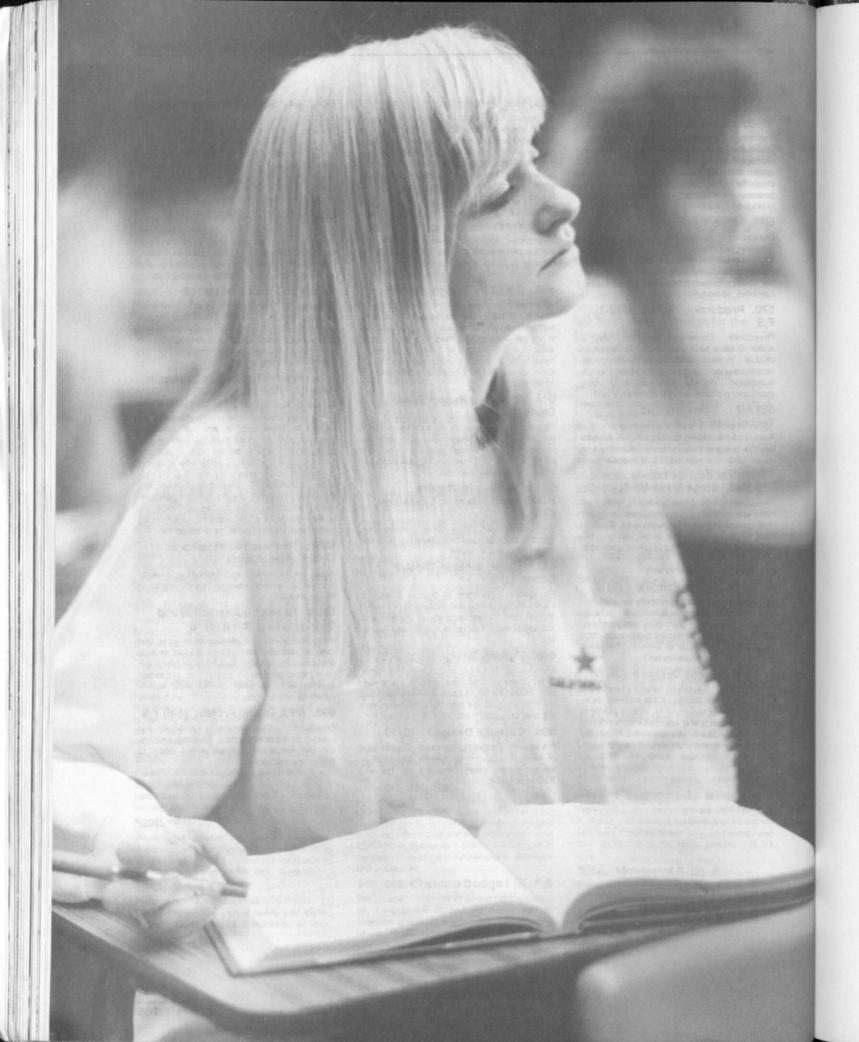
Resources, techniques and methods of research. A study of theoretical aesthetics as it applies to the creative act.

696B. Research Aesthetics and Conceptualization II (3) S

Study and practical application of research and variable aesthetic elements in production style and conceptualization. Collaborative production team conceptualization projects of production approaches for the actor, director and/or technical artists and designer.

699. MFA Thesis Project (1-6) F,S

Prerequisite: Advancement to candidacy and consent of department chair. Planning, preparation and completion of thesis project related to field of specialization.



College of Business Administration

Dean: C. J. (Mike) Walter Interim Associate Dean: Barbara Crutchfield George Dean's Secretary: Diane Barbee College Office: CBA 200 Telephone: (310) 985-5306 Administrative Services Manager: Linda McConnell Undergraduate Admissions and Advising Center: CBA 105; (310)985-4514: Coordinator: Carol Grutzmacher; MBA Office: CBA 231; Telephone: (310) 985-1797; Acting Director: David Horne International Business Program: CBA 414; (310) 985-4565; Director: Wendell H. McCulloch Jr. Student Life and Development: CBA 210; (310) 985-8600; Director: Stuart Farber

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

Mission

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) 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, Administrative Information Systems; Finance, Real Estate and Law; Human Resources Management; International Business; Management; Management Information Systems; Marketing, Operations Management; Quantitative Methods. (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.

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 stu-

dents 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.

Achievement Awards:

Beta Gamma Sigma "Outstanding Student in Business" — Applications usually due April 1. Award is presented in early May at the annual Beta Gamma Sigma Installation and Banquet.

Outstanding Graduating Senior — Applications 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.

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, Personnel and Industrial Relations Association. Information Systems Students Association, The Society for the Advancement of Management, Beta Gamma Sigma, Black Business Students Association, Delta Sigma Pi, Hispanic Students in Business and Economics, Law Society, Long Beach Entrepreneur Society, National Association of Black Accountants, Real Estate Society, International Association of Students in Economics and Commerce (AIESEC), Financial Management Association, Operational Management Association, International Association of Business Communicators.

The Associated Business Students Organization Council 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 Engineering Student Body co-sponsor the annual "Meet the Industries Night," a spring job fair which draws over 60 companies and several thousand 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.

A student organization, The MBA Student Association, has been established specifically for the graduate business students at California State University, Long Beach. The MBA Student Association promotes professional and social contact among the students and the organizations that comprise the Southern California metro region. Every MBA student is eligible for membership and is encouraged to take an active leadership role to enhance personal and association growth. For further information on student organizations, contact the Director of Student Life and Development, (310) 985-8600

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).

Supplemental Admission Requirements:

As a result of enrollment demands, the California State University's Chancellor's Office granted *impacted" status to the College of Business Administration to protect the academic integrity of the program. To be accepted as an upper division business major and to be allowed to enroll in 300 and 400 level business courses, a student must meet supplemental admissions criteria in addition to the regular admissions criteria of the university. Major requirements are determined at the time a student is admitted to the College of Business Administration.

Undergraduate students who indicate an interest in a business major on their application to the University will only be admitted as "pre-business" majors if they have not met the supplemental admission criteria or if their application is filed outside the required dates. (Exception to the filing deadlines will only be made if it is determined that there is space available for additional students.)

Continuing CSULB students must be pre-business majors at least one semester before becoming eligible for a change to the upper division business major.

Students requesting a change to an upper division business major must file a request for evaluation at the CBA Admissions and Advising Center one semester before the student expects to enroll in upper division business courses. A complete set of original transcripts of all college work, including work completed at CSULB must be filed with the request. Students may obtain the form, application and further information at CBA Room 105.

Application Deadlines for Supplemental Admission to CBA:

Application for new/transfer students should be filed between November 1st and 30th for admission for the following Fall semester, and between August 1st and 31st for the following Spring semester. Application deadlines for continuing students are publicized by the CBA Admissions and Advising Center Students filing after the deadline may be subject to a late fee.

Admissions Criteria:

For the 1994-95 academic year, the following supplementary criteria will be used:

A. Completion of 56 semester units of college or university level work acceptable toward a baccalaureate degree at CSULB.

B. Completion of 8 courses listed below (1) under the Requirements for the Bachelor of Science in Business Administration heading.

C. Satisfactory cumulative GPA in all college and university level work accepted at CSULB. Students with a GPA below 2.40 will not be admitted to Upper Division.

D. Passage of the CSULB Writing Proficiency Examination.

E. California residency. A limited number of International Visa Students will be admitted if they have a TOEFL scored of 550 or higher.

Conditional Admission:

Students who meet all other criteria for admission to the business major but who have not yet completed one or two of the eight lower division core courses, and/or have not yet passed the Writing Proficiency Examination, may be granted one semester of conditional enrollment in upper division business courses, subject to the following rules and restrictions:

At the end of the conditional semester students must have:

Completed all of the 8 lower division required courses

 Passed the Writing Proficiency no later than February for Spring and September for Fall.

 Maintained a cumulative GPA of 2.4 or better throughout their conditional semester.

Students who do not remove all deficiencies during this conditional semester will be returned to pre-business status, and must reapply for admission to the business major when all requirements for major standing have been satisfied.

For further information, students should consult the College of Business Administration Admissions and Advising Center, (310) 985-4514.

Special Enrollment Status:

Enrollment through Open University (University Extension Services) is allowed only on a space available basis in the following circumstances: 1) student is a business major and in good standing at another AACSB institution or 2) student would otherwise be qualified to be accepted as an upper division business major.

Interdisciplinary Studies and other majors which requires CBA courses and those who are business minors can register for classes only if they

have 56 units of college or university credit accepted by CSULB for baccalaureate credit. These students also need to complete the designated prerequisite courses.

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 can not be transferred from another school. Some business courses taken at other schools may be transferred for credit at CSULB if a grade of "C" or better was earned. 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 Program Requirements:

Requirements for the Bachelor of Science in Business Administration

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) (a) Upper Division Core Cour-

CBA 300, 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, (Finance and Marketing majors must take IS 305 instead of IS 301).

(b) The capstone course, MGMT 425. This course must be taken at CSULB as a senior and after all of the upper division core courses have been completed.
(c) Completion of at least one

(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.

The Accountancy Department

Option in Accountancy (code 3-2705)

The Accountancy curriculum is designed to meet the general educational 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.

Accountancy Option Requirements:

ACCT 300A-B, 400 or 410, 450, 470 or 475, 480, and one course from ANTH, PSY, or SOC

The Information Systems Department

The Information Systems Department administers options in Administrative Information Systems, Management Information Systems, and Quantitative Methods.

Option in Administrative Information Systems (code 3-2720)

The option prepares its majors for positions of responsibility as administrative managers and managers of office services in business, industry, education and government. It is designed to give an understanding of the problems of administrative management and a perception of the principles to solve these problems. The program includes a substantial number of competencies measured by the Certified Administrative Manager examination in the Administrative Management Society.

Administrative Information Systems Option Requirements:

IS 333, 385, 425, 450, 485.

Option in Management Information Systems (code 3-2725)

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 this option will find the following elective especially important: IS 342.

Management Information Systems Option Requirements:

IS 341, 380, 385, 450, 470 or 480,

Option in Quantitative Methods (code 3-2772)

This option leads toward quantitatively oriented careers in business, industrial, educational and government organizations. It provides a foundation for problem solving and decision making using the methods of operations research, business statistics, and computer technology in such positions as operations research analyst, statistical analyst, computer analyst, and business researcher. Emphasis is placed upon concepts and application to the business environment, rather than upon mathematical development theory.

Quantitative Methods Option Requirements:

IS 410, 411, 460, 463, 470

The Finance, Real Estate and Law Department

Option in Finance, Real Estate, and Law (code 3-2710)

The objective of the finance, real estate and law 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, real estate, and law curricula offer education in the management techniques and regulations applicable to financial management, investments, insurance, and real estate. The curriculum draws on fundamental knowledge of statistics, computer logic, economics, and law 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, real estate, and law major may direct the concentration toward financial management, investments, or real es-

The financial management option 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 option. The real estate option includes a focus on the various aspects of commercial, industrial and residential real estate. Within each of these options 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.

Option in Finance, Real Estate, and Law Requirements:

Financial Management Concentration Requirements:

(1) 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

Real Estate Concentration Requirements:

FIN 382, 342, and 9 units to be chosen from FIN 424, 444, 448, either FIN 449 or ECON 437

The 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)

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 develop 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.

Human Resources Management Option Requirements:

- (1) HRM 361
- (2) 12 units selected from HRM 440, 445, 446, 460, 462, 463, 465, 495

Option in Management (code 3-2745)

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.

Management Option Requirements:

MGMT 426 and 12 units selected from MGMT 326, 405, 410, 411, 412, 413, 414, 430, 451, 453, 454, 455.

Option in Operations Management (code 3-2758)

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 goodsproducing and service-oriented 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 the 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.

Option in Operations Management 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 310, 415, 426, 430, 431, 432, 433, 451, 453, 455.

The Marketing Department

Option in Marketing (code 3-2750)

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.

Marketing Option Requirements:

- (1) Nine units selected from MKTG 310, 330, 410, 420, 430, 465, 480, 492
- (2) MKTG 470
- (3) MKTG 490
- (4) MKTG 494

Option in International Business (code 3-2703)

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.

Students interested in International Business should contact the Advisement Center (985-4514) to receive the special instructions pertaining to this option's unique requirements.

International Business Option Requirements:

- (1)FIN 490
- (2)MGMT 405 (3)MKTG 480
- (4)Any two of the following four courses: HRM 458, FIN 424, MGMT 406, and MKTG 481.
- (5)Two years in high school or one year (2 semesters or 3 quarters) at the baccalaureate level of a language important in international business, approved as such by the Director of the International Business Option.
- (6) Choice of the language will determine the country or geographic area of the world about which the student must study to the extent of a minimum of 4 courses (12 units).

These will be in lieu of 12 other elective units, and can be double counted as part of the student's general education requirement.

G. E. or Elective Courses.

Select four courses (12 units), appropriate for your choice of language: ALL LANGUAGES, (ECON 368, POSC 371, I/ST 3171, I/ST 3181, I/ST 3191. SPCH 451, SPCH 452). CHINESE, (ANTH 332, A/ST 3011, A/ST 310, A/ST 4951, 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 3411, R/ST 343, C/LT 403). FRENCH, (C/LT 330A,B, ECON 361, GEOG 316, HIST 335, HIST 339, POSC 353, POSC 371, POSC 485, FREN 335, FREN 336). GER-MAN, (C/LT 330A, B, ECON 361, 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, GEOG 316, HIST 332, HIST 335, HIST 339, POSC 353, POSC 371, POSC 485). JAPANESE, (ANTH 335, A/ST 3011, 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 364, GEOG 318, GERM 410, HIST 341B, HIST 441, POSC 356, POSC 484, RUSS 310, RUSS 410). SPANISH, (ANTH 323, ANTH 324, ECON 363, GEOG 3201, HIST 364, HIST 433, HIST 462, HIST 463, POSC 358, POSC 359, POSC 481, 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 for the Undergraduate Certificate in International Business:

(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 Busi-

ness 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.

The Honors in Business Program (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 to the Honors in Business program:

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 for the Certificate of Honors in Business:

- 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 upperdivision 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 Quantitative Methods (code 1-2020)

The Information Systems Department offers a Certificate in Quantitative Methods, designed to give students an understanding of the principles, procedures and abilities needed to solve the problems faced by business statisticians, operations researchers and computer programmers. The Quantitative Method program prepares students for making scientific analyses and decisions relative to problems that may confront them in the industrial, business or governmental environments. It provides a foundation for problem solving and business decision making using the methods of statistics, operations research and computer technology. Operations research analysts, data processing managers, systems analysts, and other potential administrators may benefit from this pro-

Requirements for the Certificate in Quantitative Methods:

- (1) A bachelor's degree which may be taken concurrently with the certificate requirements:
- (2) A total of 18 units or more of Quantitative Methods courses at this University to include; a) IS 410, 411, 460, 463; b) two or more courses to be selected from: IS 341, 380, 470, MGMT/HRM 413, ECON 420, ECON 483/583, or ECON 486/586.
- (3) A grade of "C" or higher will be required in every course taken for the certificate program;
- (4) The program does not permit use of the Credit/No Credit option.

Any deviation from this program requires the written approval of the program director.

Certificate in Transportation (code 1-2030)

Requirements for the Certificate in Transportation:

- (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

Minor in Administrative Information Systems (code

- 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,

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) CBA 300 is a prerequisite for MKTG 480 and MKTG 481;
- (3) CBA 300 and MKTG 480 are prerequisites for MKTG 481;
- (4) MKTG 300 is a prerequisite for MKTG 420, 430, 465, 470, 480, 481, 490, and 492.

Minor in Quantitative Methods (code 0-2772):

- Eighteen more units to include:
- (1) IS 410, IS 411, IS 460, and IS 463. and
- (2) Six or more units to be selected from IS 380; 470; MATH 273 or IS 341: MGMT/HRM 413: ECON 420: ECON 483/583; or ECON 486/586. Note: Students may receive credit for MATH 273 or IS 341 but not both.

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

(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 or from the University test Office 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:

October 31 for Spring Semester April 30 for Fall Semester

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. Courses taken prior to admission to the MBA Program of the College of Business Administration may apply only in a very limited manner toward degree requirements. Before any course taken will apply to the MBA curricula, competency must be demonstrated via placement examinations on any course taken post baccalaureate.

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 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. Courses taken through the Open University cannot be counted toward the requirements for the MBA at CSULB.

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 Bulletin, 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
- the course work must be taken at an AACSB accredited graduate program.
- prior approval must be obtained from the MBA Director
- 4) <u>prior approval</u> 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 stu-

dent 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 Probational 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. Each student is urged to purchase the College of Business Administration MBA Handbook and to consult with the MBA office, CBA 231, (310) 985-1797.

Requirements for the Master of Business Administration Degree:

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 Ad-

ministration MBA office. The MBA program must include:
I. First Year Core 0-27
II. Second Year Core
III. Advanced Study12
IV. Capstone Course
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. Examinations will be given Tuesday, Wednesday, and Thursday late afternoon and evenings two weeks before classes begin. 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 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

Human Resources Management Information Systems

Management

Marketing

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 re-

quired 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.
- 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".
- 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
- 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.

College-Based Courses:

Undergraduate — CBA Graduate — GBA

130. Current Concepts of Business (3) F,S

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) F,S

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.

491. Honors in Business Colloquium (3) F,S

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) F,S

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) F,S

Prerequisites: Three units of Independent Study. Planning, preparation, and completion of an undergraduate thesis in business administration. Traditional grading only.

601. Applied Research (3) F,S

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.

Prerequisite: GBA 601, Planning, preparation, and completion of a thesis in business administration.

699. Integrated Analysis (3) F,S

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.

698. Thesis (2-4) F,S

612. Tax Research and

Department Chair: John Hinds Department Office: CBA 410 Telephone: 985-4586 Faculty: Professors: Michael Chase, David Davidson, Steven Fisher, John E. Hinds, John Lacev, Sitikantha Mahapatra, Mohamed E. Moustafa, Jae K. Shim, Robert W.

grinnsig xat bits ecnsiligation of beliggs ad like

Vanasse: Assistant Professors: Loc Nguyen; Emeritus Faculty: Edna M. Andrews, Serafina Q. Gunter, Truman O. Hickerson, Aren A. Lewis, John T. Martinelli, Sr., A. Mary McKinnon, Talmadge Tillman. Department Secretary: Cherie Dougan

For all degree requirements see Business Administration.

Courses (ACCT)

Lower Division

201. Elementary Financial Accounting (3) F,S

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) F,S

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) F,S

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 planningand 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) F,S

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.

development of a applicating principles and

_S12 Accounting Theory (3) F.S

400. Advanced Accounting (4) F,S 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) F,S

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) F,S

Prerequisites: Any upper division accounting course with a grade of "C" or better. Federal income taxation of the individual taxpayer. Laboratory and/or class computer applications are a requirement of the course.

451. Federal Tax Law II (4) F,S

Prerequisites: ACCT 450 with a grade of "C" or better. Federal income taxation of partnerships, corporations, estates and trusts. Laboratory and/or class applications are a requirement of the course.

460. Accounting for Not-for-Profit Organizations (4) F,S

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) F

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) F,S

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.

Accountancy College of Business Administration

475. Operations Auditing (4)

Concepts, methods and techniques of performing operational audits as a management control tool. Major concepts of financial auditing and its relationship to the operational audit. Responsibilities of the internal auditor, public accountant and rules of professional conduct. Laboratory and/or classroom computer applications are a requirement of the course.

480. Accounting Systems and Data Processing (4) F,S

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) F 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-3) F,S

Prerequisites: Consent of instructor and a 3.0 GPA in accounting. Topics of current interest in accounting selected for intensive study. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

497. Directed Studies (I-4) F,S

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) F,S

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

508. Contemporary Problems in Management Accounting (3) F,S

Prerequisite: ACCT 500. Examination of the literature on profit planning, control, and decision making. Current problems in management accounting; behavioral implications of management information systems; and quantitative approaches to managerial accounting. Laboratory and/or class computer applications are a requirement of the course.

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

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.

512. Accounting Theory (3) F,S

Prerequisites: ACCT 500, or equivalent. The development of a accounting principles and theory; problems in valuation, income determination, and financial disclosure. Laboratory and/or computer applications are a requirement of this course.

513. Advanced Auditing (3) F,S

Prerequisites: ACCT 470, with a grade of "C" or better. Extension of the basic auditing course beyond principles and procedures into areas of theory and practice. Additional concern has to do with the forces having an interest in, and an influence on, the external audit process. Laboratory and/or class computer applications are a requirement of the course.

525. International Taxation (3)

Analysis of the tax treatment of foreign income of United States citizens, non-resident aliens, foreign corporations, foreign currency, subpart F rules, and the effect of treaties will be studied. Tax concepts and principles related to selected current tax topics. Laboratory and/or class computer applications are a requirement of the

580. Accounting Information Systems (3) F,S

Prerequisite: ACCT 510 and IS 500. Information requirements and transaction processing procedures relevant to integrated accounting systems, including computer systems analysis, design and controls.

612. Tax Research and Procedures (3) F,S

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) F,S

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) F,S

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

Finance, Real Estate and Law College of Business Administration

Department Chair: L. R. Runyon Department Office: CBA 420 Telephone: 985-4569

Faculty: Professors: Earl S.
Beecher, Hamdi Bilici, Robert H.
Deans, Barbara C. George, Charles
V. Harlow, Michael L. Kearney, Son
V. Le, Arthur M. Levine, Wendell H.
McCulloch, Jr., David E. Pastrana,
Thomas J. Rhoads, L. R. Runyon,
Darshan L. Sachdeva, Robert R.
Trippi; Associate Professors: Gene
P. Morris, Thomas A. Rhee,
Lawrence F. Sherman; Assistant
Professor: Vivica Pierre, T. L. Tyler
Yang; Emeritus Faculty: Virginia M.
Belt, Harold R. Dilbeck, Raymond R.
Farrell, Richard J. Teweles.

Department Secretary: Janie Daly For all degree requirements see Business Administration.

Courses (FIN)

Lower Division

222. Legal Aspects of Business Transactions (3) F,S

Introduction to law and the legal system, elements of contracts, sales, and commercial paper.

Upper Division

300. Personal Finance (3) F,S

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) F,S

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) F,S,SS

Prerequisites: ENGL 100 and upper division status. Introduction to the interrelationship between the disciplinary models of law, economics, and personal finance. Exploration of the ethical framework of business as it operates in the marketplace. Consideration of elected topics including dispute resolution, the consumer as buyer of goods and services and the consumer as investor. Normally team-taught. Same course as ECON 309I amd H EC 309I.

324. Legal and Regulatory Environment of Business (3) F,S

497. Directed Studies (1-3) F.S.

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) F,S 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

360. Capital Markets (3) F,S

counseling are examined.

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) F,S

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) F,S

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) F,S

Prerequisites: 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) F,S

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 trans-

446. Residential Appraising (3) F,S

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) F,S

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) F, S

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) F,S

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) F,S

Prerequisites: FIN 342 and FIN 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 ad-

dressed 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) F,S

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) F,S

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) F,S

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. Futures Markets (3) F,S

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.

490. International Finance (3) F.S

Prerequisite: FIN 362; suggested, MKTG 380. 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) F,S

Prerequisites: Consent of instructor and GPA of 3.0 in finance. 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) F,S

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.

Graduate Prerequisite Courses

500. Legal Environment of Business (3) F,S,SS

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) F,S,SS

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) F,S

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) F

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.

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) F,S

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) F,S

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 his course. Traditional grading only. a spage A language

666. Seminar in Financial Management (3) F,S

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) F,S

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.

697. Directed Studies (1-3) F.S

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Legal and Economic Environmen

533. Capital Budgeting (3) F,S

Department Chair: Mohammed B. Khan Department Office: CBA 423

Faculty Professors: Jeanette W. Gilsdorf, Emma Jean Gunderson, Mohammed B. Khan, Jerry E. Mandel, Efraim Turban, Richard D. Wollmer; Associate Professors: John E. Gessford, Kenneth L.

Telephone: (310) 985-4993

Pickard, Dee Bruce Sun; Assistant Professor: Robert T. Chi, R. Michael Godfrey, Khosrow Moshirvaziri.

Emeritus Faculty: Darrell V. Burras, Lincoln L. Chao, William R. Doud, Paul R. Gilon, Braxton C. Henderson, Ronald L. King, Dale E. Nelson, Carl R. Payne, Perri J. Stinson.

Department Secretary: Debbie A. Swiderski

Courses in Information Systems

For all degree requirements see Business Administration.

Lower Division

233. Introduction to Computer Systems and Applications (3) F,S

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) F,S

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) F,S

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.

305. Written Business Communication (3) F,S

Study of written communication media utilized in business: emphasis on developing skill in business writing. Traditional grading only.

Information Systems

College of Business Administration

310. Business Statistics (3) F,S

Prerequisites: MATH 114, and 115B. 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.

333. Office Systems Applications (3) F

Prerequisite: IS 240. Applications of office automation technologies from the user perspective; relationship of automated technologies and corporate goals: comparative and evaluative techniques for appropriate selection of software and hardware with an introduction to telecommunica-

341. Application Development-Coboll (3) F,S

Prerequisite: IS 240. 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.

342. Application Development-Cobol II (3) S

Prerequisite: IS 341. A continuation of IS 341. Multi-level tables, advanced sort, advanced file handling involving sequential, indexed sequential, and relative files. Variable-length record processing, report-writer, subprograms, and concepts of interactive programming. Introduction to Job Control Language (JCL).

380. Database I (3) F,S

Prerequisite: IS 240. Introduction to Database; creating, modifying, and querying the database. Database models covered include hierarchical, network, and relational. Emphasis on design and use of databases.

385. Systems Analysis and Design (3) F,S

Prerequisite: IS 240. Systems concepts and systems development process. Application of both classical and current tools and techniques to describe business systems. Systems design techniques. Derivation of logical and physical models of business systems from data flow diagrams.

410. Probability and Decisions (3)

Prerequisites: MATH 114, and 115B. 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) S

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.

425. Administrative Communications (3) S

Theory and practice of behavioral communication involved in the administrative management process; emphasis on problems in communication involving interaction, persuasion, and human relations. Traditional grading only.

450. Data Communications (3) F,S

Prerequisite: IS 385. Elements of data communications and teleprocessing; features of centralized, decentralized, and distributed information systems. Emphasis on local area networks and the impact of communications technology on the design of information systems. Traditional grading only.

460./560. Operations Research: Deterministic Models (3) F

Prerequisites: MATH 114 and 116 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 prarmetric programming.

463./563. Operations Research: Probabilistic Models (3) S

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.

470. Decision Support Systems (3) F,S

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.

480. Advanced Database Concepts (3) F,S

Prerequisite: IS 380. Object-oriented approach to application software development. Use of entity-relationship analysis to identify objects. Development of standard objects for a business. Repository systems and their use in object administration. Application software development project using object-oriented software development system.

485. Information Systems Project (3) F,S

Prerequisite: IS 385. A comprehensive information system development project using a team approach to plan, analyze, design, and document a realistic system of moderate complexity. Topics include project planning and management techniques. Additional work required for

493. Information Systems Internships (3) F,S

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) F,S

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) F,S

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 Systems, or Business Computer Methods. Individual projects, research, or study in one of the options.

Graduate Division

500. Management Information Systems (3) F,S

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) F,S

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) F,S

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.

560./460. Operations Research: Deterministic Models (3) F

Prerequisites: Graduate standing, MATH 114 and 116 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) S

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.

580. Management Support Systems in Organizations (3) F

Prerequisite: IS 500 or equivalent. Use of information systems technologies to support the work of managers and other knowledge workers. Emphasis on individual and group decision support systems, groupware, organizational decision support systems, expert systems, and executive information systems. Traditional grading only.

584. Database Concepts and Management (3) F

Prerequisite: IS 500 or equivalent. Database concepts with emphasis on end users. Use of functional modeling and entity-relationship analysis to develop conceptual databases; conversion of conceptual models to standard data models; implementation of standard data models using database management systems (DBMSs). Database administration. Managerial, technical and organizational aspects of conceptual design, development, and implementation of databases and related user information-handling processes. Traditional grading only. Course may be repeated for a max of 3 units.

625. Problems in Business Communication (3) F

Prerequisite: Graduate standing. Contemporary business communication thought and research applied in the solving of organizational communication problems.

650. Business Telecommunications and its Management (3) S

Prerequisite: IS 500 or equivalent. Introduction to telecommunications including principles and applications. Special emphasis on technical and managerial aspects of telecommunications within a business organization. Familiar applications of telecommunications, and operation and management of telecommunications department and network.

685. Application Software Development and Management (3) S

Prerequisites: IS 500, and IS 584. Planning and development of application software. A comprehensive information system development project using a team approach. Strategies, policies, methods of analysis, and automation techniques used in software development. Management of software development projects.

695. Selected Topics (3) F.S

Prerequisites: Graduate standing and consent of instructor. Topics to be announced in the Schedule of Classes.

697. Directed Studies (1-3) F,S

Prerequisites: Graduate standing and consent of instructor. Individual study under the direction of the faculty.

Management and Human Resources Management College of Business Administration

Department Chair: John F. Herrmann

Department Office: CBA 314 Telephone: (310)985-4557

Faculty: Professors: Donald L.
Bates, Filemon C. Campo-Flores,
Phillip S. Chong, Charles D.
Hamburger, John F. Herrmann,
Salah M. Kukalis, Ralph J. Lewis,
Jonathan S. Monat, Michael T.
Quinn, Roger D. Roderick, Roger R.
Stanton, Herbert L. Stone; Associate
Professors: David J. Abramis,
Gerald L. Ford, Dan L. Madison;

Assistant Professor: Eric Hansen.
Emeritus Faculty: Robert J. DeVoe,
Carl E. Gregory, Reinald C. Heise,
James J. Kirkpatrick, Arthur C.
Laufer, Vernon A. Metzger, Wesley
Morse, Robert J. O'Donnell, Robert
J. Smith, Glen H. Stewart, Kenneth S.
Teel, William J. Traynor, Susanne
Whitcomb, Dale M. Yoder.

Secretary: Margaret Robertson

For all degree requirements see Business Administration.

Management Courses (MGMT) Upper Division

300. Principles of Management (3) F,S

Prerequisite: 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.

310. Operations Management (3) F,S

Prerequisite: MGMT 300 or equivalent. Introduction to production and operations management functions that are applicable to all types of organizations. Survey of basic models and tools with special emphasis on the introduction of supporting computer resources. All students will work "hands-on" computer exercises in forecasting, material requirements planning, aggregate planning, and other operations management areas.

326. Management and Society (3) F,S

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) F.S

Prerequisite: MGMT 300 and one of the following three: MKTG 380, MKTG 480, or ECON 471. 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) F, S

Prerequisites: MGMT 405. 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) S

Prerequisite: MGMT 310 or equivalent. Analysis of basic frameworks for managing material flows into, within, and out of organizations, Study of inventory models for independent deman items, material requirement planning, and distribution systems. Heavy emphasis on learning supported by MRP II tools and other computer resources.

411. Production Planning (3) F

Prerequisite: MGMT 410: 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) S

Prerequisite: MGMT 410. 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) F

Prerequisite: MGMT 310 and 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 im-

provement, product quality, and manufacturing strategy.

414. Purchasing Management (3) F

Prerequisite: MGMT 410. 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.

415. Analysis of Purchasing Problems (3) S

Prerequisite: MGMT 414. Study of the methods for purchasing research and negotiations. Procurement and management of transportation services. Case studies in purchasing strategy and traffic management.

421. Management of Small Business Enterprises (3) S

Prerequisite: MGMT 300 or equivalent. Analysis of the formation of management functions and decision making as related to small enterprise. Cases and problems will be examined.

425. Business Strategy and Policy (3) F,S

Prerequisite: Completion of Business core requirements, senior standing. 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) F,S

Prerequisite: Senior standing and BASIC programming experience. Evaluation of concepts for evaluation and design of decision support systems, management decision models, sociotechnical strategies for implementing information system changes.

*430. Project Management (3) F,S

Prerequisite: Completion of business core requirements. This course describes how ideas are selected for projects and how the projects are implemented. It explores the role of the project team members, 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.

432. Management of Service Operations (3) F

Prerequisite: MGMT 310 and 410. Analysis of the nature of non-manufacturing operations in a variety of service organizations. Cases, examples, and simulation tools will be used to explain and illustrate concepts.

*451. Management and Performance Evaluation Analysis (3) F,S

Prerequisite: Completion of Business Core courses. 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) F,S

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) F,S

Prerequisite: MGMT 300 and HRM 361. 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) F,S

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) F,S

Prerequisites: Consent of instructor and GPA of 3.0 in management and operations management. Topics of current interest in management 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) F,S

Prerequisites: Consent of instructor and Department Chair. Study of advanced nature in management.

Graduate Prerequisite Course

500. Business Policies, Operations and Organizations (3) F,S

Prerequisites: MBA standing. Recommended preparation: IS 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) S

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) F

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) S

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) F

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) S

Prerequisites: MBA standing, plus minimum of three units in operations management and three units in marketing or consent of instructor. 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) F

Prerequisites: MBA standing. 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) F

Prerequisites: MBA standing, plus nine units of 500/600 level courses in the area of international business. Analysis of current theory and prin-

ciples 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) F,S

Prerequisites: MBA standing, plus MGMT 500. History of management thought, business organization, strategies and policies, executive control; managerial problems.

646. Seminar in Organization Analysis (3) F,S

Prerequisites: MBA standing, plus MGMT 500. The management function; audit of management performance.

647. Seminar in Management Planning and Control Systems (3) F,S

Prerequisites: MBA standing, plus MGMT 500. Analysis of planning and control systems in management. Cases and problems will be examined.

695. Selected Topics (3) F,S

Prerequisites: MBA standing. Topics to be announced in the MISchedule 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) F,S

Prerequisites: MBA standing, plus consent of instructor. Individual study under the direction of the faculty.

Human Resources Management Courses (HRM)

Upper Division III to selgioning .000

360. Organizational Behavior (3) F,S

An overview of the dynamics of human behavior in organizations and implications for managing people at work. Topics include motivation, perception and attitudes, nature of work groups, groups norms, communications, organizational culture, change and leadership.

361. Managing Human Resources in Organizations (3) F,S

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) F,S

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) F,S

Prerequisite: HRM 361. Compensation and benefits management is viewed as an integrating human resource management process. Empha sis 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) F,S

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 & Cultural Diversity (3) F,S

Prerequisites: Junior/Senior standing. This course examines the impact of culture and ethnic origin on the work experience, and it is designed to better prepare individuals to meet the challenge of cultural diversity in the modern organization. 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. The American culture and five cultures chosen by the students are examined. Open dialogue, vigorous debate, outside research, and group presentations are required. Traditional grading only.

460. Current Issues in Human Resource Management (3) F,S

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-Managment Relations (3) F,S

Prerequisite: HRM 361. 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) F,S

Prerequisite: HRM 360. 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) F,S

Prerequisite: HRM 360. 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) F,S

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) F,S

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) F,S

Prerequisite: 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.

552. Comparative Labor Relations Systems (3) F

Prerequisites: MBA standing, plus HRM 500. Comparative survey and analysis of the history, structure, institutional arrangements and philosophy of the labor relations systems in advanced, developing and underdeveloped countries. Comparative survey and analysis of labor, and management relations and the role of government in industrial relations.

650. Seminar in Labor Relations (3) S

Prerequisites: MBA standing, plus HRM 500. Intensive analysis of current problems of labor and management.

652. Seminar in Human Resources Management (3) F,S

Prerequisites: MBA standing, plus HRM 500. 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. Negotiation and Conflict Management (3) F

Prerequisites: MBA standing, plus HRM 500. 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 Employee Motivation (3) F

Prerequisites: MBA standing, plus HRM 500. Review and analysis of theories of motivation and change, application of those theories; self-assessment, and skill building. Primary issues include: individual motivation, supervisory issues in motivating, and managing planned organizational change, development and intervention methods. Discussion, cases, simulations, and presentations.

657. Seminar in Leadership Skills (3) S

Prerequisites: MBA standing, plus HRM 500. Study of leadership skills, such as self-awareness, problem solving, communication, interpersonal and leadership situation awareness. Case studies, class discussion, psychological tests, TV taping, student presentations and lectures are used.

658. Seminar in Managing Cultural Diversity (3) F, S

Prerequisites: MBA standing. This course examines the impact of culture and ethnic origin on the work experience, and it is designed to better prepare individuals to meet the challenge of cultural diversity in the modern organization. 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. The American culture and five cultures chosen by the students are examined. Open dialogue, vigorous debate, outside research, and group presentations are required. Traditional grading only.

695. Selected Topics (3) F,S

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) F,S

Prerequisites: MBA standing, plus consent of instructor. Individual study under the direction of the faculty. Marketing

College of Business Administration

Department Chair: Terrence H. Witkowski Department Office: CBA 335 Telephone: (310) 985-4769 Faculty: Professors: Richard L. Celsi, Zohrab S. Demirdjian, Forrest E. Harding, Richard Spiller, Terrence H. Witkowski; Associate Professors: Eric Arnould, Pamela Homer, David Horne, Praveen Soni; Assistant Professors: Mary Wolfinbarger, Alice Wright. Emeritus Faculty: William D. Ash, Benjamin C. Butcher, Edmund A. Cotta Robert T. Holmes, Charles E. Wolff.

Department Secretary: Irene Bjerregaard

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) F,S

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) F,S

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 Communica- tions: Advertising (3) F.S

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) F,S

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 nonprofit and profit oriented service organizations will also be explored.

420. Sales Management (3) F,S

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) F.S

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) F,S

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) F,S

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) F,S

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) F,S

Prerequisites: MKTG 300, SBA 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) F,S

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) F,S

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)F,S

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) F,S

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) F,S

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.

Graduate Prerequisite Course

500. Marketing Concepts (3) F,S

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

506. International Business Concepts (3) F,S

Prerequisites: MBA standing and MKTG 500. Critical study of international business activity and business practices in international environment. Cases and projects.

610. Seminar in Services Marketing (3) S

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) F,S

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.

663. Seminar in Advertising Policies (3) F

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) F,S

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) F

Prerequisites; MKTG 500 and MKTG 506. 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) F,S

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) S

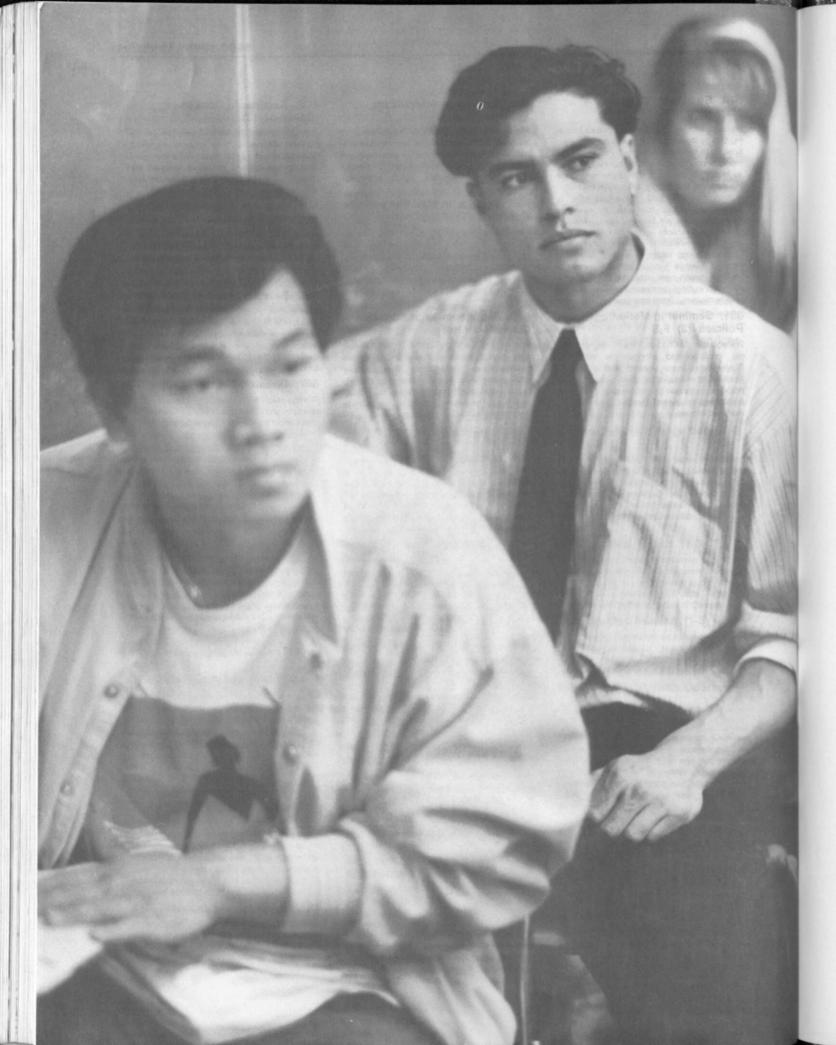
Prerequisite: MKTG 661. The role and use of marketing research and information systems as the basis for development and implementation of marketing strategy. Case studies and/or class projects required.

695. Selected Topics (3) F,S

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) F,S

Prerequisites: MBA standing, consent of instructor and Department Chair. Individual study under the direction of the faculty.



College of Education

Dean: John Sikula Associate Dean: Jean Houck Assistant to the Associate Dean: Jeanne Kaplan

Director of Instructional Support: John A. McAnlis

Assistant to the Director: Delores Blanchard

Director of Development: Sally Sherlock

Director, Educational Psychology Clinic: Gary Greene

Director, Educational Career Services: Judi Walker

Credential Analyst: Carol Riley Secretary to the Dean: Belen Estrada

Departments:

- Educational Psychology and Administration (ED P, EDAD and LI): Robert Berdan, Chair
- Instructional Systems Technology (EDST)
- Single Subject Teacher Education (EDSS): Jean L. Conroy, University Coordinator
- Teacher Education (EDEL & EDSE): Robert Roth, Chair

The College of Education (CED) prepares students for professional careers in the field of public and private education.

The mission of the College of Education is to promote effective and equitable teaching, counseling, and the pursuit of lifelong learning. The College seeks to include, and benefit from, students representing a varied range of academic and professional backgrounds and to provide them with information and experiences on the cultural and intellectual bases of our pluralistic, interdependent, and changing world.

Recognizing the importance of cultural and linguistic diversity, the College of Education welcomes the challenges and opportunities this provides for educators. College programs embrace the responsibility for providing an equitable education which is sensitive to gender, age, race, sexual orientation, ethnicity, and exceptionalities.

The College of Education exposes students to a comprehensive examina-

tion of ideas, discourse, ethics, and policy issues, with a focus on the historical and philosophical roots of education. Faculty in credential and degree programs promote innovation and improvement by integrating recent research, international/multicultural perspectives, and an appreciation of technology. The College prepares teachers, counselors, special educators, administrators, educational technologists, and psychologists to be future leaders. In addition, the College enhances professional growth opportunities for experienced practitioners in schools, industry, and government through strong post baccalaureate programs The College provides leadership and service to meet the changing needs of our local and global community.

The College of Education provides undergraduate and graduate studies in the field of education. It offers specific curricula focusing on the preparation of personnel for teaching and educational service in the preschool, elementary, middle and high schools, community colleges, adult programs, other educational agencies, and programs for training program developers and instructors in business, industrial, health and governmental areas. In addition to three certificate programs and a variety of teaching and service credentials, the College offers a Master of Arts in Education degree with various options, and two Master of Science degrees (special education and counseling). All CED graduate level courses (500/600) 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 Bulletin in the CED department that houses the particular program.

Degree Programs

Master of Arts in Education with Options in:

Educational Administration Educational Psychology Social and Philosophical Foundations of Education

Specialization in International Education

Specialization in Language, Literacy, and Culture Specialization in Urban Education Elementary Education Specialization in Curriculum and Instruction Specialization in Early Childhood Education Specialization in Reading Secondary Education Specialization in Curriculum and Instruction Specialization in Reading Instructional Systems Technology Specialization in Design and Development Specialization in Library Media Specialization in Computer-Based

Master of Science in Special Education

Technology

Master of Science in Counseling:

Marriage, Family, Child Counseling (MFCC) Option General Counseling Option Specialization in:

School Counseling Student Development in Higher Education Career Counseling

Vocational Rehabilitation Counseling Option

State Credentials

Basic Teaching Credentials: Elementary:

Multiple Subject Credential with Bilingual Emphasis in English/Spanish Multiple Subject Internship

Secondary:

Single Subject Credential with Bilingual Emphasis in English/Spanish Single Subject Internship Single Subject NTE Waiver Programs:

Health Science:

English (American Studies, Comparative Literature, Creative Writing, Dance, Journalism, Language & Composition, Literature, Radio/TV, Speech, Theatre): Foreign Language (French, German, Spanish);

Home Economics:

Industrial and Technology Education: 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 (Suspended through 1994-95) Learning Handicapped Severely Handicapped Special Education Internship (Bilingual focus) Resource Specialist Certificate of Competence

Services Credentials:

Preliminary Administrative Professional Administrative (Suspended through 1994-95) Library Media Teacher Clinical Rehabilitative (Communicative Disorders) Health (Nursing) School Counseling School Counseling Internship School Psychology School Psychology Internship

Other Credentials & Authorizations

Designated Subjects (Adult and Vocational Education, ROTC, Supervision and Coordination)

Certificates

Career Guidance Specialist (Graduate); Instructional Technology; Teaching of Reading and Language Arts (Graduate) (Suspended through 1994-95)

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 Personnel and Guidance Association to honor the former Chief of the Bureau of Pupil Personnel Services. Applications for the McCreary and Johnson Scholarships are available in the Educational Psychology and Administration Department Office.

The William C. Maslow Memorial Scholarship was established as a tribute to the husband of a now retired College of Education faculty member, 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 awards for multiple subject credential candidates.

Other scholarships for prospective teachers are awarded through donations from the California Retired Teachers Association, CSULB Emeriti Association, 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, (310) 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 childrens'

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.

The Adult Learning Disability Program serving CSULB students is also associated with the Educational Psychology Clinic, although largely supported by the Office of Disabled Student Services. Presently, 130 students are offered services including support groups, academic advisement, personal counseling, career counseling, liaison remediation of information processing skills and weekly monitoring of progress. This program has become a model for the California State University system.

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 and is open 8 a.m. to 12 noon and 1 p.m. to 5 p.m. Phone (310) 985-5772. The 24-hour job tape hot line telephone number is (310) 985-5320.

Credential Processing Center

The Credential Processing Center (CPC) is responsible for processing all initial elementary and secondary teaching and service credential applications to the Commission on Teacher Credentialing (CTC).

Credential candidates completing requirements by the end of the fall semester of any year should register prior to March 1, and spring and summer candidates prior to October 1.

Multiple and single subject candidates complete this registration process as part of the student teaching application. Following registration with the CPC, a credential evaluation will be completed and results forwarded to the candidate indicating remaining University and state requirements. After all requirements are met, a verification of such is sent to the CTC, which is also used by school districts and county offices for purposes of employment.

The CPC is located in ED1, Room 42, and is open for service Monday through Thursday from 8-12 and 1-6 and on Friday from 8-12 and 1-5, unless otherwise posted. The telephone number is (310) 985-5710.

Master's Degree Programs

Master's degree programs are offered in each of the three departments within the College. General procedures, admission, advancement to candidacy policies and requirements, and generic requirements for the Master of Arts in Education degree follow the list of options and specializations available in each department.

The Department of Educational Psychology and Administration offers two Master of Science degrees: MS in Counseling, with Options in General Counseling, in Marriage, Family, and Child Counseling, and in Vocational Rehabilitation 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 Instructional Systems Technology offers a Master of Arts in Education with an Option in Instructional Systems Technology. Three specializations are available: Design and Development, Library Media, and Computer-Based Technol-

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, Early Childhood Education, and Reading. The Secondary Education Option has two specializations: Curriculum and Instruction, and Reading.

To be considered for admission to a master's degree program, students must submit an application, official transcripts, 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.

A graduate handbook and other materials regarding degree programs are 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.

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 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. If an applicant has a GPA below 2.85 and the graduate advisor believes special circumstances apply, the file of that applicant may be reviewed by the Graduate Committee.

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 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. Test scores must be on file in the College of Education, Office of Graduate Studies and Research one semester prior to advancement to can-
- 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 - change to: 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

Requirements for the Master of Arts in Education:

- 1. Completion of 30-34 units of approved courses with 18-21 units of 500/600 level courses in education:
- 2. A thesis or project, or successful completion of a comprehensive examination as required by the appropriate option or specialization;
- Completion of the requirements and courses appropriate to the option and the specialization.

Requirements for the various options under the Master of Arts in Education are given in the departmental sections. Requirements for the Master of Science in Counseling and in Special Education are given in the Educational Psychology and Administration Department section.

Educational Psychology and Administration

College of Education

Department Chair: Robert Berdan Department Office: ED1 Room 10 Telephone: (310) 985-4517 Faculty: Professors: Robert H. Berdan, Robert W. Cash, Elaine J. Haglund, Alice M. Harris, A. Jean Houck, Cynthia Johnson, Thomas J. Kampwirth, Charles J. Kokaska, Ann Lathrop, Ralph E. Matkin, Everett Murdock, Vicente N. Noble, David Ramirez, John P. Sikula; Associate Professors: Jana Echevarria, Gary Greene, Marquita Grenot-Scheyer, Katherine Van Giffen, Terrence G. Wiley, Claudia Wright.

Emeritus Faculty: Evelyn L. Blackman, Enid V. Blaylock, Alex L Britton, Robert D. Crossan, Boyd A. Davis, George D. Demos, William E. Fogg, Florence H. Forst, Norma B. Gibbs, Alan J. Glasser, Albert Hamel, Carol A. Hunter, Taylor T. Jackman, I. Aileen Poole Koehler, Phyllis F. Maslow, John A. Nelson, Jr., Russel E. Orpet, Carolyn M. Owen, Alfred I. Schmidt, Neil V. Sullivan, Robert J. Swan, Charles H. Tilden, Stanley W. Williams.

Gloria Inzunza-Franco The Department

Department Secretary:

The Department of Educational Psychology and Administration offers graduate level course work in the following program areas: Educational Administration; Special Education; School Counseling; School Psychology; MFC Counseling; Educational Psychology; Social and Philosophical Foundations; Library Media; and Educational Research; 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 ad-

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 of-

Educational Administration Option Educational Psychology Option Social and Philosophical

Foundations of Education Option. Two Master of Science degrees are available, one in Counseling and one in Special Education. Counseling offers three options:

MS in Counseling — Option in Marriage, Family, and Child Counseling (MFCC); Option in Vocational Rehabilitation Counseling General Option, specializations: School Counseling, Student Development in Higher Education, Career 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. 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. The Professional Administrative Services Credential has been suspended through 1994-95, due to a lack of resources.

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.

he transferies or consideration

Administration (code 5-3103)

ministration program believe that the combination of theory and practice, coupled with substantive field applications, help develop flexible and creative administrators to serve the students and residents of California. The emphasis is on service to teachers and students, and stresses the need for team-building, trust, and other concepts found in pursuing excellence. The program stresses the interdisciplinary nature of leadership and administration, and draws upon research and successful approaches utilized in a variety of disciplines. The educational administration courses are available in

Prerequisites:

15 units of upper-division courses in education, including ED P 400.

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
- 3. Pass the Writing Proficiency Examination (WPE);
- 4. Submit two non-confidential letters of recommendation from individuals familiar with your professional competence and
- Submit a double-spaced typed personal statement (2 or 3 pages) of your reasons for seeking to enter the program, experience and training related to program, and your philosophy of leadership and administration;
- 6. Attendance at the Educational Administration orientation program.

Requirements:

A minimum of 31 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.

Option in Educational

The faculty in the school ad-

Psychology (code 5-3158)

Option in Educational

A research oriented Master of Arts in Education Option. Designed for students planning to pursue a doctorate or a school psychology credential.

1. One of the following (3 units):

2. One of the following (3 units):

3. One of the following (3 units):

4. One of the following chosen in

695 masters project (3) or EDAD

5. All of the following (16 units):

6. Electives to total 31 units

chosen in consultation with and

approved by the coordinator of

educational administration.

EDAD 541, 544, 647, 659, and

ED P 574 or EDAD 649;

ED P 575, 576, or 672;

ED P 500, 595, or 696;

698 thesis (6 units);

ED P 677:

consultation with the faculty

coordinator (3-6 units): EDAD

Prerequisites:

Fifteen units of approved upperdivision 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): 3. The following (6 units): ED P 6983 AEAB S GB 1021/08

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 Philosophical Foundations of Education (code 5-3162)

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:

Fifteen units of advisor approved upper division or graduate level courses in education, humanities, social and behavioral sciences, liberal studies or other appropriate areas. Three units of the 15 must include ED P 400 or a quantitative research course.

Clear Admission:

- 1. Meet University and College admission requirements;
- 2. Personal interview with program coordinator and/or program faculty;
- 3. Written statement describing previous personal/professional experience and career goals.

Requirements:

A minimum of 30 units of upper division and graduate courses with a minimum of 21 units at the 500/600 level and a minimum of 6 units within a specialization.

Core Requirements:

- 1. One of the following (3 units): ED P 500, 595, or 696 (ED P 595 or 696 required for thesis students);
- 2. One of the following (3 units): ED P 573 or EDEL/EDSE 530;
- 3. One of the following chosen in consultation with a faculty advisor

(3-6 units): ED P 695F (3) and written comprehensive examination or ED P 698 (6). Option Requirements: 1. The following three courses (9 units): ED P 574, 575, 576; 2. Choice of one of the following three Specializations within the Option:

International Education: The following (9 units): ED P 582, 583, 672

Language, Literacy and Culture: Two courses chosen from the following (6 units): ED P 577 [or LING 500], ED P 578 [or LING 575], or ED P 672. Urban Education:

The following (6 units): ED P 615, and EDAD 649. 3. Electives chosen in consultation with an advisor to

total a minimum of 30 units. 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 three options: (1) General Option with

specializations in career counseling, school counseling, and student development in higher education; (2) Marriage, Family, and Child Counseling Option; and (3) Vocational Rehabilitation Counseling Option. Each option and specialization area is developed around a 30 unit degree core. The total number of course units needed to satisfy requirements for graduation, however, depends upon the option and specialty area selected by the student.

Admission Requirements:

- 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;
- 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 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);
- Three letters of recommendation (send only after notification by the program);
- 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 April 15 for the following fall semester [students are admitted to begin course work in the fall semester only];
- 8. Applicants are allowed only nine semester units credit applied to curriculum requirements completed prior to admission into the first semester of the program.

Degree Core:

- 1. All of the following (24 units): ED P 419, 420, 430 (or 434B/C for SDHE), 515, 520, 531, 555, 695C:
- 2. Eighteen units of the degree core (ED P 419, 420, 430 or 434B/C, 515, 531, 555) must be completed prior to applying for advancement to candidacy;
- 3. Field work/internship (6 units) selected in consultation with the

student's assigned faculty advisor: ED P 643A, 644A (school counseling), or ED P 643B, 644B (student development in higher education), or ED P 643C, 644C (career counseling), or ED P 643D, 644D (marriage, family, and child counseling), ED P 645 (vocational rehabilitation counseling);

4. One of the following chosen in consultation with the student's assigned faculty advisor: Written comprehensive examination or Thesis (ED P 698).

Option in Marriage, Family and Child Counseling (MFCC) (code 6-3175)

Requirements

All of the following (28 units): EDP 510, 511, 512, 513, 543, 604, 608, 634, 638; Elective (3 units).

A number of the MFCC Option specialty courses are offered through University Special Session because of reduction in the State budget funding. The affected courses are indicated in the MFCC Information Advisory packet.

Option in Vocational Rehabilitation Counseling (VRC) (code 6-3170)

Requirements:

All of the following (28-31 units): ED P 501, 502, 503, 510, 513, 529, 581, 637; and one from ED P 524 or

General Option (code 6-3165)

Specialization Requirements:

All of one of the following specializations:

Career Counseling (25-28 units): ED P 510, 513, 529, 530, 637, 638; and one from 516, 517, or 566; and 524 or 580.

School Counseling (27 units): ED P 510, 513, 517, 530, 536, 604, 615, 638, and 639.

Student Development in Higher Education (15 units): ED P 516, 538, 548, 549, 638.

Special Education

The faculty in the special education program area each have their own specialization, which, combined with the numerous part-time faculty used in the program provide depth and a rich combination of theory and practical application. All courses required for the special education credential are scheduled in the evening for the benefit of regular teachers pursuing this advanced credential. Student teaching in special education classrooms is available during the summer to accommodate regular classroom teachers, but opportunities are limited.

Master of Science in Special Education (code 6-3155)

Clear Admission:

- 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;
- Baccalaureate degree from an accredited institution;
- 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.

- Degree Core:
 a. The following (3 units): ED P
- 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).
- Degree Requirements:
 a. All of the following (9 units):
 ED P 535, 546A or B, and 566;
 b. Electives to total 30 units selected in consultation with a special education faculty advisor.

Credential Programs

Pupil Personnel Services Credential Programs

The California Commission on Teacher Credentialing (CTC) issues four pupil personnel services credentials: school counseling, school psychology, child welfare and attendance, and school social work. The College of Education at CSULB offers two of these credential programs: school counseling and school psychology.

School Counseling Credential (code 800)

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:

- 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;
- Three letters of recommendation;
- A written personal statement;
- Screening interview(s);
- 7. An application and items 1-5 above must be on file in the Department of Educational Psychology and Administration 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:

- 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 undergraduate course work or equivalents approved by the program coordinator (6 units): ED P 400, 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. 1st 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. 2nd Semester Counseling Field Work, ED P 644A:
- (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 competence before recommendation to the state CTC for the school counseling credential.

School Counseling Internship Credential:

See Department for details.
School Psychologist Credentia

School Psychologist Credential (code 950)

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:

- 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;
- Three letters of reference by persons who have had professional work association with applicant;
- 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;
- 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 and Administration 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, 536, 555, 615, 639. 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 (2 semesters at 3 units each). Electives to complete a minimum of 60 units.
- 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;
- Psychology prerequisites: Master of Science in Counseling or equivalent and approval of field work-school psychology internship application by the faculty. ED P 405, 524, 525, 579A. 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 '5.", and be approved by the School Psychology credential coordinator.

Special Education Specialist Credential

This program provides teachers with advanced training in preparing students with learning disabilities and severe disabilities to be productive members of their communities.

Admission:

- 1. Admission to the University;
- 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.

Requirements:

Core: ED P 350, 405, 564, 579A or 579B, and C D 361.

Learning Handicapped (code 463):

ED P 554, 565, 586B;

Severely Handicapped (code 464):

ED P 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.

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:

- Hold a valid California basic teaching credential;
- Be employed by the cooperating school district, or have an offer of employment on an Internship Credential Program from the cooperating district;
 Demonstrated teaching
- 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, 451, 454, 554, 565, 568, 572A (8), and 572B (8).

Resource Specialist (code 467)

The Resource Specialist Certificate Credential Program is a postbaccalaureate 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 first level - Preliminary
Administrative Services Credential is valid for five years from date of issuance, or three years from date of
initial employment in an administrative position requiring the credential,
whichever date is later, and is not
renewable.

The second level - Professional Administrative Services Credential is valid for five years and is renew-

Due to a lack of resources, the second level credential has been suspended through 1994-95.

Administrative Services Credential — Preliminary (code 501)

Students are oriented toward the following positions: elementary and secondary school principals, assistant principals, supervisors of instruction, curriculum directors, and other building level positions.

Clear Admission:

- 1. Complete the "clear admission" requirements (#'s 1-6) as listed for the MA in Education, Option Educational Administration;
- Possession of a valid
 California teaching credential, or pupil personnel, or librarianship, or health services credential, or vocational education instructor's credential, or clinical rehabilitative services credential;

Requirements:

1. EDAD 541, 544, 580, EDEL 625 or EDSE 625, EDAD 647, 648, EDAD 649 or ED P 574, EDAD 680, ED P 677. One of the two required field experiences (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).

Exit Requirements:

- Complete three years of verifiable teaching;
- Satisfy the state requirement for mainstreaming;
- 3. Successfully pass the Exit Interview process of the state required competencies.

Administrative Services Credential — Professional (code 502)

Suspended through 1994-95.

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:

- 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:
- 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;
- 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);
- Field Experience (4 units):LI 580.

Graduate Certificate for Career Guidance Specialist

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;
- 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:
- Passage of the Writing
 Proficiency Examination (WPE);
 Approved electives in the
 Departments of Educational
 Psychology, 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 progam.

Courses in Educational Administration (EDAD)

Graduate Division

541. Principles and Leadership in School Administration (3) F,SS

Prerequisite: A valid regular teaching credential or 15 upper division or graduate units in education. Basic principles of school administration and federal, state, county and local school administration relationships are studied. Stress is placed upon the concepts and techniques of leadership as they relate to educational administration.

544. Legal and Financial Aspects of Schools (3) F,SS

Prerequisite: EDAD 541. Consideration of the law and public education, of school revenues, apportionments, budgetary procedures and cost accounting.

580. Introduction to Field Experience in Administration (3) F,S,SS

Prerequisite: Approval by the Program Coordinator, Department of Educational Psychology and Administration. 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 experiences 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) F,SS

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.

595. Leadership Seminars (1) F.S.SS

Directed inquiry of various areas pertinent to educational administration selected with the students. Class meetings at which professionals from various disciplines present the results of their research. Requires reading and study of the agreed upon areas of presentation, and participation in the organization and the critical evaluation of these presentations.

597A,B,C. Directed Study (1,2,3) F,S,SS

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; practi cal 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.

647. Seminar in School Personnel Administration and Leadership Behavior (3) S

Prerequisites: EDAD 541, 544. Advanced study and research into the areas relating to the role and function of educational management and leadership and the planning, organizing, staffing, directing and expediting of the personnel function.

648. Educational Management (3) S

Prerequisites: EDAD 541, 544. 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 Educational Administration (3) F

Analysis of avenues of citizen input for school reform, alternatives for reforming the urban school, and approaches for educating the atrick student. A comparison and contrasting of several recent models of school reform.

659. Educational Governance, Politics, and Policy (4) S,SS

Governance and political influence at national, state and local levels. Concepts and orientations of individuals and organizations influencing district and site level management and direction. Importance of substantive school-community involvement to the success of our youth and democratic processes. Thirty hours of additional course-related field work required for fourth unit.

680. Advanced Field Experience in Administration (3) F,S,SS

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.

695. Masters Project in Educational Administration (3) S,SS

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 such as

a position paper, issue paper, or policy application. Oral defense required. (Not open to students pursuing the thesis option.)

697. Directed Research (1-3) F,S,SS

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) F,S,SS

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.

Courses in Educational Psychology (ED P)

Lower Division

190. Current Topics in Education (1-3) F,S

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) F,S,SS

A course designed for, but not restricted to, entering and undeclared students. Includes training in life problem-solving and self-management skills; an intensive exploration of one's own values, interests and abilities; an intensive career information search; and optional modules. Instruction by self-paced materials, lecture, small group discussion, interviews and inputs from various campus departments.

192. Learning Strategies and Study Skills (3) S

Determination of individual cognitive (learning) style prefer ences 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 (3) F,S

Physical, mental, emotional and social growth and development of the child with emphasis on the learning process.

302. Adolescent Development and Learning (3) F,S

Prerequisite: General psychology. Physical, social, emotional and mental development during adolescence: learning processes.

305. Educational Psychology (3) F.S.SS

Modifiability and educability of the human organism at different levels of maturity; psychology of learning applied to teaching.

311. Mental Hygiene (3) F,S

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) F,S,SS

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.

357. Self-Management (3) SS

(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) F.S.SS

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 3731.

390. Current Topics in Education (1-3) F,S

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) F,SS

(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. Behavior Management in the Classroom (3) F,S,SS

Application of the principles of learning theory, social learning, and group dynamics in the classroom. Includes training in observation in a school setting, collection of observational data, building and implementation of intervention programs.

*419. Educational Statistics (3) F.S.SS

Prerequisite: Elementary algebra. Introduction to statistical methods with application to educational research problems.

*420. Tests, Measurements and Evaluations (3) F,S

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) F,S,SS

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.

*434B,C. Interpersonal Skills in Human Resource Development (3,4) F,S

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.

*451. Learning Disabilities in Exceptional Individuals (3) F,S

Assessment of learning disabilities in learning handicapped students as related to etiology and diagnosis. Identification of current issues and trends and the utilization of research findings in program implementation. Review of theoretical instructional systems used to design programs for the learning handicapped. Field work or clinical experience required as appropriate.

*453. Adults with Learning Disabilities: Counseling Model (3) F

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) F

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.

476./576. Education and Diversity: Historical and Contemporary Perspectives (3) F

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. Traditional grading only.

*485. Theoretical Foundations of Language Minority Education (3) F,S

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) F,S

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. Field Studies in Human Services/Mental Health (3) F,S

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.

*497. Independent Study (1-3) F,S

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) S,SS

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) F

History, philosophy, and legislation of rehabilitation affecting people with disabilities

served by public and private rehabilitation delivery systems.

502. Vocational Aspects of Disability (3) S

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) F

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

510. Laws and Ethics for Counselors (3) S,SS

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) F,W,SS

Prerequisite: Consent of instructor, 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 educational prevention programs.

512. Child Abuse Assessment and Reporting (1) F,W,SS

Child abuse assessment indicators, state child abuse laws, community resources, reporting requirements, and treatment options for the child and the abusive. Designed to meet licensure requirements for mental health practitioners only.

513. Introduction to Clinical Interviewing (3) F,S

Prerequisites: PSY 370 and/or consent of instructor. Theoretical bases and applications in the conduct of problem identification and diagnostic interview in career, clinical, college, school, and vocational rehabilitation counseling settings.

515. Counseling Theory (3) F,S,SS

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) S,SS

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) F,S

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) S

Prerequisite: ED P 419. Principles of statistical analysis, with emphasis on sampling procedures, hypothesis testing, experimental design and correlational techniques.

520. Program Evaluation and Research (3) F,S

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) SS

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.

524. Individual Intelligence Testing (4) F

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) S

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) F

Prerequisites: ED P 525, and concurrent enrollment in ED P 642A. Diagnostic and remedial techniques with individuals, including the learning disabled and those with low-incidence exceptionalities. Discussion of problems and solutions in school psychology practice.

529. Assessment in Career Counseling (3) S

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. Technical and abilities.

ques for developing and using special assessment instruments will also be covered.

530. Career Development and Decision Theory (3) F

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) F,S

Knowledge, use and management of information resources in the career development field.

534. Career Development in Private Practice, Industry and Business (3) S

Career development concepts and skills applicable in non-educational settings. Organizational structures, needs analysis, program accountability, and commercial resources from a career perspective.

535. Counseling and Guidance of Exceptional Individuals (3) F

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. Consultation in School Counseling Services (3) F,S

Corequisite: ED P 642A or 643A or 644A. Theory and practice of consultation as it applies to counseling services. Emphasis is on understanding various models of consultation, and the ability to apply these models in school, college, agency, business or private practice settings. Field experiences are required.

538. Student Development in Higher Education (3) F

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) S,SS

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. Practicum in Special Education (3,3) F,S

Prerequisites: ED P 350 and consent of instructor. Supervised experience with individuals with exceptionalities in schools, clinics, workplaces and residential settings; assessment, identification and remediation of learning characteristics. Application should be made by March 1 for the fall semester and October 1 for the spring semester.

548. Students in U. S. Higher Education (3) S

Prerequisite: ED P 538. Focus on the concepts of community and culture in the United States college with an emphasis on under-

standing 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) F

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) F

Prerequisite: ED P 350. Social, philosophical and historical foundations of special and compensatory education.

554. Principles of Educational Remediation (3) S

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) F,S

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.

560. Management of Emotionally Handicapped Child (3) S

Prerequisite: ED P 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) F

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.

563. Methods of Teaching Individuals with Severe Handicaps (3) S

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 of Individuals with Exceptionalities (3) S

Prerequisites: Admission to the Special Education Specialist Credential, ED P 350, 405. Knowledge of formal and informal assessment instruments and techniques used to assess individuals with exceptionalities from preschool to adult. Emphasis on use of accurate assessment data in the individualized educational planning process for students with exceptionalities. (Not open to students with credit in ED P 464.)

565. Methods of Teaching Learning Handicapped Individuals (3) F,S

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 for the Exceptional Individual (3) S

Prerequisite: ED P 350 or consent of instructor. Review of the career, leisure time, adult, family and community needs and problems of the exceptional individual. Emphasis will be upon the cooperative role of the school, public and private community agencies and organizations including parent groups and associations comprised of exceptional (handicapped, disabled or gifted) individuals.

568. Evaluation of Bilingual/ Multicultural Exceptional Children (3) F

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, nonbiased assessment procedures, and instruments and techniques developed to assess bilingual/multicultural exceptional children.

570. Role of the Resource Specialist (3) F

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.

572A-B. Internship With Learning Handicapped Individuals (8,8) F,S

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 cour-

ses. In addition, the student will demonstrate advanced professional development. (Supervision) Credit/No Credit grading only.

573. Intercultural Communication in Education (3) S

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) F,S

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) S

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./476. Education & Diversity: Historical and Contemporary Perspectives (3) F

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 fac-

tors; 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) F,S

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) S

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) SS

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.

581. Rehabilitation and the Courts (3) F

Prerequisites: ED P 502, 510, 529, and 524 or 580. Extensive evidence and preparation for vocational testimony is followed by opportunities for mock hearings and trials and observation of actual legal proceedings.

582. Comparative International Education (3) S

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) S

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.

586. Advanced Field Study with Exceptional Individuals (7) F,S

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

590. Special Problems in Educational Psychology (1-6) F,S

maximum of 14 units.

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) F

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.

604. Seminar in Human Development (3) F,S

Prerequisites: ED P 301 or 302, and ED P 400 or 419. Theories and issues in developmental psychology. Cognitive, linguistic, perceptual, psychomotor, social and emotional development; nature-nurture and individual differences.

605. Seminar in School Learning (3) S

Prerequisites; ED P 305 and 400 or 419. Research in the area of learning problems in the classroom; recent experimentation and theory in the field of educational psychology.

608. Seminar and Practicum in Marriage, Family, Child Counseling (4) F

Prerequisites: ED P 510, 511, 512, 513, and 515. 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. Requires a minimum of one practicum hour per week in applied psychotherapeutic techniques to experience assessment, diagnosis, treatment, and case management aspects of premarital, marital, family, child, and relationship dysfunctions. (Not open to students with credit in ED P 518 or 633.)

615. Seminar in Home-School-Community Relations (3) S

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.

634. Family Systems Therapy: Theory and Practice (3) S

Major family systems therapy theories, research issues, and techniques for counseling families.

637. Career Counseling Practicum (4-6) F

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) F.S.SS

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) F

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) F,SS

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.)

641. Apprenticeship in School Psychology (2) S

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) F

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) F,S

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) F,S,SS

Prerequisites:

A. School Counseling
ED P 517, Certificate of Clearance.

B. Student Development in Higher
Education
ED P 516, 538.

C. Career Counseling
ED P 637.

D. Marriage, Family, Child Counselor
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) F,S,SS

Prerequisites:

A. School Counseling
ED P 531, 638, 643A, passage of CBEST.
B. Student Development in Higher
Education
ED P 549, 638, 643B.
C. Career Counseling
ED P 638, 643C.
D. Marriage, Family, Child Counselor
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) F,S,SS

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) S

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. Seminar in Curriculum Development (3) S

Psychological, sociological and philosophical foundations of principles of curriculum patterns and development at both elementary and secondary levels.

695C. Seminar in Professional Development in Counseling and Human Services (3) F,S

Prerequisites: Advancement to candidacy and consent of instructor. A seminar stressing integration of counselor roles and specializations. The student will demonstrate knowledge of the field along with selected skills in critical thinking and counseling methods.

695F. Seminar in Foundations of Education (3) S

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) S

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.

697. Directed Research (1-3) F,S

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) F,S

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.

Courses in Library Education (LI)

Lower Division

100. Introduction to Library Use (1)

Introduction to the use of libraries, library tools, materials and services. Particular emphasis on the college library.

Upper Division

*497. Independent Study (1-3) F,S

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

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 library media program under the supervision of a credentialed library media teacher. Applications for spring semester must be in the office of the program coordinator by October 1 and for fall semester and summer by March 1.

590. Special Topics in Library Media (1-6) F,S,SS

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.

Instructional Systems Technology

College of Education

Faculty: Associate Professors:
Joseph A. Lea, Richard C.
McLaughlin.
Emeritus Faculty: Paul L. Brent,

Emeritus Faculty: Paul L. Brent, James E. Cockrum, Donna George, Jay J. Gramlich, Richard J. Johnson, F. Alan Timmons, Barbara A. Ward.

Instructional Systems
Technology Advisory Council

The Advisory Council is composed of students and professional people whose position indicates an involvement with media as a means of instruction in public schools, business and industry. The purpose of this group is to examine and recommend changes in the existing program and assist the department in future planning.

The Department

The Department of Instructional Systems Technology offers courses meeting the requirements for the M.A. in Education with an Option in Instructional Systems Technology, and a certificate program in Instructional Technology.

Objectives of the programs are to (1) provide opportunities for advanced study, experience and research in practical and theoretical aspects of instructional design and the preparation, selection, circulation and implementation of instructional materials and methods, including computer applications; (2) qualify those students desiring advanced professional preparation for instructional media and communication phases of school, health, business, industry, and governmental institutions; (3) prepare students for an advanced degree in which a significant prerequisite for employment is professional competency in instructional communications; (4) provide theory and experience in the organization, leadership and administration of learning resource centers and school library media programs; and (5) provide opportunities for teachers, administrators and training directors to become acquainted with new communicative techniques for effective instruction.

Students desiring information should contact the department office for referral to one of the faculty advisors. All COE graduate level courses (500/600) are assumed to be traditional grading only unless stated otherwise.

Master of Arts in Education with an Option in Instructional Systems Technology (code 5-3150)

Admission and Advancement to Candidacy:

Please consult the "College of Education" section of the catalog for information on admission criteria and advancement to candidacy.

Prerequisites:

- Design and Development, all of the following (6 units): EDST 300,
 301:
- 2. Library Media, all of the following (3 units): EDST 300;
- Computer-Based Technology, all of the following (6 units): EDST 300, 301.

Requirements:

A minimum of 30 units with a 20 unit concentration in education is required. 18 units must be in the 500/600 level series taken at this University.

Core

- 1. One of the following (3 units): EDEL/EDSE 530, ED P 574, or 576 (Library Media specialization requires EDEL/EDSE 530);
- One of the following (3-6 units):ED P 400, or 419 and 420;
- 3. One of the following (3 units): ED P 500, or 696;
- 4. The following (3 units): EDST 501;
- 5. One of the following: Written comprehensive examination or EDST 698 (6 units).

Specialization Requirements:

- Design and Development:
 A minimum of 7 courses chosen from (1) and (2).
- (1) Production: 3 or 4 of the following (9-12 units): EDST

410, 412, 451, 510, 511, 512, 515, 551;

(2) Applied and Theoretical: 3 or 4 of the following (9-12 units): EDST 450, 452, 500, 501, 550, 553, 630;

b. Electives to total 30 units.2. Library Media:

a. Select three of the following (9 units): LI 510, 513, 520, 540, 550; b. One of the following (3 units): EDST 410, 412, 451, 510, 511,

- c. One of the following (3 units): EDST 452, LI 570;
- d. Electives to total 30 units selected from the following in consultation with an advisor: EDEL 540, 551, 553; ED P 575, 582, 677; EDST 500, 512, 515, 630; LI 590.
- Computer-Based Technology:
 All of the following (9 units):
 EDST 450, 550, 553;
- b. Two of the following (6 units): EDST 451, 452, 551;
- c. Electives to total 30 units.

Certificate in Instructional Technology

The Certificate Program in Instructional Technology is interdisciplinary and is open to students in any field where communication and/or library media skills are important. The program is open to undergraduate or graduate students, but may be earned only concurrently or following award of a baccalaureate degree.

Admission to the program is through application to the Department of Instructional Systems Technology.

Requirements:

- A bachelor's degree with an approved major;
- 21 to 24 units selected from the three disciplines listed below and completion of one of the four programs listed, chosen in consultation with an advisor and determined by class level and student objectives.
- a. Industrial Employee
 Development Personnel and
 Public School Administrators;

b. Instructional Materials
 Resource Center Personnel:
 Audio Visual or Library;

- c. General Media Specialist;
- d. Library Specialist.

Approved courses:

EDST 300, 301, 410, 412, 450, 451, 452, 490, 491, 497, 500, 501, 510, 511, 512, 515, 550, 551, 553, 630, 697; LI 510, 513, 520, 540, 550, 570, 581, 590; SPCH 332, 333, 352, 358, 448, 449/549, 451/551.

Courses in Instructional Systems Technology (EDST)

Lower Division

250. Computer Literacy (3) F,S

Developing personal productivity and understanding computer concepts. Acquiring experience with integrated computer applications (word processing, graphics, spreadsheets, databases, telecommunications and networking), overhead and video presentations. Elementary computer programming. (Lecture 2 hours, laboratory 2 hours.) Not open to students with credit in IM 340 or 341.

251. Computer Programming (3)S

Prerequisite: EDST 250 or consent of instructor. Applying advanced programming techniques, including structured programming, file handling and custom input/output. (Lecture 2 hours, laboratory 2 hours.) Not open to students with credit in EDST (I M) 342.

Upper Division

300. Instructional Media (3) F,S

Resource materials and technological advancements related to instructional theory and practice. Laboratory experience includes preparation of instructional media and equipment operation. (Lecture 2 hrs, lab. 2 hrs.)

301. Instructional Design (3) S

Prerequisite: EDST 300 or consent of instructor. Instructional systems design applied to educational and training programs.

*410. Preparation of Graphic Media (3) F

Problems in visualization including the preparation of transparency materials for utilization with the overhead projector in the corporate/classroom setting. Introduction to computer graphics, newsletter design and production. (Lecture 2 hrs, lab 2 hrs.) Traditional grading only.

*412. Instructional Support Production (3) F

Design and development of instructional media support and interactive learning materials for instruction. Basic skills necessary to produce overhead, slidetape, audio, and video materials including computer generated images. (Lecture 2 hours, laboratory 3 hours).

*450. Computer Education (3) F,S,SS

Prerequisite: EDST 250. Integrating technology into teaching and learning. Teaching others to use computers as tools for problem solving, critical thinking and creativity: the computer as tutor (drill and practice, tutorials, and simulation and games), tool (word processing, graphics, spreadsheets, databases, telecommunications and networking), and tutee (programming and authoring languages). Using teacher utility programs; evaluating and managing resources. (Lecture 2 hours, laboratory 2 hours.) Traditional grading only.

*451. Desktop Publishing (3) F

Prerequisite: EDST 250 or consent of instructor. Developing instructional materials for individualized learning, with an emphasis on self-publishing techniques using computer desktop publishing technology. (Lecture 2 hours, laboratory 2 hours.) Not open to students with credit in I M 411.

*452. On-line Information Retrieval (3) F

Prerequisite: EDST 250 or consent of instructor. Retrieving information through on-line computer searches of bibliographic and non-bibliographic databases. Using telecommunications services, equipment and software. (Lecture 2 hours, laboratory 2 hours.) Not open to students with credit in I M 440.

*490. Special Topics in Instructional Media (1-3) F,S

Prerequisite: Consent of instructor. Topics of current interest in instructional media 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. Internship (3) F,S

Prerequisites: Consent of department chair and senior standing. At least 120 hours with cooperating organizations. Work to be directed and evaluated by supervisors of the participating organizations. Three classroom meetings per semester. Assignments will be varied and within the area of instructional communications.

*497. Independent Study (1-3) F.S

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. Instructional Systems (3) S

Prerequisite: EDST 300 (may be taken concurrently) or consent of instructor. Analysis and design of instructional systems related to the conceptual framework of a system.

501. Theoretical Models Applied to Media (3) F

Prerequisites: EDP 305, EDST 300. Theoretical models of communication, information, learning and perception applied to the design and utilization of instructional media.

510. Preparation of Photographic Media (3) F

Prerequisite: EDST 300 or consent of instructor. Design and production of photographic story board formats, slides and filmstrips. (Lecture 2 hours, laboratory 2 hours.)

511. Preparation of Audio Media

Prerequisite: EDST 300 or consent of instructor. Planning and producing the sound track for instructional/informational media presentations. (Lecture 2 hours, laboratory 2 hours.)

512. Instructional Film Production (3) F

Prerequisite: Consent of instructor. Planning, producing and directing the instructional/ informational film. Script to screen production procedures will be emphasized.

515. Multi-Media Message Design (3) S

Prerequisites: EDST 300, 410, 510, 511, 512, and consent of instructor. Advanced study and laboratory experiences in designing, producing and presenting educational multi-media messages. (Lecture 2 hours, laboratory 3 hours.) Not open to students with credit in IM 513.

550. Teaching Computer Concepts and Applications (3) F

Prerequisite: EDST 450 or consent of instructor. Teaching others about computing: developing and using performance objectives, selecting and using instructional techniques and materials, and interpreting and applying research. (Lecture, 3 hours.)

551. Interactive Learning (3) S

Prerequisite: EDST 451 or consent of instructor. Developing instructional materials for interactive learning, with an emphasis on computer-based interactive video technology. (Lecture 2 hours, laboratory 2 hours.) Not open to students with credit in I M 441.

553. Managing Computer-Based Resources (3) S

Prerequisite: EDST 450 or consent of instructor. Organizing educational technology systems for use by others. Setting up and operating workstations and laboratory facilities. Installing and modifying software packages. Optimizing computer usage by means of command language capabilities. Maintaining and repairing equipment. (Lecture 2 hrs, lab 2 hrs.)

630. Seminar in Educational Technology (2) F

Prerequisite: EDST 501. Analysis of experimental techniques, theory and research in learning, motivation and audience.

697. Directed Research (1-3) F,S

Prerequisites: Consent of instructor, department chair and associate dean. Individual research or intensive study under the guidance of a faculty member. Student may enroll for 1-3 units to a maximim of 3 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 the spring semester.

698. Thesis or Project (3,3)

Prerequisites: Advancement to candidacy, ED P 696 for thesis, or ED P 500 for project, approval by director, department chair and associate dean. Planning, preparation and completion of a thesis or project 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 or October 1 for the spring semester.

Single Subject Teacher Education Program

College of Education

University Coordinator: Jean Conroy Office: ED 1, Room 55

Telephone: (310) 985-5325 Secretary: Patricia Colucci General

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 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).

Admission Requirements:

- 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. Current GPA requirements are as follows: 2.87-Foreign Language; 2.80 Health Science; 2.78 English; 2.76 Art, Music; 2.75 Government, History, Home Economics, Mathematics, Physical Education, Science, Social Science. Consult with your advisor if your degree is not from CSULB;
- 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 recommen-
- dation;
 6. Submit an application for Certificate of Clearance to the California
 Commission on Teacher Credentialing
- 7. 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 Examina-

*412. Ingtrueffordugingpolitics

tion; 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;

- 8. Submit a written statement of professional goals or philosophy;
- Submit a completed program application to EDSS 300 instructor;
- 10. Complete all single subject area requirements for admission. Contact the Credential Coordinator for details.

Requirements for a 5-Year Preliminary Credential:

- 1. Hold a bachelor's degree;
- Satisfy the U.S. Constitution requirement (POSC 100 or 391 or exam).
- Complete the requirements for a Single Subject Credential Major;
- 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 the student teaching requirement of EDSS 472A,B,C.

Bilingual Emphasis Credential:

This Spanish/English program is available for students only in the Mathematics, Spanish, and Social Science Credential programs. The program requires the following:

- Single subject education course sequence;
- 2. Bilingual section of EDSE 457;
- 3. 150 hours as a teacher's aide in a secondary school bilingual setting;
- Intercultural Component (12 units): Candidates should consult with the chairperson of the Mexican American Studies Department for approval of courses.
- 5. Language Component: Candidates for the Bilingual Emphasis Credential are expected to achieve and to demonstrate the ability to perform the duties of a credentialed

teacher equally well in both Spanish and English. The program administers an assessment for all candidates in both languages and provides advisement based on the result of that assessment. SPAN 322 is required. The Bilingual Proficiency Assessment is administered on the last Saturday of February.

6. Culture/History Component: Candidates must successfully complete a written assessment for competency in the target culture/history. Courses required are CHLS 300, CHLS 340, CHLS 350, and one of CHLS 310, CHLS 400, CHLS 405. The Culture/History assessment is administered on the third Saturday of March and October.

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;
- 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 for Student Teaching:

- Admission to the Single Subject Teacher Education Program;
- A GPA of 2.75 or the minimum requirement of the CSU System for the degree major, whichever is higher;
- 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;
- 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 six (6) units taken in the senior year toward a postbaccalaureate credential (see index under "graduate-credit");
- 3. ED P 350 (mainstreaming);
- 4. Computer education.

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

Complete the requirements for the B.A. in Art with an option in Art Education.

English

American Studies Emphasis:
 Students are required to complete the following core of thirty-one (31) units and fifteen (15) units to provide breadth and perspective.
 Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B.

Breadth and Perspective (15 units): AMST 300, 490, 498, HIST 477A,B. Comparative Literature Emphasis: Students are required to complete the following core of thirty-one (31) units and twenty-one (21) units to provide breadth and perspective. Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (21 units): C/LT 234, 330A, 330B; Select one course from C/LT 349, 431, 432, 438; Select one course from C/LT 403, 404, 430, 440, 449, 451;

courses listed for this option.

Creative Writing Emphasis:
Students are required to complete the following core of thirty (30) units and eighteen (18) units to provide breadth and perspective.
Core Courses (30 units): ENGL 184, 310, 375, 482; One course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B.
Breadth and Perspective (18 units):

Select one course from C/LT 342,

402, 445, 452, 453; Select at least

three units of electives from the

Select nine units from ENGL 405, 406, 407 (may repeat any of these three courses for a maximum of 6 units); Select three courses from ENGL 385, 386, 459, 467AB, 474, 475, 476, 477AB.

 Dance Emphasis: Students are required to complete the following core of thirty-one (31) units and twenty-five (25) units to provide breadth and perspective.
 Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B.
 Breadth and Perspective (25 units): DANC 114B, 212B, 220, 331, 380, 442B, 470, 485, 488.

Journalism Emphasis:
 Students are required to complete the following core of thirty-one (31) units and twenty-four (24) units to provide breadth and perspective.

 Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B.
 Breadth and Perspective (24 units minimum, at least 12 of which must be upper division): JOUR 110, 120, 320, 331, 430; Select one course from JOUR 322A, 322B; Select 6

units minimum from JOUR 115, 280, 312, 370, 422A or B, 431, 490, 499.

 Language and Composition Emphasis: Students are required to complete the following core of thirty-one (31) units and eighteen (18) units to provide breadth and perspective.
 Core Courses (31 units): ENGL 184, 310, 325, 363, 482; Select three courses from ENGL 250A, 250B, 370A, 370B.
 Breadth and Perspective (18 units): ENGL 420, 421, 428, 429; Select 6 units from ENGL 423, 426, 427, 499. Twelve units or equivalent of a

foreign language.

 Literature Emphasis: Students are required to complete the following core of thirty (30) units and sixteen (16) units to provide breadth and perspective. Core Courses (30 units): ENGL 184, 310, 375, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (16 units): ENGL 363, 384; C/LT 230; Select one course from ENGL 451, 452, 453, 455, 456, 458, 459; Select one course from ENGL 474, 475, 476, 477AB, 478, 479.

Radio-Television Emphasis:
Students are required to complete the following core of thirty-one (31) units and eighteen (18) units to provide breadth and perspective.
Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325;
Select three courses from ENGL 250A, 250B, 370A, 370B.
Breadth and Perspective (18 units):
RTVF 150, 204, 220, 230, 240, 316.

 Speech Communication Emphasis: Students are required to complete the following core of thirty-one (31) units and twenty-one (21) units to provide breadth and perspective.
 Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325, Select three courses from ENGL 250A, 250B, 370A, 370B.
 Breadth and Perspective (21 units): Select one course from SPCH 210, 271; Select three courses from SPCH 331, 332, 333, 335; SPCH 440, 448, 450.

Theatre Arts Emphasis:
 Students are required to complete the following core of thirty-one (31) units and twenty-five (25) units to provide breadth and perspective.

Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (25 units): THEA 100, 114A, 142, 148, 346, 374, 375, 476; Select one course from THEA 310A or 340A.

Foreign Language

- French: Complete requirements for B.A. and include FREN 414;
- German: Complete requirements for B.A. and include GERM 303 and 410;
- Spanish: Complete requirements for B.A. and include SPAN 430 and 445.

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 Home Economics with an option in education.

Life Science

Students are required to complete the following core of thirty-four (34) units and sixteen (16) units of related course work.

Core Courses (34 units):
Lower Division: BIOL 210A, 210B;
Upper Division (Must include two Plant and two Animal courses):
Morphology and Development:
Select at least one course from BIOL 332, 333, 334, 370, 438, 439, A/P 335, 336;

 Physiology: Select at least one course from A/P 340/340L, 342/342L, 440, BIOL 447/447L;

Ecology: Select at least one course from BIOL 350, 450, 453, 456;
Organismic Biology: Select at least one course from BIOL 313, 314, 315, 316, 324, 328, 419, 421, 423, 424, 425, 427;

Marine Biology:
 One approved Marine Biology course (not required to be upper

division). Examples of acceptable courses include: BIOL 201, 353, 419, 425, 458.

Breadth and Perspective (16 units): CHEM 111A, PHYS 100A, MICR 210, CHEM 327.

Mathematics

Students are required to complete

the following program of twenty-one (21) lower division units, twenty-four (24) upper division units, and three (3) elective units.

Lower Division: MATH 122, 123, 224, 233, 247; Select one course from MATH 278*, CECS 174, 242. Upper Division: MATH 310, 341, 361A, 380; Select one course from MATH 350, 355*; Select 9 elective MATH units chosen in consultation with Credential Advisor. * Preferred course

Elective: Select 3 additional units, in consultation with the Credential Advisor.

consultation with the Credential Advisor, from mathematics, computer science, or approved closely related courses.

Students will satisfy the require-

Students will satisfy the requirements for this program by completing the B.S. in Mathematics with an option in Mathematics Education.

Music

Complete the requirements for the B.M. with an option in either Instrumental Music or Choral/ Vocal Music.

Physical Education

- Physical Education Emphasis: Complete the requirements for the B.A. in Physical Education with an option in Adapted Physical Education, Elementary School, or Secondary School.
- Dance Emphasis:
 Students are required to complete the following core of forty (40) units and eighteen (18) units in courses designed to provide breadth and perspective.
 Core Courses (40 units): P ED 125, 145, 260, 263, 300, 312, 335, 360, 380, 483; DANC 112A, 360, 470; A/P 202, 207; Select one unit from

145, 260, 263, 300, 312, 333, 380, 380, 483; DANC 112A, 360, 470; A/P 202, 207; Select one unit from P ED 250, 253, 255, 257; Select one unit from P ED 264, 266, 267. Breadth and Perspective (18 units): DANC 114B, 212B, 220, 331, 380, 442B, 488.

Physical Science

Chemistry Emphasis:
 Students are required to complete the following core of 25-30 lower division courses, 26 upper division courses, and 19-20 units in courses designed to provide breadth and perspective.

Core Courses (51-56 units): Lower Division: CHEM 111A-B, 251; PHYS 100A-B or all three of 151, 152, 153; GEOL 102, 104; Upper Division: CHEM 321A-B, 451; CHEM 371A-B or 377A-B; Select 6 units approved by an advisor from CHEM 373, 421, 422, 431, 441A,B,

496; Breadth and Perspective (19-20 units): MATH 122, 123; CECS 242; Select at least 6 additional units from GEOL 460, 461, 461L. 463, 465; Select at least 3 additional units from PHSC 102, 103, 331, PHYS 330, 380.

Earth Science Emphasis:
 Students are required to complete the following core of 55 units and 22-23 units of courses designed to provide breadth and perspective.
 Core Courses (55 units): Lower Division: GEOL 102, 104, 105, 140; PHYS 151, 152; CHEM 111A-B; Upper Division: GEOL 324, 330, 341, 342, 419, 431, 441, 472; Select one course from GEOL 463, GEOG 444; Select one course from GEOL 464, 465;

Breadth and Perspective (22-23 units): MATH 122, 123; CECS 242; ASTR 100; BIOL 200; Select at least 3 units in Chemistry from CHEM 251, 327, 327L, 448; Select at least three units from PHSC 102, 103, 331, PHYS 330, 380.

Physics Emphasis:
 Students are required to complete the following core of 55-56 units and 17-21 units of course work designed to provide breadth and perspective.

perspective.
Core Courses (55-56 units): Lower
Division: PHYS 151, 152, 153;
MATH 122, 123, 224; CHEM 111AB; GEOL 102, 104; Upper Division:
PHYS 310, 320, 340A-B, 450;
Select one course from PHYS 330,

Breadth and Perspective (17-21 units): ASTR 100 or 200A-B; CECS 242; Select 6 units from GEOL 460, 461, 461L, 463, 465; Select 6 units from CHEM 251, 327, 327L, 371A,B, 441A,B, 448.

Social Science

Students are required to complete a 48 unit program which includes a 33-unit core, two 6-unit emphases in two disciplines (but not both psychology and sociology), and a 3unit capstone course as the final student assessment prior to student teaching. The two 6-unit emphases are to be chosen from among the social science disciplines of Anthropology, Economics, Geography, History, Political Science, and no more than one emphasis from Psychology or Sociology. Core Courses (33 units): ECON 300, GEOG 100, 306, HIST 132, 172, 173, 473, POSC 210, Select one course from each of the following - HIST 111 or 131, HIST 112 or 492, and POSC 100 or 391. Breadth and Perspective (12 units):

Anthropology Emphasis:
 Select one course from ANTH 313, 314; Select one course from ANTH 307IC, 331, 332, 335, 336.

Economics Emphasis:

 Select one course from ECON 313, 360, 368; and one course from any upper division course in ECON except ECON 300, 305IC, and 309IC.

 Geography Emphasis: GEOG 140 and one course from GEOG 310, 312, 316, 318, 320.

History Emphasis:
 Select one course from HIST 373,
 375, 376, 378, 379, 380; Select one
 course from HIST 317, 337, 339,
 364, 382B, 383B, 385, 386, 431,
 491

Political Science Emphasis:
Select one course from POSC 326, 327; Select one course from POSC 420, 423, 424.

 Psychology Emphasis: PSY 100 and 351, or

 Sociology Emphasis: SOC 100 and 335.
 Capstone (3 units): SBS 495, completed with a grade of "B" or better.

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 Internship
Credential Program, students must
submit the State application for an Internship Credential with supporting
documents and fees to the CTC
through the CSULB CPC. Students
must hold an Internship Credential
prior to Internship teaching.

Requirements:

- 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);
- 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;
- 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;
- 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 available in either of two formats, depending on the arrangements made with the participating school district.

Plan A: — Standard 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 F-G (8 units each per semester); To be taken before, during or after Internship Teaching: H SC 411B, ED P 350, Computer Education.

Plan B: — Two-year Internship Program — Required Courses Taken Concurrently and During Summer Sessions Suggested sequence:

Summer Session — EDSS 300; Fall semester — EDSS 572A (4 units), EDSE 436; Spring semester — EDSS 572B (4 units), EDSS 450; Summer session — EDSE 457, EDST 250; Fall

semester — EDSS 572C (4 units), EDSE 435; Spring semester — EDSS 572D (4 units), ED P 302; Summer session — ED P 400;

Additional courses to be taken before, during or after Internship teaching — EDST 300, H SC 411B, ED P 350, and 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).

Courses in the Single Subject Credential Programs (EDSS)

300A-T. Preliminary Directed Field Experiences (2)

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 1 hour, laboratory/field 3 hours.) Credit/No Credit grading only, with 'A' or 'B' required for credit.

A. Preliminary Directed Field Experience (Art)
C. Preliminary Directed Field Experience (Life and Physical Sciences)

D. Preliminary Directed Field Experience (Health Science) F. Preliminary Directed Field Experience

(Foreign Languages: French, German, Spanish) G, Preliminary Directed Field Experience (English: Literature, Language and Composition, Creative Writing, Comparative Literature, Journalism, Speech, American Studies, and

H. Preliminary Directed Field Experience (Home Economics)

M. Preliminary Directed Field Experience (Mathematics)

N. Preliminary Directed Field Experience (Music)

P. Preliminary Directed Field Experience (Physical Education, Dance)
Prerequisites: Current standard first aid/CPR certification, P ED 370 and completion of a min. of five skill proficiencies. Credit/No Credit grading only, with "A" or "B" required for credit.

S. Preliminary Directed Field Experience (Social Sciences, including Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology)

T. Preliminary Directed Field Experience (Technology Education)

*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 com-

pleted prior to student teaching. Traditional grading only. Course fee: \$40.

*450C. Curriculum & Methods in Teaching Natural Science (3) F,S

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, materials and procedures used in teaching science. Must be completed before 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, Latin or Spanish; includes supervision of cocurricular foreign language activities. Should be taken the semester prior to student teaching. Traditional grading only.

*450G. Teaching English (3) F,S

Prerequisite: Admission to the Single Subject Credential Program. Methods of teaching language, literature and composition in junior high school, senior high school and community college. Includes instruction in techniques of teaching. Must be completed before student teaching. Traditional grading only.

*450H. Methods and Curriculum in Home Economics Education (3) Demand

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) F,S

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, methods and materials used in teaching mathematics. Must be taken prior to the final directed field experience. Traditional grading only.

*450N. Curriculum and Methods in Teaching Music (3) Demand

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 secondary 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) F.S

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 en-

roll in student teaching the following semester. Traditional grading only.

*450S. Curriculum and Methods of Teaching Social Science (3) F,S

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.

*450T. Curriculum and Methods in Industrial Education (3) S

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, materials and procedures in teaching industrial education with emphasis on current practices and the relationship of industrial education to the total school program. Must be taken the semester prior to student teaching. Traditional grading only.

472A,B,C. Student Teaching (5,5,5) F,S,SS

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) F,S,SS

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) F,S,SS

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-D;F-G. Single Subject Internship (4-4-4-4;8-8) F,S

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 four units per semester for two years or eight units per semester for one year. Teaching will be evaluated by the participating school district and university supervisor. Credit/No Credit grading only.

Teacher Education

College of Education

Department Chair: Robert A. Roth Department Office: ED-1, Room 13 Telephone: (310) 985-4506 24-Hour Information Line (Recorded Message): 985-1632 Multiple Subject Admissions Clerk: Jan Condou Office: ED1-13 Telephone: (310) 985-4507 Office of Field Programs: Judy Weil Office: ED1-6 Telephone: (310) 985-4508 Faculty: Professors: Carole A. Cox, V. Yvonne Gold, Rita H. Jones, Albert H. Koppenhaver, Marina C. Krause, Mary Jo Lass, Helen P. Newcastle, Consuelo Nieto, Leonard Olquin, Robert A. Roth, Norma B. Tarrow; Associate Professors: Kaye W. Anderson, Jean M. Casey, Richard F. Marrs, Mary Ellen Vogt, James J. Zarrillo; Assistant Professors: Catherine C. DuCharme. Emeritus Faculty: Roy C. Anderson, Louis L. Beck, R. Burdett Burk, William E. Fisher, Juliana T. Gensley, Frank F. Gorow, Harold V. Graham, George R. Jamgochian, Patricia D. Jersin, Kephas A. Kinsman, Frank S. Morris, Charles L. Myers, Walter A. Nagle, Leland M. Perry, Donald F. Popham, Clara G. Rodney, Howard C. Rolfe, Arlene A. Roster, Roy A. Sugimoto, Doris D. Tabor.

Office Manager: Ron Kerns
The Department

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 catalogue for information on admission criteria and program requirements), as well as a Master of Arts in Education with options in either elementary or secondary education. Additionally, programs are available for advanced credentials in the specializations of (a) Early Childhood Education, and (b) Reading/Language Arts for grades K-12. All CED graduate level courses (500/600) are assumed to

be "traditional grading only" unless stated otherwise.

Early Childhood Education (ECE) Programs

The faculty in the ECE program area work cooperatively with the Isabel Patterson Child Development Center as well as the Department of Home Economics and the Program in Human Development, and have an interdisciplinary approach to the prerequisite for the Specialist Credential and the Master of Arts in Education specialization available under the Elementary option.

Courses are offered during the evening, and fieldwork requirements can be met during the year and during summer session.

Reading/Language Arts Programs

Faculty in the Reading Program believe that a variety of approaches to reading should be learned and mastered by future reading specialists. Course offerings are at night to accommodate practitioners, but most fieldwork assignments require daytime availability at a school site during the school year.

Master of Arts in Education

Please consult the "College of Education" section of the *Bulletin* for information on admission criteria and advancement to candidacy.

Option in Elementary Education (code 5-3110)

Prerequisites:

Curriculum and Instruction and Reading Specializations: A valid multiple subject or elementary teaching credential.

Early Childhood Specialization: EDEL 420, 481 or 482 (or one year of documented preschool teaching), ED P 301.

Requirements:

A minimum of 30 units is required with at least 21 in the 500/600 level series at this University. The core requirements are as follows:

- One of the following (3-6 units):
 ED P 400, or ED P 419 and 420;
- 2. One of the following (3 units): ED P 500 or 696;

3. The following (3 units): EDEL/EDSE 530;

4. One of the following chosen in consultation with a faculty advisor (3-6 units): EDEL 695 (3 units) or 698 (6 units).

Specialization Requirements for 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
- 4. Electives to total 30 units.

Specialization Requirements for Early Childhood Education:

1. All of the following (18 units): EDEL 421, 422, 522, 523, 621, and EDEL 526 or ED P 604.

Specialization Requirements for Reading:

This specialization has been suspended.

Option in Secondary Education (code 5-3140)

Requires a bachelor's degree and a valid California teaching credential or its equivalent.

Requirements:

A minimum of 30 units is required with at least 18 units in the 500/600 level series taken at this University. The core requirements are as follows:

- 1. The following (6 units): ED P 400, and ED P 500 or 696;
- 2. The following (3 units): EDSE/EDEL 530;
- One of the following chosen in consultation with a faculty advisor (3-6 units): EDSE/EDEL 695 (3 units) or EDSE 698 (6 units).

Specialization Requirements for Curriculum and Instruction:

- 1. One of the following (3 units): EDSE 500A or 501;
- 2. The following (6 units): A EDSE/EDEL 540, 625;
- 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:

a. Nine units of advanced
course work in the Single

course work in the Single Subject area of concentration. The area of selection is limited to the areas identified as appropriate by the Commission on Teacher Credentialing.

Specialization Requirements for Reading:

This specialization has been suspended.

Credential Programs:

Multiple Subject Credential (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 school instruction. The program emphasizes daytime field experience in elementary classrooms, and includes methodology courses and student teaching. Courses for the MSCP program can be completed in one summer and two semesters, or three semesters (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.

Admission:

Before beginning the MSCP, students must 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 ad-

mission or acceptance to the MSCP. A separate application must be submitted to the MSCP Admissions Coordinator 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, in Phase Two, students complete methodology courses, and in Phase Three, students complete student teaching.

Phase One - Admission Requirements

Students interested in the MSCP and/or the Bilingual Cross- Cultural Emphasis (Spanish/English) are advised to call the MSCP Information Line at (310) 985-1632 to request an informational brochure. The brochure contains the following information, as well as a schedule of the MSCP Group Advisement meetings. Students are also required to purchase the MSCP Handbook before attending a meeting; the purchasing location of the handbook is also mentioned in the brochure. The MSCP Information Line is available 24-hours a day, seven days a week.

1. Attend one MSCP Group Advisement Meeting either before or while enrolled in the introductory courses. The MSCP application and other necessary materials will be distributed at these meetings only. Students must bring the MSCP Handbook to the meeting. Individual advising is not available until after students have attended one of the meetings. For those seeking a Bilingual Cross-cultural Emphasis (Spanish-English) credential, attendance at a Bilingual Emphasis Application Meeting is also required. Students need to attend the MSCP Group Advisement Meeting prior to attending the Bilingual Emphasis Application Meeting. Again, individual advising is not available until after attending one (or both) of the meet-

Successfully complete EDEL
 380 or its approved equivalent with a grade of "B" or better. (Check the MSCP Handbook for approved equivalents).

3. Successfully complete EDEL 360 or Math 110 or an approved equivalent. (Check the MSCP Handbook for approved equivalents).

- Submit a tuberculosis skin test or chest X-ray taken within the last three years.
- Submit one photocopy of all university and/or college transcripts.
- 6. Submit three letters of recom-
- 7. Submit a typed statement describing why you want to teach.
- 8. Attend an oral interview with a department faculty advisor.
- Submit the MSCP application along with documents verifying that the above prerequisites have been completed the semester before taking methods classes during the following dates:

Summer/Fall: January 1 - March 1 Winter/Spring: August 1 - October 1

THE ABOVE DEADLINES ARE STRICTLY ENFORCED.

NOTE: Only students enrolled in EDEL 380 in Summer Session, and who receive a "B" grade or higher, will be allowed to submit MSCP application packets July 1 - August 1 for admission to the MSCP in the fall semester. Special oral interview times are set up for students in this category.

STUDENTS ARE STRONGLY
URGED TO TAKE THE CBEST AND
MSAT (if required) AS SOON AS
POSSIBLE TO ENSURE RECEIVING
THEIR RESULTS IN ADVANCE OF
STUDENT TEACHING APPLICATION DEADLINES.

Phase Two - Methods and Subject Matter Competency

1. Methods Courses

Methods courses (EDEL 440, 450, 460, and 470) are designed to prepare students with the objectives, principles, materials, and teaching procedures needed in four basic areas. Although all of the methods courses require daytime field work, at least one course must be taken off campus. These courses must be completed with a minimum grade of *C* and a cumulative GPA of 3.0 or above.

Option One - Open Track: Core (12 units): EDEL 440, 450, 460, and 470,

Student Teaching (16 units): EDEL 481.

Option Two - Bilingual/Cross-Cultural Emphasis (Spanish/English):

Students in this program must be admitted to the Bilingual/Cross-Cultural Spanish/English 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 courses should be taken as follows: Fall semester: EDEL 450, 460, Spring Semester: EDEL 440, 470, Final Semester: EDEL 481. (Students must enroll in bilingual sections of these courses).

Language Component: Candidates for the Bilingual Emphasis Credential are expected to achieve and demonstrate the ability to perform the duties of a credentialed teacher equally well in both Spanish and English. (The program will provide students with options for this requirement.) All candidates are required to complete 3 units in classroom vocabulary for the bilingual teacher (SPAN 322).

Culture/History Component: Candidates must successfully complete a written assessment for competency in the target culture. The Culture/History assessment is administered twice each year. All non-Liberal Studies majors are required to take four culture/history courses to prepare for this assessment.

2. Subject Matter Competency

All students admitted to MSCP must meet Subject Matter Competency before beginning Phase 3. At CSULB, Subject Matter Competency can be accomplished in one of three ways: (a) pass the National Teachers Examination's (NTE) Multiple Subject Assessment for Teachers Exam (MSAT), (b) complete or have completed an approved core of courses in the Liberal Studies Waiver Program with no grade lower than a "C" in those courses. (If Subject Matter Competency was completed at an institution other than CSULB, an assessment will be made to determine course equivalency), or (c) complete a Liberal Studies Certificate. Students need to be evaluated by the Liberal Studies Office prior to filing for a grad check. This option waives the NTE's MSAT requirement. For information about the Subject Matter Competency requirement, contact the Credential Processing Office at (310) 985-5710.

Phase Three - Culminating Field Experience (CFE)

The CFE (EDEL 481 - 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 Office of Field Programs, located in ED1-6, one semester prior to beginning the CFE. Applications are distributed at the Student Teaching Application meetings. Dates for these meetings are announced during the first week of the methods courses, and are posted throughout the ED-1 and ED-2 buildings well in advance of the actual meeting dates. Completed applications received first will be given highest priority for choice of school district. It is possible that not all qualified applicants will be able to student teach in the semester of their choice. The criteria for priority selection is posted outside the Department of Teacher Education office, located in ED1-13, as well as outside the Office of Field Programs, located in ED1-6. Deadlines for submitting applications to student teach are:

Fall or Summer Term: March 1 Spring Term: October 1

Student Teaching Admission Requirements

- 1. Admission to the MSCP;
- Passage of the California
 Basic Educational Skill Test
 (CBEST);
- 3. Passage of the NTE's Multiple Subject Assessment for Teachers (MSAT) is required of all non-Liberal Studies majors. This exam may be waived by completing the selected core of courses in the Liberal Studies program. Consult the Liberal Studies section of the Bulletin for detailed information about the core of courses;
- 4. 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 to be evaluated. This option waives the NTE's MSAT requirement;
- 5. 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 four methods classes with no grade lower than a "C", and an overall GPA of 3.0 or higher;

- Received a grade of "C" or higher in EDEL 420 if student wishes to student teach at the kindergarten level;
- Completed at least 12 units at CSULB;
- 8. Submitted a certificate of clearance or proof of filing for clearance with Sacramento, or proof of an Emergency Credential;
- A valid tuberculosis skin test or chest x-ray;
- Submitted either a student teaching or internship application.

CFE Options

- 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, i.e. 2,4; 3,5. One student teaching assignment must be in a public school. It is possible to complete student teaching during two consecutive summers, one entire summer, or one summer and part of one regular semester.
- 2. In cooperation with approved school districts (ABC, Long Beach, and Paramount), an Internship Program is available for selected individuals to teach full time with full pay. This program is limited to outstanding candidates who have successfully completed Phases 1 and 2 of the MSCP, and have been offered employment in a participating district. An additional application and interview is required for the Internship Program. In addition to the student teaching admission requirements, an Intern applicant must meet the following requirements: (a) possess a baccalaureate degree from an accredited institution of higher learning, (b) submit verification of an extensive and successful experience with pupils in a school situation, (c) complete NSCI 301 or EDEL 475 or approved equivalent, (d) complete the Child Development requirement (ED P 301, HDEV 307, PSY 361, or equivalent).

Interns normally carry a full teaching load and serve as a member of the instructional team at the school site. Conditions of employment are governed by the master agreement of each individual school district. Interns are employed by the cooperating school district under the temporary provisions allowed in the Education Code.

3. Requirements for students in the Bilingual (Spanish/English) program in addition to those needed for admittance to student teaching include: (a) completion of the bilinqual concentration in the Liberal Studies major, (b) completion of appropriate language and culture/history courses (for non-Liberal Studies majors), (c) completion of all four methods courses in the designated bilingual sections, (d) passage of the Bilingual Proficiency Assessment and the Culture/History Assessment, and (e) a minimum of 150 hours as a volunteer or paid paraprofessional in a bilingual elementary classroom. For further information about the Bilingual Spanish/English requirements, please contact the Bilingual Program Coordinator, Dr. John Attinasi at (310) 985-4018.

Additionally, the Department of Teacher Education highly recommends that all students complete the following courses with a grade of "C" or higher prior to student teaching: (a) HDEV 307 or PSY 361 or ED P 301 or equivalent; (b) EDEL 475 or NSCI 301 or equivalent; and (c) P ED 476 or equivalent.

Preliminary Multiple Subject Credential

Students completing either Option One or Option Two 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.

Multiple Subject Internship Credential

In cooperation with approved school districts, including ABC, Long Beach, and Paramount, the College of Education at CSULB offers a Multiple Subject Internship program. The program offers the opportunity for selected individuals to teach full time with full pay in a participating district as an intern. The program is limited to outstanding candidates who have been admitted to the Department program and have been offered employment by a participating district.

Admission:

Each of the following admission requirements must be met to be eligible for the internship program.

 Clear admission to the multiple subject credential program;

- Baccalaureate degree from an accredited institution of higher education;
- Completed the liberal studies program and satisfied the subject matter competence of a *B* average on selected courses, or passed the MSAT;
- 4. Certificate of Clearance verified by Credential Processing Office;
- Earned an overall GPA at or above the standard set by the CSU system, and a "B" average after admission to teacher education;
- 6. Description and verification of experiences with students in a school setting, such as serving as a teacher's aide:
- 7. Minimum grade of "B" in each of the four prerequisite multiple subject methods courses (EDEL 440, 450, 460, 470);
- Satisfy the U.S. Constitution requirement (POSC 100 or 391 or exam);
- Have a TB clearance prior to internship;
- 10. Submit three references for confidential "Intern Recommendation Form."

Requirements:

- 1. Complete EDEL 572A-B (8,8);
- 2. Complete NSCI 301 or EDEL 475 for the science requirement;
- 3. Complete ED P 301 for child development requirement.

Professional Responsibilities of the Multiple Subject Intern:

Interns normally carry a full teaching load and serve as a member of the instructional team at each school site. Conditions of employment are governed by the master agreement of each district, and school district policies and procedures. Interns are employed by the cooperating district under the temporary provisions allowed in the Education Code.

Professional Clear Multiple Subject Credential

Candidates must meet an approved fifth-year program, and be recommended by an institution which offers a multiple subjects 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 de-

gree to have a maximum of six units taken in the senior year count toward post-baccalaureate studies. For further information about this petitioning process, see index under "Graduate - credit".

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) EDST 450, or ENGL 337 or MATH 278; and a state-approved CPR course.

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 (310) 985-5710.

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 Children's Center 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 a Writing Proficiency Examination (WPE) or CBEST;
- Possess a valid basic teaching credential or be in the process of completing the Multiple Subject Credential Program;
- Provide three letters of recommendation;
- 6. Verification of successful experiences with young children;
- Submit a personal statement of teaching philosophy;
- Attend a personal interview with the ECE Coordinator;
- 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, 450, 460, 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)

Due to a lack of resources, this credential has been suspended through 1994-95.

Graduate Certificate in the Teaching of Reading and Language Arts

This graduate certificate has been suspended.

Courses in Elementary Education (EDEL)

Upper Division

360. Mathematical Concepts of Number and Geometry (3) F,S,SS

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 (3) F,S,SS

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-hour 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) F,S,SS

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) F

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) S

Curriculum and teaching-learning processes for children from infancy to age five in a variety of early childhood settings. Establishment of optimal environments; varied activities appropriate to developmental age; selection and creation of materials. Ten (10) hours of fieldwork required,

*440. Integrating Language Arts Processes in Elementary Schools (3) F.S.SS

Prerequisite: Admission to Multiple Subjects Credential Program. Theory, research, and practice of the language arts in elementary schools. Implementation and evaluation of an integrated, meaning-centered literature program based on intensive listening, speaking, and writing experiences for all students. Five hours of field experience required. Traditional grading only.

*442. Language, Learning, and Teaching in Culturally and Linguistically Diverse Classrooms

Prerequisite: Admission to the Multiple Subject Credential Program. Theory and practice of teaching language arts to culturally and linguistically diverse students in a literature-based, meaning centered program integrated across the curriculum. Focus on acquiring English as a second language through equitable, student centered instruction. Emphasis on ESL, the writing process, and language development through the visual and performing arts. Ten hours of field work in local schools with at least 25% of students classified as LEP.

*442B. Language, Learning, & Teaching in Culturally & Linguistically Diverse Bilingual Classrooms

Prerequisite: Admission to the Multiple Subject Credential Program-BCLAD Emphasis. Theory and practice of teaching language arts to culturally and linguistically diverse students in a literature-based, meaning centered program integrated across the curriculum. Focus on acquiring English as a second language through equitable, student centered instruction. Emphasis on ESL, the writing process, and language development through the visual and performing arts. Ten hours of field work in local schools in a bilingual Spanish classroom.

*450. Reading in the Elementary School

Prerequisite: Admission to the Multiple Subjects Credential Program. Theory, research, and instructional methodology for teaching reading in pluralistic elementary classrooms. Emphasis on emergent literacy, literature-based programs, language minority children, and reading across the curriculum. Ten hours of field work required. Traditional grading only.

*452. Literature & Literacy in Culturally & Linguistically Diverse Classrooms

Prerequisite: Admission to the Multiple Subject Credential Program. Theory and practice of teaching language arts to culturally and linguistically diverse students in a literature-based, meaning centered program integrated across the curriculum. Focus on acquiring English as a second language through equitable, student centered instruction. Emphasis on program models for teaching with literature, curriculum development, technology, literacy in the content curriculum, and assessment. Ten hours of field work in local schools with at least 25% of students classified as LEP.

*452B. Literature & Literacy in Culturally & Linguistically Diverse Bilingual Classrooms

Prerequisite: Admission to the Multiple Subject Credential Program-BCLAD Emphasis. Theory and practice of teaching language arts to culturally and linguistically diverse students in a literature-based, meaning centered program integrated across the curriculum. Focus on acquiring English as a second language through equitable, student centered instruction. Emphasis on program models for teaching with literature, curriculum development, technology, literacy in the content curriculum, and assessment. Ten hours of field work in local schools in a bilingual Spanish classroom.

458. Newspaper in Education (1-3) SS

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.

*460. Mathematics in the Elementary School (3) F,S,SS

Prerequisite: MATH 110 or equivalent. Admission to elementary teacher education. Concepts and principles of modern school mathematics. Includes methods and media that contribute to its meaning and understanding. Five hours of field experience required. Traditional grading only.

*462. Mathematics in Culturally and Linguistically Diverse Classrooms (3) F,S,SS

Prerequisite: Admission to the Multiple Subject Credential Program which includes a grade of "C" or better in MATH 110, EDEL 360, or equivalent. Learning theories, research, and instructional practices of teaching mathematics to culturally and linguistically diverse students in elementary schools and self-contained middle school classrooms. Emphasis on mathematical concepts, active involvement of children, mathematical communication and reasoning, applications and connections, and assessment alternatives. Ten hours of fieldwork in local schools with at least 25% of students classified as LEP.

*470. Social Studies in the Elementary School

Prerequisite: Admission to the Multiple Subjects Credential Program. Trends, research, and instructional methodology for teaching social studies in pluralistic elementary classrooms. Emphasis on content, instructional organization, effective teaching strategies, and evaluation of learning. Five hours of field work required. Traditional grading only.

*472. Content Curriculum in Culturally and Linguistically Diverse Classrooms (3) F,S,SS

Prerequisite: Admission to the Multiple Subject Credential Program. Theory, research, and practice for teaching academic content in culturally and linguistically diverse elementary schools and self-contained middle school classrooms. Emphasis on the development of instructional units that reflect an integrated curriculum, inquiry learning, social participation, values, and access to the core curriculum for all students. Ten hours of fieldwork in local schools with at least 25% of the students classified as LEP.

*475. Teaching Science in the Elementary School (3) S

Prerequisites: Six units of science. Objectives, principles, materials and methods for teaching elementary school science. Students will learn how to develop their own strategies and materials for teaching science concepts selected from the life, physical, and earth sciences. Inquiry and hands-on approaches stressed. (Lec 2 hrs; lab 2 hrs) Traditional grading only.

481. Student Teaching in the Elementary Grades (8,8) F,S,SS

Prerequisites: EDEL 440, 450, 460, 470 and official admission by the Elementary Teacher Education Committee. All day for one semester or five mornings per week for two semesters in a public school elementary classroom, with assignments in two grade levels and a weekly seminar with a college advisor. Application should be made by March 1 for the fall semester and October 1 for the spring semester. Credit/No Credit grading only, with "A" or "B" required for credit. Course is repeatable for a maximum of 16 units in same semester.

482. Student Teaching in Culturally and Linguistically Diverse Classrooms (8,8) F,S,SS

Prerequisites: EDEL 442, 452, 462, 472, and admission to program. All day for one semester in a public school within grades K-8, with assignments within two or more broad levels of schooling (K-3, 4-6, 7-8), teaching students from diverse cultural, linguistic, racial, ethnic, and/or socioeconomic backgrounds. Weekly seminar or colloquium. Credit/No Credit grading only, with "A" or "B" required for credit. Course is repeatable for a maximum of 16 units in same semester.

482B. Student Teaching in Bilingual Classrooms (8,8) F,S,SS

Prerequisites: EDEL 442B, 452B, 462, 472, and admission to bilingual student teaching. All day for one semester in a public school within two or more broad levels of schooling (K-3, 4-6, 7-8) or equivalent experience, teaching in bilingual settings for English language development, specially designed content instruction, and literacy in the language of emphasis. Weekly seminar and/or colloquium. Credit/No Credit grading only, with "A" or "B" required for credit. Course is repeatable for a maximum of 16 units in same semester.

482C. Student Teaching in Bilingual Classrooms (8,8)F,S,SS

Prerequisites: EDEL 442B, 452B, 462, 472, and admission to bilingual student teaching. For students who are teaching in their own class-rooms under an emergency credential. One semester of supervised teaching in a bilingual setting. Emphasis on English language development, specially designed content instruction, and literacy in the language of emphasis. Weekly seminar and/or colloquim. Credit/No Credit grading only, with 'A' or 'B' required for credit. Course is repeatable for a maximum of 16 units in same semester.

*490. Special Topics in Elementary Education (1-3) F,S,SS

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) SS *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

F,S,SS

500A. Reflective Processes For Beginning Teachers (3) F,S

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 own problems and situations. Same course as EDSE 500A.

501. Enhancing Teacher Effectiveness Through Instructional and Personal Strategies (3) F

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 or become mentor teachers. Enhance ability to analyze and improve instruction or guide other teachers. Increase interpersonal and personal analysis skills and strategies and assist other teachers in using their skills. Same course as EDSE 501.

522. Parent Education and Involvement in Educational Environments (3) S

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) F

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) S

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) F,S

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 in Culturally and Linguistically Diverse Classrooms (3) F

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 programs. 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.

560. Problems of Teaching Elementary Mathematics (3) S

Prerequisites: EDEL 460, 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) S

Prerequisites: EDEL 470; 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 Subjects Internship (8,8) F,S

Prerequisite: Admission to the Multiple Subjects Internship program by the Teacher Education Admissions and Standards Committee. 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) SS

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) S

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.

625. Advanced Analysis of Instruction Through Reflective Strategies (3) S

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) F,S,SS

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) F,S,SS

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) S,SS

Prerequisites: Advancement to candidacy, approval of graduate advisor, 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. Consideration of curriculum, role of the school, and topics related to effectiveness and excellence in education. For qualified candidates preparing to write the comprehensive examination. Same course as EDSE 695.

697. Directed Research (1-3) F,S,SS

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) F,S,SS

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.

Courses in Secondary Education (EDSE)

Lower Division

157. Critical Thinking and Analytical Reading (3) F,S

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

*435. United States Secondary Schools/Intercultural Education (3) F,S,SS

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

*436. Learning and Instruction in a Multicultural Setting (3) F,S,SS

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) F,S,SS

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) SS

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) SS

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.

*497. Independent Study (1-3) F,S,SS

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) F,S

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 own problems and situations. Same course as EDEL 500A.

501. Enhancing Teacher Effectiveness Through Instructional and Personal Strategies (3) F

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 or become mentor teachers. Enhance ability to analyze and improve instruction or guide other teachers. Increase interpersonal and personal analysis skills and strategies and assist other teachers in using their skills. Same course as EDEL 501.

530. Intercultural Education: US and Global Dimensions (3) F,S,SS

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 in Culturally and Linguistically Diverse Classrooms (3) F

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 programs. 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) F,S

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

625. Advanced Analysis of Instruction Through Reflective Strategies (3) F

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) S,SS

Prerequisites: Advancement to candidacy, approval of graduate advisor, 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. Consideration of curriculum, role of the school, and topics related to effectiveness and excellence in education. For qualified candidates preparing to write the comprehensive examination. Same course as EDEL 695.

697. Directed Research (1-3) F.S.SS

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) F,S,SS

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.



College of Engineering

Dean: J. Richard Williams Associate Dean for Instruction: Mihir K. Das Acting Associate Dean for Curricula and Outreach: Michael K. Mahoney Development Officer: Lukman Clark Administrative Services Manager: Rosario Yeung-Lindquist **Facilities Coordinator and Safety** Officer: Mike Berg College Office: ECS - 610 College Secretary: Vickie Messina / Kim Truesdelle Telephone: (310) 985-5121 Departments:

- Aerospace Engineering (A.E.):
 Tuncer Cebeci, Chair
- Chemical Engineering (Ch.E.): Lloyd Hile, Chair
- Civil Engineering (C.E.): Peter A. Cowan, Chair
- Computer Engineering and Computer Science (C.E.C.S.): Michael K. Mahoney, Chair
- Electrical Engineering (E.E.):
 Radhe Das, Chair
- Engineering Technology (E.T.): Tesfai Goitom, Chair
- Mechanical Engineering (M.E.):
 Ortwin Ohtmer, Chair

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. Master of Science in Engineering is also offered in interdisciplinary areas. The Ph.D. in Engineering Mathematics is offered jointly with The Claremont Graduate School: Undergraduate programs provide opportunities to specialize in the areas of biomedical, chemical, civil, computer, electrical, industrialmanagement, manufacturing, materials, mechanical, ocean engineering, computer science and engineering technology. The engineering curricula in chemical, civil. computer, electrical, and mechanical

engineering are accredited by the Accreditation Board for Engineering and Technology (ABET) and the Construction Management program is accredited by the American Council for Construction Education (ACCE). Several certificate programs are also offered. Most of the regular courses are also scheduled in evenings 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 adjoining buildings including a new 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 school, 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 the Accreditation Board for Engineering and Technology (ABET).

Baccalaureate Degrees

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 Electrical Engineering *

B.S. in Mechanical Engineering *

B.S. in Engineering Option in Industrial-Management Engineering

Option in Materials Engineering Option in Ocean Engineering Option in Biomedical and Clinical Engineering

B.S. in Engineering Technology
Option in Computer Technology
Option in Construction
Management

Option in Electronics
Option in Manufacturing
Option in Quality Assurance

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 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 although applications may be accepted at later dates 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, Blacks, and Hispanics 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.

The curricula are also designed to accommodate students transferring from other colleges such as the community colleges and liberal arts colleges. 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

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 requires a minimum GPA of 2.7 in the last 60 units taken.

A student <u>must</u> 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 CR/NC.

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 Bulletin.) 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. All 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, must meet with an advisor in the department 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 must be 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 must be 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 must 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 must provide both breadth and depth and not be limited to a selection of unrelated introductory courses. Such coursework must meet 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 other than a student's own language(s). 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 must 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 must 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:

<u>Category C</u>: ART 375I, C/LT 320I, C/LT 411I, MUS 363I, C/LT 420I, R/ST 383I, AMST 350I, C/LT 349I, HIST 303I, LING 363I.

Category D: ANTH 412I, DANC 373I, EDP 373I, GERN 400I, HIST 307I, POSC 461I, ANTH 311I, PSY 300I, SOC 335I, SOC 410I, SOC 441I, SOC 485I

Category E: DANC 373I, EDP 373I, HDEV 307I, HDEV 357I, HSC 420I, HSC 425I, 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 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, GEOG 320I, HIST 307I, I/ST 319I, W/ST 401I, ANTH 311I, GEOG 312, HIST 414I, CHLS 390I, SOC 410I, SOC 485I, U/ST 401I.

Category E: HSC 4201.

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 412I, GEOG 307I, ENGR 375I, POSC 461I, POSC 494I, I/ST 317I, I/ST 318I, ANTH 311I, HIST 306I, HIST 308I, HIST 474I, HDEV 307I, PSY 350I, PED 332I, SOC 335I, SOC 410I, U/ST 401I

Category E: ECON 309I, ENGR 375I, FIN 309I, HEC 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 412I, DANC 373I, EDP 373I,
ENGR 375I, HIST 307I, POSC 461I,
POSC 494I, I/ST 317I, I/ST 318I, ANTH
311I, HIST 306I, HIST 474I, HEC 312I,
HDEV 307I, PSY 300I, SOC 335I, U/ST

Category E: DANC 373I, ECON 309I, EDP 373I, FIN 309I, HEC 373I, HSC 420, ENGR 375I, TED 388I.

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 452I.

Category D: W/ST 401I, DANC 373I, EDP 373I, GERN 400I, HEC 312I, HDEV 307I, PSY 300I, HDEV 357I. Category E: DANC 373I, EDP 373I, HDEV 307I, HDEV 357I, HSC 420I, HSC 425I, HIST 309I, PED 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, MUS 363I, MUS 364I, C/LT 452I, ENGL 318I, R/ST 391I, R/TV 318I, THEA 324I.

<u>Category D</u>: PSY 300I, SOC 410I. <u>Category E</u>: 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 411.
Category D: ANTH 307I, ANTH 412I,
POSC 461I, POSC 494I, ANTH 305I,
ANTH 311I, GERN 400I, HIST 306I,
HIST 308I, HIST 482I, C/LA 350I, PSY
300, PED 322I, SOC 335I, SOC 441I.
Category E: ECON 309I, SOC 461I,
HDEV 307I, HDEV 357I, HSC 425I,
REC 340I, FIN 309I, HEC 309I.

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 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, HEC 309I.

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: HEC 312I, W/ST 401I.
Category E: HSC 425I, W/ST 365I,
HIST 309I, PED 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, R/ST 315I, R/ST 331I, R/ST 341I.

Category D: A/ST 300I, A/ST 301I, A/ST 485I, GEOG 312I, GEOG 320I, CHLS 390I, SOC 485I.

Category E: HSC 4201

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, HEC 312I, HDEV 307I, PED 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 3701

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, 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: 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 452I, HIST 303I, LING 363I.

Category D: ANTH 311I, DANC 373I, EDP 373I, HEC 312I, HIST 310I, PSY 300I, PSY 350I, PED 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 370l Category C: C/LT 320l, C/LT 411l, C/LT 420l, C/LT 349l, C/LT 421l, C/LT 422l, HIST 323l, HIST 414l.

Category D: A/ST 301I, ANTH 307I, ANTH 412I, HIST 307I, POSC 461I, POSC 494I, I/ST 319I, AMST 350I, HIST 414I, R/ST 383I.

Category E: SOC 4611.

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,

Category C: ART 3601, ART 3751, C/LT 3201, C/LT 4121, MUS 3631, MUST 3641, C/LT 3241, C/LT 3491, C/LT 4211, C/LT 4221, C/LT 4511, ENGL 3181, GERM 3701, HIST 3231, HIST 4041, HIST 4141, THEA 3241, THEA 4211, HIST 4141.

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 420I, C/LT 452I, CLSC 310I, C/LT 451I, HIST 323I, HIST 404I, LING 363I. Category D: HIST 404I, HIST 482I, PSY 300I, SOC 485I.

ATHEME 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 3701

Category C: C/LT 3201, C/LT 4111, C/LT 4121, R/ST 3831, C/LT 4511.

Category D: ENGR 3751, HIST 3071, POSC 4611, POSC 4941, W/ST 4011, HIST 4741, PSY 3501, PED 3321, SOC 3351, SOC 4101.

Category E: ENGR 375I, HSC 420I, HIST 309I, PED 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 3701
Category C: C/LT 4111, C/LA 3501.
Category D: ANTH 3071, ENGR 3751, HIST 3071, POSC 4611, POSC 4941, I/ST 3191, W/ST 4011, SOC 4101.
Category E: ENGR 3751, HSC 4201, SOC 4611.

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 judg-

ments 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.

<u>Category D</u>: ANTH 307I, ANTH 412I, HIST 307I, POSC 494I, W/ST 401I, GEOL 305I, HIST 474I, PSY 300I, SOC 410I, SOC 441I.

Category E: 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 D: 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 3701
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 3011, POSC 4611, I/ST 3171, I/ST 3181, I/ST 3191, GEOG 3121, GEOG 3201, HIST 4741

Category E: HSC 4201.

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 3701

Category B: ENGR 370I
Category C: C/LT 411I.
Category D: ANTH 307I, ENGR 375I,
HIST 307I, POSC 461I, I/ST 319I, HIST
474I, PSY 300I, SOC 410I.
Category E: ENGR 375I, HSC 420I,
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 375I. HIST 3071, POSC 4941, W/ST 4011, HIST 474I, SOC 410I.

Requirements for the ABET Accredited Degree Programs

Category E: ENGR 3751

Students working for an ABET accredited degree are required to see 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 re-

quirements. In particular, majors in the ABET accredited programs must 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.

Graduate Programs:

Graduate Program Director: Mihir K. Das, Associate Dean for Instruction

Master of Science in Engineering

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 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 for the Master of Science in Engineering (code 6-4301):

- (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 Bulletin.

Ph.D. in Engineering Mathematics (code 8-4303)

Program Advisor: Nick Panagiotacopulos, Professor of Electrical Engineering. (For information in specific disciplines, contact department chairs.)

Ph.D. in Engineering 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 only to a limited number of qualified students, and therefore, applications should be made as early as possible. Applications are encouraged from both 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. Applicant must, moreover, have attained a good scholastic record and present such confidential recommendations indicating that he or she is qualified to pursue, with distinction, advanced study and research. In some cases examinations may be required. Admission is contingent upon the availability of faculty and facilities to support research in the applicant's area of interest.

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 must prepare and file 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 must indicate 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) must be completed. Transfer credits of up to 24 units of related courses at the master's level is permissible on ap-

proval of the Program Committee; this course work must have been completed with at least a grade of "B" or its equivalent at an accredited institution and must be directly related to the joint program and to the student's Ph.D. goals. Of the 72 units, a minimum of 24 units must normally be 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 is required to pass written preliminary examinations. These examinations shall consist of four examination areas: two in engineering and two in mathematics. In each area there will be a three-hour examination. The two engineering examinations must be taken during the same month, and the two mathematics examinations must be taken during the same month. These examinations will be 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 must include at least two faculty members, one each from CGS and CSULB. It must provide 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 super-

Research Preparation:

On 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 embarks on the research phase of the Ph.D. Program. In preparation for the research phase, the student is expected to spend at least a semester in advanced graduate courses, seminars, or directed reading courses, where exposure to research material 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 adequate reading proficiency in a foreign language and in computer programming. The tests for language and computer proficiency must be passed before the student takes the qualifying examination.

Research Proposal and Qualifying Examination:

With these advanced courses as background, and with the guidance of the Doctoral Committee, the student shall define an area of proposed research and prepare 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 will be 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; only upon a positive recommendation may the student embark on a dissertation. In the event of failure, the qualifying examination may be retaken once, 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 CGS 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.

College-Based Courses (ENGR) Lower Division

090. Special Topics in Engineering (1) F,S

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) F,S

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.

282. Critical Thinking and Analysis (3) F,S

Prerequisite: MATH 122, PHYS 151. The interrelations of language, abstract symbolism and analysis are considered. The procedures for arriving at conclusions from various starting points are considered. Programming as a critical thinking tool, evaluation of various programming languages as aiding in logic, statistical generalizations, truth tables, structured programming as critical-thinking techniques. (Lec. problems 3 hrs)

Upper Division

300. Computers and Their Applications (3) F,S

Prerequisite: ENGL 100 and Upper-division standing. Introduction to computers and computer applications. Microcomputer operating systems. Use of DOS commands. Text editing. Word processing. Database management. Spreadsheet analysis. Operating environments with a graphical interface. Presentation graphics. Preparation of original art and graphics. Computer drawing and drafting. Introduction to desktop publishing. Introduction to computer programming in BASIC. (Lecture-problems 3 hrs).

302. International Developments in Renewable Energy and Cultural/Environmental Impacts (3) F,S

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.

350. Computers, Ethics and Society (3) F,S

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

370l. Astronautics and Space (3) F,S

Prerequisites: Upper Division Standing, English 100. Technologies and social aspects of space travel and the colonization of space and the planets. Topics include fundamentals of rocketry and orbital mechanics, economics of space travel, life support systems, current programs for space flight and extraterrestrial development, space stations, technologies and prospects for extraterrestrial colonization, unique social aspects of isolated extraterrestrial colonies, prospects for interstellar space flight. (Lecture-problems 3 hrs).

375l. Total Quality and Continuous Improvement (3) F,S

Prerequisites: ENGL 100 and Upper Division Standing. 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.

480. The Self-Integrated Professional (3) F,S

Prerequisite; ENGL 100, PHIL 160 or General Education A.3 Critical Thinking and upper division status. The professional as an individual in society and his/her profession. The significance of the values of the individual and individual behavior in the moral and ethical decisions involved in professional activity. The ethics, discipline and conduct of professions such as engineering, science and technology, nursing, business management, education, sports, law enforcement, etc., in a multi-cultural society. (Lecture Discussion 3 hours).

492B. Internship In Engineering (3) F,S

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) S

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.

572. Automation in Computer Integrated Manufacturing (3) F

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) S

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.

595. Manufacturing Resource Planning (3) F

Prerequisites: CE 406, ENGR 574 or consent of instructor, and graduate standing. Concepts and methodologies of manufacturing systems planning, methods of technological forecasting, development, and application of planning and inventory models, network and graph techniques. Simulation and analysis of actual manufacturing operations using algorithms and models under conditions of risk and uncertainty. (Lecture and computer lab, 3 hours). Traditional grading only.

790. Advanced Special Topics in Engineering (4) F,S

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) F,S

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) F,S

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.

Aerospace Engineering College of Engineering

Department Chair: Tuncer Cebeci Department Office: ECS-607 Telephone: (310) 985-1503

Faculty: Professors: Tuncer Cebeci, Ralph Cooper, J. Richard Williams; Associate Professors: Hsun-Hu Chen, Hsin-Piao Chen, Hamid Hefazi

Graduate Advisor: Hamid Hefazi Secretary: Laju Tejwani

Advisory and Development Council:

The Department of Aerospace Engineering is supported by an Advisory and Development Council consisting of outstanding engineers and executives from industry and government agencies 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.

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 background of fundamental information permitting the students to acquire knowledge and skill 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.

The program benefits 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 Depart-

ment 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 for the Master of Science in Aerospace Engineering

- 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.
- 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 436 (3), *537 (3), 539 (3), 540 (3), 631 (3), 632 (3), 696 (3)

Category B: Design, Performance, Propulsion, Avionics

AE 480 (3), 481 (3) *551 (3), 552 (3), *554 (3), 555 (3), 652 (3), 654 (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) F

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.) Traditional grading only.

271. Introduction to Aerospace Engineering II (3) S

Prerequisites: Calculus, Physics, AE 270. 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 evehicle 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.) Traditional grading only.

336. Engineering Fluid Dynamics (3) F

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.) Traditional grading only

351. Introduction to the Stability and Control of Aerospace Vehicles (3) S

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.) Traditional grading only.

352. Introduction to Flight Mechanics (3) S

Prerequisites: ME 371, CE 335 or consent of instructor. Introduction to mechanics of atmospheric and orbital flight. Application of basic aerodynamics to performance analysis of aircraft, missiles and spacecraft. (Lecture-problems 3 hours.) Traditional grading only.

374L. Aerospace Materials Laboratory (1) S

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.) Traditional grading

436. Aerodynamics (3) F

Prerequisites: CE 335 or consent of instructor. Incompressible inviscid flows, airfoil and wing aerodynamics, compressible flows, incompressible viscous flows, supersonic and hypersonic flows. (Lecture-problems 3 hours.)

440L. Aerodynamics Laboratory I (1) S

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.) Traditional grading only.

462. Fundamentals of Aerospace Propulsion (3) S

Prerequisites: AE 436, ME 330. 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.) Traditional grading only.

470. Avionics and Opto-Electronics (3) F

Prerequisite: AE 351. 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.) Traditional grading only.

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

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.) Traditional grading only.

471. Introduction to Aircraft Structures (3) F,S

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.)

473. Aerospace Design (3) S

Prerequisites: AE 436, 462, 471. Completion of a design project under faculty supervision emphasizing the essential ingredients of design through the use of trade-off studies. A written and an oral report are required. (Lecture-problems 3 hours.) Traditional grading only.

480. Fundamentals of Aerospace Engineering I (3) F

Prerequisites: AE 436 and 471, or consent of instructor. Science and engineering of flight vehicles, basic aerodynamics, structures, performance, stability and control, elements of rocket propulsion and trajectories, and orbital performance. (Lecture-problems 3 hours.)

481. Fundamentals of Aerospace Engineering II (3) S

Prerequisite: AE 480 or consent of instructor. The aircraft design process including wing and fuselage design, engine sizing, Take-off Field Length (TOFL) and Landing Field Length (LFL) estimates, price and operating cost estimates. (Lecture-problems 3 hours.)

490. Professional Practice and Seminar (1) S

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

502. Applied Numerical Methods for Aerospace Engineers (3) F,S

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) F,S

Prerequisites: AE 436 or 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.)

539. Gas Dynamics (3) F

Prerequisites: CE 335, or consent of instructor. Review of one dimensional gas dynamics: isentropic, Fanno and Rayleigh flows; normal shocks, oblique shocks, Prandtl-Meyer expansion. Small perturbation theory: subsonic and supersonic flows. Transonic and mixed flows. (3 hours, Lecture-problems.)

540. Aero Laboratories (3) S

Prerequisites: AE 537 or consent of instructor. Dimensional analysis and modeling, testing principles, wind tunnels and test rigs, measurement of pressure, temperature, velocity and forces. Pitot tubes, hot-wire and laser doppler velocimetry techniques. Data acquisition and analysis. (2 hours, Lecture-problems, 3 hours Laboratory).

551. Aircraft Performance and Design (3) F,S

Prerequisite: AE 537 or consent of instructor. Aircraft flight behavior requirements and design criteria. CFD and empirical design method applications for subsonic, transonic, and supersonic conditions. Segmented and continuous performance analysis methods for turbojet, piston-propeller, turboprop and turbofan aircraft. (Lecture-problems 3 hours.)

552. Flight Mechanics (3) F

Prerequisites: ME 371 or consent of instructor. Geometry of wing and fuselage, wing forces and moments, kinetics of flight vehicles in 3D, simulation of flight path, forces and moments during maneuvering, cockpit simulation. (Lecture-problems 3 hours).

554. Avionics Systems (3) F,S

Prerequsites: 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.)

555. Computer Aided Design and Computer Aided Manufacturing (3) F

Prerequisite: ME 305 or equivalent, or consent of instructor. 3D-wire frame modeling and solid modeling of aircraft. Computer-aided drafting and manufacturing. Computational geometry for aircraft design and manufacture, pre- and post-processing for Finite Element or Boundary Element Method. Display techniques and graphics programming, animation of flight vehicle structures. Application of advanced 3D-CAD/CAM software packages on high-resolution graphical interactive workstations. (Lec-problems 3 hours.)

571. Aerospace Structures I (3) F,S

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) S

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) F

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) F

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), S

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) S

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.

654. Guidance, Navigation and Control of Aerospace Vehicles (3) F.S

Prerequisites: AE 652 or consent of instructor. Control theory and applications to air vehicles. Control law development and flight control synthesis with respect to handling qualities and stability augmentation. Includes architecture of guidance systems. (Lecture-problems 3 hours.)

661. Propulsive Systems (3) S

Prerequisites: AE 537, 539 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.)

680. Special Topics in Aerospace (3) F,S

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) F,S

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) S

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) F,S

Prerequisite: Graduate Standing. Research in computational and experimental aerodynamics, structures or design problems.

698. Thesis (1-6) F,S

Prerequisites: Consent of instructor, advancement to candidacy. Research on a chosen topic for thesis.

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

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) S

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.)

Chemical Engineering

College of Engineering

Department Chair:
Lloyd Hile
Department Office: EN2-101
Telephone: (310) 985-4909
Faculty: Professors: Lloyd R.
Hile, Larry K. Jang, Hamid
Kavianian, Ashok Naimpally,
Shirley C. Tsai;
Emeritus Professor:
John M. Lenoir
Undergraduate Advisor:
Larry K. Jang
Graduate Advisor: Shirley C. Tsai
General Education Advisor:
Lloyd Hile

The Department

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

Chemical 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

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.

Hote Propulsive Systems - (3

All chemical engineering students must have received a minimum grade of "C" in each of the prerequisites for any chemical engineering course.

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). 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.

Requirements for the Bachelor of Science In Chemical Engineering (code 3-4320)

Lower Division: CH E 200, 210; CHEM 111A, 111B, 251; EE 211 or 212; 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; CH E 435 or 436; three units of approved CH E electives; three units of approved engineering electives; three units of approved science electives; a course in economics.

Courses (CH E)

Lower Division

200. Chemical Engineering Fundamentals (3) F,S

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.)

Smuniures (3) of the second second

210. Computer Methods in Chemical Engineering (3) F,S

Prerequisites: CHEM 111A, MATH 122, PHYS 151. Beginning Fortran programming and techniques of numerical analysis applied to typical problems in chemical engineering. (Lecture-problems 2 hours, laboratory 3 hours.)

Upper Division Mark Majorito Sea

300. The Chemical Industry (3) F, Odd Years

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) F,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) F,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,S

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.)

385. Semiconductor Processing (3) S

Prerequisites: CHEM 111A; PHYS 154 or consent of instructor. Application of chemical engineering principles of diffusion, reaction, heat transfer, etc. to processes used in semiconductor device manufacture. Examination of crystal structure, film growth, doping techniques, chemical vapor deposition, and other topics related to microelectronic device fabrication. (Lecture-Problems: 3 hours)

405./505. Safety in the Chemical Process Industries (3) F,S

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,S

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) F,S

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,S

Prerequisites; CH E 210, 320. Heat exchange by conduction, convection and radiation. Diffusion in fluids and solids. Simultaneous heat and mass transport. (Lecture-problems 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,S

Prerequisites: CHE 210, CHEM 371A.
Homogeneous and heterogeneous reactions and application to reactor design, catalysts.
(Lecture-problems 2 hours, laboratory 3 hours).

435. Chemical and Electrochemical Manufacturing Processes (3) F

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.

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) F

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 flow-sheeting 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) F,S

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) F,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 3 hrs.)

465./565. Biochemical Engineering (3) F, S

Prerequisite: CH E 200, CH E 330, CH E 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) F,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. Theoretical Methods in Chemical Engineering (3) F, Even Years

Prerequisites: CH E 210, 310, 420, 430. Simulation and optimization of chemical engineering processes by mathematical formulation and computer modeling. (Lecture-Problems 3 hours.)

485./585. Air Pollution (3) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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. (Lectureproblems 3 hours.)

520. Advanced Transport Phenomena (3) F,S

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) F,S

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.

540. Energy Conservation (3) F,S

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) F

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.

550. Alternate Energy Sources (3) F,S

Prerequisites: Consent of instructor. Examination of processes to economically produce energy or fuel from various raw materials (coal, oil shale, tar sands, biomass, solar, wind, etc.) (Lecture-Problems: 3 hours) Traditional grading only.

555./455. Environmental Compliance (3) F,S

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) F, S

Prerequisite: CH E 200, CH E 330, CH E 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.)

585./485. Air Pollution (3) F,S

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) F.S.SS

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) F,S,SS

Prerequisite: Advancement to Candidacy. Planning, preparation and completion of a thesis in chemical engineering.

425. Polymer-Synthesis and

Department Chair: Peter A. Cowan surveying, urban and environmental engineering. The Department of Civil Department Office: VEC 101 Engineering offers graduate study Telephone: (310) 985-5118/8010 programs leading to the degrees of Faculty: Professors: C. V. master of science in civil engineering Chelapati, H. L. Chu, Peter A. (M.S.C.E.) and the advanced degree Cowan, Ali Eshett, Richard P. of civil engineer (C.E.). These Nguyen, Joseph M. Plecnik, programs provide opportunities for Chan-Feng Tsai, William H. Ying, graduate students to develop as civil Elena Zagustin engineers capable of competent re-Emeritus Faculty: Robert L. search, design, and application Alexander, Kamal T. Al-Chalabi, John through integrated curricula of en-H. Dudley, M. Gamal Mostafa, gineering and science while permitting Willard H. Reed, Bing C. Yen, a concentration in the student's area Undergraduate Advisor: of interest. Areas of specialization include: environmental engineering, Graduate Advisor: water resources engineering, geotech-Chan-Feng Tsai nical engineering, structural engineer-

W. H. Ying

advisors.

Leanne Hayes

The Department

Department Secretary:

Students desiring detailed informa-

tion should contact the department of-

The Department of Civil Engineering

offers an option designed to give the

students a broad educational back-

ground essential to modern civil en-

gineering practice and research. The

program is built around a basic core

of mathematics, natural and engineer-

professional engineering programs. It

is planned to give a selection of basic

education to enable the graduate to

begin a career in any of the various

to prepare for graduate study in re-

lated engineering majors. It makes

possible a systematic and integrated

foundation in the principles of struc-

tural analysis and design, transporta-

tion systems, environmental systems,

resources engineering, materials, con-

tunity to explore a particular area of in-

terest is offered in the wide selection

permit students a sequence of cour-

ses related to the area of their choice.

mechanics and hydraulics, materials

of construction, geotechnical engineer-

ing, earthquake engineering and struc-

The four engineering buildings

house laboratory facilities in fluid

tures, engineering mechanics,

of civil engineering design electives to

struction engineering management,

and information technology. Oppor-

geotechnical engineering, water

fields of practice in civil engineering or

engineering-science and design

ing sciences common to accredited

fice for referral to one of the faculty

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

ing, and transportation 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 upto-date. It also advises on placement opportunities before and after gradua-

ABET Accreditation

The Bachelor of Science in Civil Engineering is accredited by the Accreditation Board for Engineering and Technology (ABET). 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

Civil Engineering College of Engineering

ABET requirements in math/sciences. humanities and social sciences areas and engineering sciences and design.

Bachelor of Science in Civil Engineering (code 3-4325)

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

Lower Division:

BIOL 200 or MICR 100; CHEM 111A; C E 205, 206, 225; E E 211; MATH 122, 123, 224; M E 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, 464, 491, M E 331, 374; three units of technical electives from: C E 429, 435, 446, 458,

Master of Science in Civil Engineering

Prerequisites:

- (1) A bachelor's degree in an accredited curriculum in civil engineer-
- (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;
- (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 for the Master of Science in Civil Engineering (code 6-4325)

Completion of a minimum of 30 units beyond the bachelor's degree and graduate coursework as follows:

- (a) 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.
- (b) Six units of electives selected from approved upper-division or graduate courses in appropriate subjects:
- (c) 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

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 con-

sidered by the Department Graduate Studies Committee.

Advancement to Candidacy for the Civil Engineer Degree:

- (1) A Department Graduate Study 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 for the Civil Engineer Degree (C.E.) (code 7-4324)

(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 500and 600-level civil engineering courses including a thesis of nine units to be written and presented orally:

(b) Twenty-four units of 400-, 500and 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)

Director: Dr. Peter A. Cowan, Professor of Civil Engineering

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 accomodate 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 for the Certificate

- 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 Civil Engineering 531, 543, 565, 602; Public Policy and Administration 590 (Waste Management and Policy Regulation); a minimum of nine units (electives) selected from the following: Civil Engineering 504, 506, 549, 560, 561, 562, 563, 564, 566, 567, 569; Chemical Engineering 555, 585; and Mechanical Engineering 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) F,S

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) F,S

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) F.S

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

300. Engineering Materials Laboratory I (1) F,S

Prerequisites: CHEM 111A, PHYS 151. Prerequisite or corequisite: C E 205. Course covers the basic properties of civil engineering construction materials. (Laboratory 3 hours.)

305. Technical Communications (3) F,S

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) F,S

Prerequisite: CE 206. Application of numerical methods and computer programming to the solution of civil engineering problems. (Lecture-Problems: 1 hour, Laboratory: 3 hrs.)

325. Engineering Surveying, Mapping and Automated Applications (2) F,S

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) F,S

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) F,S

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) F,S

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) F,S

Prerequisite: 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) F

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) F,S

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) F,S

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) F,S

Prerequisites: Physics 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.)

381. Resources, Technology and People (3) F,S

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. Engineering and Civilization (3) F,S

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) F,S

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 socioeconomic problems that arise during or as a consequence of implementation of water resources policies. Evaluation in socio-political, economic, environmental, aesthetic, ethical and macro-technical terms. (Lecture-Discussion: 3 hours.)

404. Laboratory Techniques (1) F,S

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) F,S

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) F,S

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) S

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) F,S

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) F

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).

420. Advanced Surveying and Photogrammetry Engineering (3) F.S.

Prerequisite: CE 225. Advanced techniques in surveying and photogrammetry applied to civil engineering planning and construction projects. Use of remote sensing and modern computer aided surveying systems. (Lecture-problems: 2 hours, Laboratory: 3 hours.)

426. Transportation Engineering (3) F,S

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) S

Prerequisite: C E 345. Design problems in highway engineering. Design project. (Lectureproblems 3 hours.)

429./529. Traffic Engineering (3) F

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.)

433. Drainage Engineering (3) S

Prerequisites: Senior standing or consent of instructor. Drainage principles and practices applicable to construction technology. Estimation of flow, municipal storm drainage, highway drainage, legal aspects of drainage. Not open to Civil Engineering majors. (Lecture-problems: 3 hours).

435. Hydrology and Water Resources Engineering (3) F

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) F,S

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) S

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) F,S

Prerequisites: CE 345, 346, or consent of instructor. Methods of design and construction of various geotechnical engineering projects, utilizing theory of soil mechanics. (Lecture-problems 3 hours)

446./542. Geotechnical Projects (3) F

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) F

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) F

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) F,S

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) F,S

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.)

460. Environmental System Planning (3) F

Prerequisite: C E 364 or consent of instructor. Planning and evaluation of systems for management of water supply, wastewater, stormwater, air quality, and solid and hazardous waste, considering system performance, legislation and regulations, environmental impacts, and socioeconomic factors. Selected case studies. (Lecture-problems 3 hours.)

462. Environmental Ethics and Impact (3) S

Historical perspective of environmental legislation, conservation and ethics with case studies. Study of environmental laws and acts. Physical factors in environmental quality. Evaluation and review of selected case studies and Environmental Impact Studies. (Lecture-problems: 3 hours.)

464. Environmental Engineering Laboratory I (1) F,S

Prerequisites: ENGL 100 and CE 364 or consent of instructor, Laboratory methods in Environmental Water Quality as applied to topics of current interest. (Laboratory 3 hours)

466. Environmental Systems Design (3) S

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) F,S

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.)

470. Engineering Contracts and Specifications (3) F

Prerequisite: C E 300. Principles of contracts and specifications, codes, drawings and estimates. Applications of business law to engineering. (Lecture-problems 3 hours.)

471. Cost Estimating and Bidding (3) S

Prerequisites: C E 426, 459. Construction cost estimating of large engineering projects and the preparation of appropriate bids. (Lecture-problems 3 hours, field trips.)

473. Project Management (3) S

Prerequisites: Senior standing or consent of instructor. Theory and application of logic and current techniques in the planning, scheduling and managing of engineering projects. Techniques of construction. (Lecture-problems 3 hours.)

481. Professional Practice In Civil Engineering (1) F,S

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) F,S

Prerequisite: Consent of instructor, OSHAct 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) F.S

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) F

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) F

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) F

Prerequisite: CE 455, 459. Elements of lateralforce design in steel, concrete, masonry and timber structures. Application of current building codes. (Lecture-Problems: 2 hours, Laboratory: 3 hours.)

497. Senior Problem Directed Studies (2) F,S

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) F

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) S

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) F,S

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) F,S

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.

506. Engineering Economy for Complex Systems (3) S

Prerequisites: CE 406 or consent of instructor. Principles and techniques used by engineers in formulating rational requests for the allocation of capital and other resources to complex programs. Model formulation, systems analysis and design. Applications to public engineering systems. Emphasis on risk, uncertainty, decision theory, qualitative factors and intangibles. (Lecture-problems 3 hours) Traditional grading only.

507. Risk Assessment and Decision Making in Engineering (3) F.S

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) F,S

Prerequisites: Graduate standing or consent of instructor. Civil Engineering applications of non-deterministic models and decision theory. Applications of proven statistical computer programs. (Lec-problems: 3 hrs). Traditional grading only.

509. Computational Methods in Civil Engineering (3) F,S

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-prob; 2 hrs, lab: 3 hrs) Traditional grading only.

510./410. Concrete Materials and Construction Engineering (3) F

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) F

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 hrs, laboratory: 3 hrs). Traditional grading only.

516./456. Timber Design (3) F

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) F

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) F,S

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. (Lectureproblems 3 hours.) Traditional grading only.

522. Transportation Planning (3) S

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. (Lec-problems 3 hrs) Traditional grading only.

526. Pavement Engineering (3) S

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) F

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) S

Prerequisites: C E 335, 345 or consent of instructor. Theory and application of ground-water flow and seepage through earth structures. (Lectureproblems 3 hours.) Traditional grading only.

532. Sediment Transportation (3) F Prerequisite: C E 437. Phenomena of sediment

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) S

Prerequisite: C E 336, 437 or consent of instructor. Hydraulic measurement and principles of hydraulic similitude as applied to stream, estuarine and coastal environments. (Lectureproblems 3 hrs) Traditional grading only.

535. Advanced Hydrology (3) F

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) F

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) F

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) S

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) F

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) F,S

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. (Lec-prob 3 hrs) Traditional grading only.

545. Rock Mechanics in Engineering Practice (3) F

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. (Lec-prob 3 hrs) Traditional grading only.

546. Theory and Design of Foundation Structures (3) F

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) S

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) S

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. (Lec-problems 3 hours.) Traditional grading only.

549. Advanced Soil Mechanics Techniques (3) F

Prerequisite: CE 345 or consent of instructor. Current theories on soil mechanics topics and advanced testing techniques. (Lecture-problems 2 hours, Lab 3 hours) Traditional grading only.

550. Behavior and Design of Concrete Structures (3) F

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 ad-

vanced design of concrete structures. (Lectureproblems 3 hours.) Traditional grading only.

551. Prestressed Concrete (3) S

Prerequisite: C E 459. Principles of prestressed concrete, materials used, applications to structural design, review of existing specifications. (Lec-problems 3 hrs.) Traditional grading only.

552. Theory of Plates and Shells (3) F

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) S

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) F,S

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) S

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) F.S.

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) S

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) F

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) F,S

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) F

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) S

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) F

Prerequisite: C E 364, 464 or consent of instructor. Design of physical and chemical processes for water and wastewater treatment, with emphasis on water treatment plants. (Lectureproblems 3 hrs.) Traditional grading only.

563. Water and Wastewater Treatment Design II (3) S

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) F

Prerequisites: CE 364 or consent of instructor. Health and safety aspects of environmental quality and related engineering systems. Regulatory aspects. Projects and case studies. (Lec-problems 3 hours) Traditional grading only.

565. Environmental Waste Engineering (3) S

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) F,S

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) F

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) F,S

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) F,S

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-problems: 2 hours, laboratory; 3 hours). Traditional grading only.

571. Construction Planning and Cost Control (3) F,S

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) F,S

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) F,S

Prerequisite: Graduate standing or consent of instructor. Application of law of contracts to construction contracts. Legal matters of concern to engineers. (Lec-prob: 3 hrs) Traditional grading only.

574. Methods, Analysis & Design of Construction Operations (3) F,S

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) F,S

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 hrs, laboratory 3 hrs.) Traditional grading only.

576. Construction Organization and Management (3) F,S

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) F,S

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) F.S

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. (Lec-prob 3 hrs) Traditional grading only.

582. Management of Productivity and Quality (3) F,S

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) F,S

Prerequisite: Consent of instructor. OSHAct 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 hrs.) Traditional grading only.

602. Seminar in Civil Engineering (3) F,S

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) F,S

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.

630./730. Mathematical Modeling in Hydraulic Engineering (3) F

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) F.S

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) F,S

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) F,S

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) F,S

Prerequisite: Admission to candidacy for degree of master of science in civil engineering. Corequisite: C E 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) F,S

Prerequisite: Admission to candidacy for degree of Civil Engineer. Corequisite: C E 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.

730./630. Mathematical Modeling in Hydraulic Engineering (3) F

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 730. 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) F.S

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)

Presequiation C 2 864, 464 and residence of the

Computer Engineering and Computer Science

College of Engineering

Department Chair:
Michael K. Mahoney
Department Office: ECS 552
Telephone: (310) 985-4285
Faculty: Professors: Sandra Cynar,
Edward Evans, Sheila Foster, Arthur
Gittleman, Shui Lam, John Lane,
Dar-Biau Liu, Michael K. Mahoney,
Thinh Nguyen, Morton Schwartz,
Dennis Volper; Associate
Professors: Joel Carissimo, Paul
D'Carpio-Montalvo, Wayne Dick,
Carl Maltz, Tracy Bradley Maples.
Undergraduate Advisor:
Joel Carissimo

Graduate Advisors: Dar-Biau Liu; Wayne Dick Systems Analysts: Alan Belanger, Matthew Black Department Secretary: Janet Leimer

Students desiring detailed information should contact the department for referral to one of the faculty advisors.

referral to one of the faculty advisors. Advisory and Development Council

The Department of Computer Engineering and Computer Science is supported by an Advisory and Development Council which consists of computer scientists, engineers and executives from industry and government in Southern California. Its function is to form a liaison between the University and professionals working in the computer field 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.

Accreditation

The Bachelor of Science, Option in Computer Engineering, is accredited by the Accreditation Board for Engineering and Technology (ABET). Students enrolling in this program are strongly advised to contact an undergraduate advisor as early as possible to get information about the ABET requirements in the math/sciences, humanities and social sciences areas.

Bachelor of Science in Computer Science

The College of Engineering offers a Bachelor of Science in Computer Science. Students desiring this degree must select either the Computer Engineering Option (3-4010) or the Computer Science Option (3-4011). The goal of both options is to prepare graduates for a wide variety of computer-related careers by providing a balance between the theoretical and practical aspects of computer science, and between hardware and software. The Computer Engineering Option differs from the Computer Science Option in that it concentrates more on hardware. 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 engineering majors must receive a grade of C or better in any course which is a prerequisite for a course required in an engineering program. No required engineering courses may be taken credit/no credit. Both options of the Bachelor of Science in Computer Science degree require a total of at least 135 units.

Option in Computer Engineering (code 3-4010)

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 for the Option in Computer Engineering

Lower Division: CECS 174, 201, 228, 274; CHEM 111A; EE 212; MATH 122, 123, 224, PHYS 151, 152.

Upper Division: CECS 301, 321, 326, 346, 347, 371, 440, 443 or 444, 446, 494; MATH 370A; EE 310, 331 (or 330), 380; plus three courses from the following Computer Engineering list of approved electives: CECS 325, 328, 405, 406, 419, 420, 421, 422, 424, 426, 428, 448, 449, 450, 472, 475, 490, ENGR 350. A total of at least 135 units is required.

Option in Computer Science (code 3-4011)

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 for the Option in Computer Science

Lower Division: CECS 174, 201, 228, 271, 274; MATH 122, 123, 224, 247; PHYS 151, 152; two approved courses in science and/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; plus four courses from the following Computer Science list of approved electives: CECS 405, 406, 419, 420, 421, 426, 428, 448, 449, 450, 472, 475, 490. A total of at least 135 units is required.

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, 274, 326, 346, 347, 371, 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:

- a. have completed all undergraduate deficiencies with grades of C or better:
- b. have attained an overall grade point average (GPA) of 3.0;
- c. have completed at least 12 units applicable to the degree with a GPA of at least 3.0;

- d. have passed the University Writing Proficiency Examination;
- e. 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 upperdivision course units including the fol-

- a. at least 18 units of CECS cour-
- b. at least 18 units at the graduate level of instruction;
- c. CECS 530, 531, 546 and 572. All students must complete either:
- a. a written 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 fol-

- a. at least 18 units of CECS cour-
- b. at least 18 units at the graduate level of instruction;
- c. CECS 526, 528, 529 and 543. All students must complete either:
- a. a written 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

172. Introduction to Programming Using Pascal (3) F.S

An introduction to programming using the Pascal language. Data types, assignment statements, decision structures, loops, procedures and functions, structured programming. Not open for credit to CECS majors (Lecture 2 hours, laboratory 3 hours.)

174. Programming and Problem Solving I (4) F,S

Prerequisite: MATH 117 (or its equivalent). Introduction to the basic concepts of computer science and the fundamental techniques for solving problems with computer programs. Structured problem solving, systematic programming methodologies, programming style. Introduction to a block-structured, high-level programming language (Ada). Applications to numerical and non-numerical problems. (Lecture 3 hours, laboratory 3 hours.)

201. Digital Logic Design (3) F,S

Prerequisite: MATH 117 (or equivalent). Basic topics in combinational and sequential switching circuits with applications to the design of digital devices. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

228. Discrete Structures with Computer Science Applications I (3) F,S

Prerequisites: CECS 174 and MATH 122. The specification, development and analysis of algorithms. Sets, relations and functions. Logic and mathematical structures used in computer 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.)

270. Introduction to FORTRAN Programming (3) F,S

Prerequisite: A grade of "C" or better in MATH 122. Application of FORTRAN 77 to solve numerical and non-numerical problems. Not open to students with credit in MATH 174. (Lecture 2 hours, laboratory 3 hours.) (CAN C SCI 4)

271. Introduction to Numerical Methods (3) F,S

Prerequisites: CECS 174 and MATH 123. An introduction to numerical methods and the FORTRAN 77 programming language. Topics include round-off errors in digital computation, iterative method for finding roots and fixed-points, rates of convergence, solution of systems of equations, methods for differentiation and integration, difference equations and structured FORTRAN 77 programming. (Lecture 2 hours, laboratory/ problem session 3 hours.)

273. COBOL Programming (3) F,S

Prerequisite: A previous course in computing. such as CECS 174 or MIS 240. Fundamentals of the computer programming language COBOL. Data division, input and output file handling for tapes and disks. Computer assignments using COBOL. (Lecture 3 hours.)

274. Programming and Problem Solving II (4) F,S

Prerequisite: CECS 174. Disciplined methods of design, coding and testing. Data abstraction, object-oriented design. Introduction to data structures (linked lists, stacks, queues and trees.) Recursion. Sorting and searching. (Lecture 3 hours, laboratory 3 hours.)

275. Programming in C (3) F,S

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. (Lectureproblems 2 hours, laboratory 3 hours.)

Upper Division

300. Problem Solving Using Spread Sheets and Databases (3)

Prerequisites: One computer programming course and either PHIL 170 or PHIL 270. General purpose problem solving applied to data storage and retrieval. Topics include problem solving style and structure, a survey of storage and retrieval problems, logic and data queries, data structures and types - spread sheet and relational database, applications of spread sheets and databases. (Lecture 2 hrs, laboratory 3 hrs.)

301. Digital Logic Design II (3) F,S Prerequisite: CECS 201. Sequential logic, programmable logic design, hardware design languages. VLSI implementations. Laboratory in Computer Aided Design (CAD) techniques. (Lecture 2 hours, laboratory 3 hours.)

321. Introduction to File Processing (4) F,S

Prerequisites: CECS 228 and either CECS 274 or CECS 342. Introduction to file processing, file organization and data management systems. Computer projects in the design and implementation of such systems. (Lec 3 hrs, lab 3 hrs.)

325. Computer Organization and Assembly Language Programming (4) F.S

Prerequisites: CECS 201 and 274. 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 3 hrs, lab 3 hrs)

326. Operating Systems (4) F,S

Prerequisite: CECS 325 or CECS 346. The structure and functions of operating systems with an introduction to the C programming language. Topics include interrupt handling, processes and interprocess communication, memory management, resource scheduling, information sharing and protection, file systems. Project implementation in C. (Lecture 3 hours, laboratory 3 hours.)

328. Discrete Structures with Computer Science Applications II (3) F,S

Prerequisites: CECS 228 and CECS 274. A broad view of data structures and the structurepreserving operations on them. Abstract data types, algorithms, complexity. Programming projects to exemplify these concepts. (Lec 2 hrs, lab/problem session 3 hrs)

342. Computer Methods II (3) F,S 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) F,S

Prerequisites: CECS 174 and 201. Study of available microprocessors and microcomputer elements for applications of these devices to practical problems. Design of microprocessorbased systems including hardware and software. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

347. Microprocessor Hardware Design (3) F,S

Prerequisites: CECS 301 and 346 and either EE 330 or 331. Hardware design and construction of a microprocessor system. Memory system design including dynamic RAM and CACHE memories. CAD applications. A materials fee may be charged. (Lecture 2 hrs, lab 3 hrs.)

371. Numerical Methods (3) F,S

Prerequisites: CECS 174 or CECS 242; MATH 364A or MATH 370A. An introduction to numerical methods emphasizing numerical calculus and an introduction to FORTRAN 77. Topics include numerical methods for approximating definite integrals, approximating the derivative of a function at a point, and solving differential equations. FORTRAN programming projects using these methods will be assigned. Not open to students with credit in CECS 342. (Lecture 2 hrs, lab 3 hrs)

*405. Special Topics in Computer Science (3) F,S

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) F,S,SS

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) F

Prerequisite: CECS 328. Finite automata and regular expressions. Pushdown automata and context-free languages. Turing machines and computability. Computational complexity. (Lecture-problems 3 hours.)

*420. Artificial Intelligence (3) F,S

Prerequisites: CECS 228 and CECS 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. (Lecture 2 hours, laboratory 3 hours.)

*421. Database Management (3)

Prerequisites: CECS 228 and 321. Introduction to database concepts, data models, data definition/manipulation languages and relational database design. (Lecture 2 hrs, lab 3 hrs.)

*422, CAD and Semicustom IC Design (3) F,S

Prerequisites: CECS 301 and 346. 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 available CAD software tools. A materials fee may be charged. (Lecture-problems 2 hrs, lab 3 hrs)

*424. Organization of Programming Languages (4) F,S

Prerequisites: CECS 321 and either CECS 325 or CECS 346. Comparison of programming languages (Pascal, Ada, PL/1, FORTRAN, etc.) in their design and structure regarding features such as data types, control structures, run-time considerations, etc. Computer projects illustrating some of these concepts. (Lec 3 hrs, lab 3 hrs)

*426. Topics in Operating Systems (3) S

Prerequisite: CECS 326. Advanced operating system analysis and design. Topics of current interest. Project implementation. (Lecture 2 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, divideand-conquer technique and weighted-edge problem. (Lecture 2 hrs, lab/problem session 3 hrs.)

440. Computer Architecture (3) F,S

Prerequisites: CECS 201 and either CECS 325 or CECS 346. Review of logic design. Register transfer and micro-operations. Basic computer organization. Central processor organization. Microprogram control organization. Arithmetic processor design. Arithmetic algorithms. Inputoutput organization. Memory organization. (Lecture 2 hours, laboratory/projects 3 hours.)

441. Computer Applications in Electrical Engineering (3) F

(Same course as E E 441.) Prerequisite: CECS 342. Advanced numerical methods applied to engineering problems not readily solvable by analytical methods. Ordinary differential equations, partial differential equations, eigenvalues, simulation. (Lecture-problems 3 hours.)

*443. Software Engineering (3) F,S

Prerequisite: CECS 326. Software life cycle. Functional decomposition, data flow and objectoriented development. Reusability and portability. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

*444. Compiler Construction (4) F,S

Prerequisites: CECS 228 and either CECS 325 or 346. Syntax directed compiler study. Organization of a compiler and overall design: parsing, semantic analysis, optimization and code generation. (Lecture 3 hours, laboratory 3 hours.)

*446. Microprocessor Systems Design (3) F,S

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) S
Prerequisite: CECS 274. Evaluation, design and
programming of user interface systems. Humancomputer interaction. Components of interactive
systems. Tools for building user interfaces. (Lec-

ture 2 hours, laboratory 3 hours.)

*449. Computer Graphics (3) F,S

Prerequisites: MATH 247 and either CECS 274 or
CECS 346. Basic software and hardware of computer graphics. Applications. (Lecture 2 hours,

*450. Applied Artificial Intelligence (3) F

laboratory 3 hours.)

Prerequisite: CECS 420. Applications of artificial intelligence in expert systems, vision and natural language. Introduction to neural networks. Topics of current interest. Project implementation. (Lecture 2 hrs, lab 3 hrs.)

*472. Computer Networking (3) F,S
Prerequisite: CECS 326. Concepts of computer
networking, including network design, management, and programming. The course covers both
generalized network issues and specific issues
related to the CSULB network. (Lecture 2 hours,
laboratory 3 hours.) Traditional grading only.

*475. Object-Oriented Programming and C++ (3) F,S

Prerequisite: CECS 275 or CECS 326. 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 hrs, laboratory 3 hrs.)

*490. Special Problems (1-3) F,S

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.

*494. Computer Engineering Seminar (3) F,S

Prerequisite: Senior standing. Intensive study of selected conceptual and theoretical problems in computer engineering. Student design project and oral presentation required. (Lecture-problems 3 hours.) Traditional grading only.

Graduate Courses

521./621. Advanced Database Management (3) F

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. Theory of Programming Languages (3) S

Prerequisite: CECS 424. (Master's students register in CECS 524 or 624; Ph.D. students register in CECS 624.) Topics in the theory and formal description of programming languages including functional programming, interpreters, Lambda calculus, denotational semantics and recursion. Additional projects required for CECS

624. (Lecture-problems 3 hours.) Traditional grading only.

526. Advanced Operating Systems (3) F,S

Prerequisites: CECS 228 and CECS 326. Theoretical foundations of concepts applied in the design of operating systems. Topics include control of concurrent processes, deadlocks, mutual exclusion, virtual memory, resource management and scheduling. (Lecture-problems 3 hours.) Traditional grading only.

528. Advanced Analysis of Algorithms (3) S

Prerequisite: CECS 428. Theoretical analysis of algorithms. Topics include: divide and conquer, dynamic programming and greedy algorithms; basic search and traversal techniques including search trees; sorting; matrix manipulations; NP-completeness. (Lecture-problems 3 hours.) Traditional grading only.

529. Advanced Compiler Design (3) F,S

Prerequisite: CECS 444. Real-world and theoretical problems encountered by the compiler writer. Topics include error handling, table management, the symbol table, run-time problems, code optimization, code generation and register allocation. (Lecture-problems 3 hrs.) Traditional grading only.

530. Advanced Computer Architecture I (3) F,S

Prerequisite: CECS 440. 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. (Lecture-problems 3 hrs) Traditional grading only.

531. Advanced Computer Architecture II (3) S

Prerequisite: CECS 530. 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. (Lecture-problems 3 hours.)

543. Advanced Software Engineering (3) F,S

Prerequisite: CECS 443. Study of software engineering as a broad, problem-solving discipline. Includes structured programming and software project management (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

546. Fault Tolerant Computing Systems (3) F

Prerequisite: CECS 530. 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. (Lecproblems 3 hrs) Traditional grading only.

549./649. Advanced Computer Graphics (3) F

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) S

Prerequisite: CECS 420 or 450. (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) F

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) F

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.

CECS 570./670. Concurrent Programming with Ada (3) S

Prerequisite: CECS 443. (Master's students register in CECS 570 or 670; Ph.D. students register in CECS 670.) Study of parallel and multi-tasking computer processes for advanced applications using the Ada programming language. Topics include rendezvous, timing and scheduling, select statements, task types and activation, termination and exceptions, and resource handling. Additional projects required for CECS 670. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

572. Distributed Computing Systems and Networking (3) F,S

Prerequisite: CECS 472. Advanced concepts in distributed computing systems and computer networking. Topics will include: distributed architectures, computer network standards and design, and computer network performance issues. (Lecture-problems-computer projects 3 hours.) Traditional grading only.

575. Object-Oriented Analysis and Design (3) F,S

Prerequisites: CECS 475 and either CECS 443 or 543. 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. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

590./690. Special Topics in Computer Science (3) F,S

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) F

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. Theory of Programming Languages (3) S

Prerequisite: CECS 424. (Master's students register in CECS 524 or 624; Ph.D. students register in CECS 624.) Topics in the theory and formal description of programming languages including functional programming, interpreters, Lambda calculus, denotational semantics and recursion. Additional projects required for CECS 624. (Lecture-problems 3 hours.) Traditional grading only.

644./744. Software Verification and Validation (3) S

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.

649./549. Advanced Computer Graphics (3) F

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, Jaboratory 3 hours.) Traditional grading only.

650./750. Pattern Recognition using Artificial Intelligence (3) F

Prerequisite: CECS 450. (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) S

Prerequisite: CECS 420 or 450. (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) F

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) F

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 Programming with Ada (3) S

Prerequisite: CECS 443. (Master's students register in CECS 570 or 670; Ph.D. students register in CECS 670.) Study of parallel and multi-tasking computer processes for advanced applications using the Ada programming language. Topics include rendezvous, timing and scheduling, select statements, task types and activation, termination and exceptions, and resource handling. Additional projects required for CECS 670. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

672./772. Topics in Distributed Computer Systems (3) F,S

Prerequisite: CECS 572. (Master's students register in CECS 672; Ph.D. students register in CECS 772.) Topics include 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.

690./590. Special Topics in Computer Science (3) F,S

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) F

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) F,S,SS

Prerequisite: Classified Graduate standing. Theoretical and experimental problems in computer science and engineering requiring intensive analysis. (Independent Study.) Traditional grading only.

698. Thesis (2) F,S,SS

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) S

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) F

Prerequisite: CECS 450. (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.

772./672. Topics in Distributed Computer Systems (3) F,S

Prerequisite: CECS 572. (Master's students register in CECS 672; Ph.D. students register in CECS 772.) Topics include 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.

Electrical Engineering

College of Engineering

Department Chair: Radhe Das Department Office: ECS Building, Room 512

Telephone: (310) 985-5102/5103 Faculty: Professors: James Ary, Michael Singh Chelian, Radhe Das, Christopher Druzgalski, Edward Evans, Fumio Hamano, Michael Hassul, Kenneth James, Thimias Jordanides, Rajendra Kumar, Slawomir Lobodzinski, Hassan Nour, Nick Panagiotacopulos, Harnatha Reddy, Alfonso Rueda, Bahram Shahian, Michael Singh, Raymond Stefani, Robert Teng, Chit-Sang Tsang, Stanley Wolf, Henry Yeh, Mahmoud Wagdy; Assistant Professor: Tom Johnson.

Emeritus Faculty: Guy Cain, L.
Boyd Kendall, Rodney Lewis, Dan
McCarthy, Frank Paal, Harold
Washburn, Robert Winchell.
Undergraduate Advisor:
James Ary
Graduate Advisor:
Michael Singh Chelian
Biomedical Engineering
Advisors: James P. Ary,
Christopher Druzgalski

The Department

Department Secretary:

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

Barbara V. L. Marshall

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). 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)

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 for the Bachelor of Science in Electrical Engineering

Core: CHEM 111A, CECS 242; EE 200, 201, 212, 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, 347L, 350, 370, 370L, 382, 400, 430, 430L, 460; MATH 370B; ME 330 or CE 370; plus an approved 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

Communications Sequence: either EE 380 or 401, EE 482, 485, 488; plus approved communication electives* to at least 137 units.

Controls Elective Sequence: EE 411, 470, 471; plus approved controls electives* to at least 137 units.

Digital and Computer Elective Sequence: EE 301, 301L, 332, 446, 447; plus approved digital electives* to at least 137 units.

Digital Signal Processing Elective Sequence: either EE 380 or 401, EE 482, 485, 485L, 486, 489; plus approved digital signal processing electives* to at least 137 units.

Power Elective Sequence: EE 350L, 452, 453, 458; plus approved power electives* to at least 137 units.

* See undergraduate advisor for list of approved electives.

Bachelor of Science in Engineering Option in Biomedical and Clinical Engineering (code 3-4336)

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 of the Bachelor of Science in Engineering Option in Biomedical and Clinical Engineering

CHEM 111A; CECS 242; EE 200, 201, 212, 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, 347L, 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.

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 *Bulletin*.

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

- 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

- Removal of all undergraduate deficiencies as determined by the graduate advisor. The GPA must be at least 3.0 for all such courses attempted.
- 2. Demonstration of competence in electrical engineering by passing the departmental qualifying exam.
- 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.
- Passing the Writing Proficiency Exam.
- 5. Completion of at least 12 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.

Requirements for Master of Science in Electrical Engineering (code 6-4330)

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 (18 units); EE 697 (3 units); EE 698 (6 units); EE 400/500/600 (3 units); Comprehensive Oral Exam on Thesis.

Non-Thesis Alternative: EE 500/600 including the above core requirement (27 units); EE 400/500/600 (3 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, 346, 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) F,S

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) F,S

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.) Traditional grading only.

211. Fundamentals of Electric Circuits (3) F,S

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 opamps, Ideal transformers. Phasors, balanced 3-phase systems and power. (Lecture-problems 3 hours.) Traditional grading only.

212. Electric Circuits I (4) F,S

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 opamps, Ideal transformers. Phasors, balanced 3-phase systems and power. Use of computers in circuit analysis. (Lecture-problems 3 hours, 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) F,S

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)

301L. Sequential Circuit Design Laboratory (1) F,S

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)

310. Electric Circuits II (3) F,S

Prerequisites: EE 211 or EE 212, MATH 370A.
Continuation of circuit analysis including
Fourier series, Fourier and Laplace transform
techniques, two port networks. (Lectureproblems 3 hours).

320. Solid State Electronic Devices (3) F,S

Prerequisites: CHEM 111A, MATH 370A, PHYS 154 (or 153). 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) F,S

Prerequisites: EE 211 or 212. Analysis and design of diode, transistor, and operational amplifier circuits. (Lecture - problems 3 hours)

330L. Engineering Electronics L Laboratory (1) F,S

Prerequisite: EE 330. Transistor and operational amplifier circuit design laboratory. (Lab 3 hrs)

331. Electronic Circuit Design (3) F,S

Prerequisites: EE 211 or EE 212 (Not open to EE majors). Analysis and design of diode circuits, transistor amplifier and operational amplifier circuits. (Lecture-problems 3 hours.)

332. Digital Electronic Circuits (3) F,S

Prerequisites: EE 201, 212. 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). Semiconductor memories. Basic IC design-Gate Array, Standard Cell, PLA. (Lecture-problems 3 hrs)

346. Microprocessor Principles and Applications (3) F,S

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.

347L. Microprocessor Laboratory (2) F,S

Prerequisite: EE 346. Design and construction of a microprocessor based system. A material fee may be charged. (Lecture-problems 1 hour, laboratory 3 hours.)

350. Energy Conversion Principles (3) F,S

Prerequisites: EE 211 or EE 212. 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)

350L. Energy Conversion Laboratory (1) F,S

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) F,S

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.)

370L. Control Systems Laboratory (1) F,S

Prerequisite: EE 370. Study of analog and digital simulation and servomotor control systems. (Laboratory 3 hours.)

380. Engineering Probability and Statistics (3) F,S

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. (Lecproblems, computer projects 3 hrs)

382. Communication Systems I (3) F,S

Prerequisite: EE 310. Review of Fourier series and transforms. Introduction to passive, active and digital filters. Basic elements of probability theory, 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.)

400. Senior Design Seminar (1) F.S

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. Special Topics (3) F,S

Prerequisite: MATH 370 A. Corequisite: EE 310. Analytic techniques relevant to electrical engineering. (Lecture-problems 3 hours.)

404. Physiological Control Systems (3) S

Prerequisite: EE 370L Corequisite: EE 411. 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) F,S

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)

*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)

*406L. Biomedical Engineering Laboratory (1) F

Prerequisite or corequisite: EE 406. Laboratory study of medical-instrumentation, transducers and computer data processing. A materials fee may be charged. (Laboratory 3 hours.)

*407. Applications of Computers in Medicine (3) S

Prerequisites: EE 346 or consent of instructor. Principles of analysis and design for computers and data collection equipment for real-time online medical systems. A materials fee may be charged. (Lecture-problems, computer projects 3 hours)

408. Health Care Delivery Systems Engineering (3) S

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), electroetrinogram (ECG), electroculogram (EOG), and electromyogram (EMG). (Lecture-problems 3 hours.) Traditional grading only.

*410. Analog Filter Design (3) F,S

Prerequisites: EE 310. Theory and design of active filters using operational amplifiers. Emphasis is placed on low-pass filters. (Lecture-problems 3 hours)

*411. Linear Systems Analysis (3) F,S

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.)

412. Advanced Circuit Theory and Filter Design (3) F,S

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) F

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)

*420L. Microelectronics Laboratory (1) F

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)

*430. Analog Electronic Circuits II (3) F,S

Prerequisites: EE 330, 330L, 370. Analysis and design of multi-transistor amplifiers, subcircuits, and integrated operational amplifiers. Linear applications. Frequency response. Computer-aided circuit analysis and design. Feedback amplifiers and stability. (Lecture - problems 3 hours.)

*430L. Engineering Electronics II Laboratory (1) F,S

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)

*432. Design of Analog Circuits and Systems (3) F,S

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) F,S

Prerequisite: EE 301 or 346. Basic digital system and computer organization and architec-

ture including studies of the arithmetic logic unit, the control unit, input/ output processes and memory organization. (Lecture - problems 3 hours.)

*441. Applications of Numerical Methods in Electrical Engineering (3) F

Prerequisite: CECS 342 or consent of the instructor. Advanced numerical methods applied to engineering problems not readily solvable by analytical methods. (Lecture - problems 3 hours.)

*446. Advanced Microprocessors and Embedded Controllers (3)F,S

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) F,S

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) F

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) F,S

Prerequisites: EE 310, 350. Elements of power systems, transmission line parameters and performance. Load flow. Symmetrical components, symmetrical and unsymmetrical faultine Power system control, stability and protection. Economic dispatch. HVDC transmission. (Lecture - problems 3 hours.)

*453. Industrial Power Systems (3) S

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)

*455. Space Electric Power Systems (3) S

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)

*458. Design of Power System Components (3) F,S

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) F,S

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).

463./563. Microwave Engineering (3) S

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) S

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 semi-conductors, 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) F,S

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)

*471. Design of Control Systems (3) F,S

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.

*481. Fiber Optic Communication (3) F,S

Prerequisites: EE 382, 460. Fiber optic communications from systems viewpoint, communication system components including optical fiber, light sources, light detectors, analog and digital fiber optic systems. (Lecture - problems 3 hours)

*482. Communication Systems II (3) F

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)

*483. Digital Image Processing (3) F,S

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)

*484. Satellite Communication (3) F,S

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.)

*485. Digital Signal Processing I (3) F,S

Prerequisites: E E 310. Study of continuoustime signals and systems, and the corresponding discrete-time analysis. Z-transform analysis. Sampling theorem, analog-digital and digital-analog conversion approximation. Analysis and design of digital filters. (Lectureproblems 3 hours)

485L. Computer Aided Digital Signal Processing Systems (1) F,S

Prerequisite: EE 485. 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.

*486. Digital Signal Processing II (3) S

Prerequisites: E E 485. 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)

*487. Data Compression Techniques and Applications (3) F,S

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.)

*488. Communication Systems Design (3) F

Prerequisites: EE 400, 430, 430L, 482. Application of communication theory to the design of communication systems/subsystems and their implementation with digital and analog integrated circuits. (Lecture-problems 2 hours, laboratory 3 hours.) Traditional grading only.

*489. Digital Signal Processing System Design (3) S

Prerequisites: EE 347L, 400, 485. 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) F,S

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.

Graduate Division

501. Linear Multivariable Systems (3) F,S

Prerequisite: EE 411. Linear spaces and operators. Linear system and realizations. Stability analysis. Controllability and observability. Composite systems. (Lecture - problems 3 hours.)

505. Advanced Engineering Mathematics II (3) F,S

Prerequisites: EE 401 or 411 or Math 370B or consent of instructor. Advanced analytical concepts of general interest to graduate-level electrical engineering. Optimization. Advanced linear algebra, matrix theory, numerical techniques. Computer applications. (Lecture-problems 3 hours).

506. Theory and Practice of Biomedical Instrumentation (3)

Prerequisites: Graduate standing in engineering or natural sciences, EE 406 or consent of instructor. Advanced design concepts and practical utilization of biomedical instrumentation. Transduction of physiological parameters. Theory and practice. (Lecture-problems 3 hours).

507. Advanced Biomedical Systems (3) F,S

Prerequisites: Graduate standing in engineering or natural science, EE 406 or consent of instructor. Novel trends in biotechnology, design and organization of modern hospital systems and utilization of advanced technologies. Modeling and simulation of physiological and medical systems. (Lecture - problems 3 hours).

508. Probability Theory and Random Processes (3) F,S

Prerequisites: EE 380, EE 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)

509. Network Theory (3) F,S

Prerequisite: EE 410, 430, or 485. 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) F

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).

511. Active Filters (3) S

Prerequisite: EE 410 or EE 510. Classification of continuous-time and sampled-data systems, approximation theory, multiple-loop feedback topologies, low-sensitivity high-order filters, switched-capacitor filters. (Lecture-problems 3 hours).

513. Digital Filter Design and Implementation (3) S

Prerequisites: EE 410 and 485. General concepts, frequency and time-domain analysis using FFT, ideal filter response, digital and frequency transformations. FFT, FIR, IIR and digital filter design and implementation techniques. (Lecture-problems 3 hours).

514. Advanced Circuit Synthesis and Design (3) S

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.

520. VLSI Design (3) S

Prerequisite: EE 430. Techniques for designing Very Large Scale Integrated (VLSI) circuits using n-channel metal oxide semiconductors (n-MOS). (Lecture-problems 3 hours).

528. Speech Signal Processing (3) S

Prerequisites: EE 485. Principles of engineering applications of speech signal processing. Speech synthesis, recognition, encoding, and compression. Applications of neural networks. (Lecture - problems 3 hours)

531. CMOS Electronics (3) S

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, opamps and systems. (Lecture-problems 3 hours.) Traditional grading only.

532. Switched Capacitor Integrated Circuits (3) F

Prerequisite: EE 430 or consent of instructor. CMOS building blocks, switched capacitor analog signal processing elements such as amplifiers, integrators, S/H circuits, filters, oscillators, comparators, D/A and A/D converters, and wave shaping circuits. Advanced techniques for corrections of nonideal behavior. Analysis and simulation projects. (Lecture-problems 3 hours.) Traditional grading only.

533./633. Quantum and Optical Electronics (3) F

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 & 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 & Computer Architecture (3) F,S

Prerequisite: EE 440 or 446. High level computer architectures including studies of super-computers, array processors, parallel processing, direct execution computers. (Lec - prob 3 hr.)

541. Computer Arithmetic Unit Design (3) F

Prerequisites: EE 446 or EE 540. Hardware implementation of computer arithmetic. Accelerated algorithms used by dedicated computers and by supercomuters. Complexity vs speed trade off. (Lecture - problems 3 hrs.)

542. Dedicated Processor Design (3) S

Prerequisite: EE 446 or 540. Design of distributed computing systems. Design of fault tolerant computing systems. Introduction to systolic arrays. Case studies. (Lec - prob 3 hrs)

545. Computer Networks (3) F,S

Prerequisites: EE 482 and EE 540. 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).

550. Power Electronics and Applications (3) F

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 & Applications of DC/DC Converters (3) S

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) S

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).

553. High Voltage Power Systems (3) F

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).

560./660. Applied Electromagnetics (3) F

Prerequisite: EE 460 or consent of instructor. (Master's 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) F

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) S

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) S

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) S

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.

569./669. Remote Sensing (3) F

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) F

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.)

571. Estimation Theory (3) S

Prerequisites: EE 501, 508. Stochastic dynamic systems. Theory of parameter and state estimation, least squares and maximum likelihood, optimal filtering and prediction, Kalman filtering, smoothing, and non-linear estimation. (Lecture - problems 3 hours)

572./672. Linear Quadratic Control (3) F

Prerequisites: EE 471, 501. Corequisite: EE 571. (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.

573./673. Robust Multivariable Control (3) S

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./674. Robot Dynamics and Control (3) S

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.

580. Statistical Communication Theory (3) F

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.)

581. Satellite Communication Systems (3) S

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) F

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. Advanced Digital Signal Processing (3) F,S

Prerequisites: EE 401 and 483 or consent of instructor. (Master's students register in EE 583; Ph.D. students register in EE 683.) Image restoration, encoding, segmentation, representation and description. Image reconstruction from projections. Additional projects required for EE 683. (Lecture-problems 3 hours.) Traditional grading only.

584./684. Information Theory and Coding (3) F

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) F

Prerequisites: EE/CESE 346 and EE 485. Digital signal processors architecture and language. Real-time DSP considerations and limitations. Digital filter and signal processing system implementations. (Lecture-problems 3 hrs)

587. Radar Systems (3) F

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.)

588. Advanced Digital Communication Systems (3) S

Prerequisites: E E 580. Baseband and passband modulation/demodulation, sequence demodulation, block and convolution codes for data transmission, trellis codes for digital modulation, data translation and compression codes, synchronization, adaptive equalization. (Lecture - problems 3 hours)

589./689. Neural Networks and Applications (3) F

Prerequisite: EE 485 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. Modeling of human neural network systems. Mechanisms of supervised and unsupervised 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) F,S

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).

605./705. Advanced Mathematics Seminar for Electrical Engineering (3) F

Prerequisite: EE 505 or consent of instructor. (Master's students register in EE 605; Ph.D. students register in EE 705.) Advanced topics in linear, non-linear, ordinary and partial differential equations, integral transforms and conformal mapping. Applications to electrical engineering. Students must write and present an oral report on a topic chosen from an approved list. Recommended for students planning a Ph.D. or industrial research. Additional projects for EE 705. (Seminar 3 hours.) Traditional grading only.

610. Seminar in Circuit Theory and Design (3) F

Prerequisites: EE 509 and either EE 510, or 511 or 513. Intensive study of current professional literature and recent techniques related to circuit theory. (Seminar 3 hours)

614./514. Advanced Circuit Synthesis and Design (3) S

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) F

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.

630. Seminar in Electronics (3)

Prerequisites: EE 531 or 532 or consent of instructor. Intensive study of selected topics of current professional literature and recent techniques related to electronics. (Seminar 3 hours)

633./533. Quantum and Optical Electronics (3) F

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) S

Prerequisites: EE 540 and at least one from EE 541, 542, 543, and 545. Study of selected topics in computer systems in which recent significant advances have been made. (Seminar 3 hours)

650. Seminar in Power and Energy Systems (3) F,S

Prerequisite: At least one of EE 550, 551 or 552. Study of selected advanced topics in the areas of power and energy system analysis and design. (Seminar 3 hours).

651./551. Theory and Applications of DC/DC Converters (3) S

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) F

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.

669./569. Remote Sensing (3) F

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) S

Prerequisite: At least one of EE 570, 571, 572, or 573. Study of selected topics in the areas of synthesis and design of optimum control systems. (Seminar 3 hours.)

672./572. Linear Quadratic Control (3) F

Prerequisites: EE 471, 501. Corequisite: EE 571. (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) S

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) S

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) F,S

Prerequisite: EE 501 or consent of instructor. (Master's students register in EE 675; Ph.D. 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) S

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. Advanced Digital Signal Processing (3) F,S

Prerequisites: EE 401 and 483 or consent of instructor. (Master's students register in EE 583; Ph.D. students register in EE 683.) Image restoration, encoding, segmentation, representation and description. Image reconstruction from projections. Additional projects required for EE 683. (Lecture-problems 3 hours.) Traditional grading only.

684./584. Information Theory and Coding (3) F

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) F

Prerequisites: EE 380 and 485. (Master's students register in EE 685; Ph.D. students register in EE 785.) Advanced topics in digital signal processing including adaptive filters and spectral estimation. State space description of linear discrete time systems. Realization and applications. Additional projects for Ph.D. students. (Lecture-problems 3 hours.) Traditional grading only.

689./589. Neural Networks and Applications (3) F

Prerequisite: EE 485 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. Modeling of human neural network systems. Mechanisms of supervised and unsupervised systems. Applications in signal processing, communications, control and other areas. Additional projects required for EE 689. (Lecture-problems 3 hours.) Traditional grading

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) F,S

Prerequisites: Graduate Standing. Theoretical and experimental problems in electrical engineering requiring intensive analysis.

698. Project or Thesis (3-6) F,S

Prerequisite: Advancement to Candidacy. Planning, preparation and completion of a thesis in electrical engineering. May be repeated to a total of 6 units.

705./605. Advanced Mathematics Seminar for Electrical Engineering (3) F

Prerequisite: EE 505 or consent of instructor. (Master's students register in EE 605; Ph.D. students register in EE 705.) Advanced topics in linear, non-linear, ordinary and partial differential equations, integral transforms and conformal mapping. Applications to electrical engineering. Students must write and present an oral report on a topic chosen from an approved list. Recommended for students planning a Ph.D. or industrial research. Additional projects for EE 705. (Seminar 3 hours.) Traditional grading only.

715./615. Advanced Circuit Theory (3) F

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) F,S

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 inearization, 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) F

Prerequisites: EE 380 and 485. (Master's students register in EE 685; Ph.D. students register in EE 785.) Advanced topics in digital signal processing including adaptive filters and spectral estimation. State space description of linear discrete time systems. Realization and applications. Additional projects for Ph.D. students. (Lecture-problems 3 hours.) Traditional grading only.

791./691. Adaptive Systems (3) S

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.

Engineering Technology

College of Engineering

Department Chair: Tesfai Goitom Department Office: Industrial Technology Building, Room 101 Telephone: (310) 985-4271 Faculty: Professors: Anastassios G. Chassiakos, Tesfai Goitom, Emanuel Jarasunas, Ray R.T. Wang, Jay Webster, Donald E. Zimmerman: Associate Professors: Satish P. Singhal, William H. Welch; Assistant Professors: Nezih Gunal, Tom L. Robinson Undergraduate Advisors: Ray R. T. Wang (Computers), Nezih Gunal (Construction Management), Anastassios G. Chassiakos (Electronics), Emanuel Jarasunas (Manufacturing), Tom L. Robinson (Quality Assurance) Certificate Advisors: Jay Webster (Safety Operations), Tesfai Goitom (Facilities Operations) Emeritus Faculty: Robert C. Brice, Arthur W. Grossman, Glenn E. Hayes, Stephen S. Heineman, Henry J. Krauser, Paul L. Kleintjes, James L. Young. Department Secretary: Eleanor L. Caplan

The Department

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

Engineering Technology Advisory Council

The advisory council, composed of leaders actively engaged in areas of technology with which the program is concerned, continually provides information and guidance about industrial developments in methods, materials and techniques so that the program reflects the best of current practices. The members examine various aspects of the program 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.

Programs

The programs in the Engineering Technology (ET) Department are 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 ET programs have been designed to accommodate students who may wish to enter the University in a four-year program, or who may wish to transfer credits earned at 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.

Accreditation Information

The Construction Management program which is accredited by the American Council for Construction Education (ACCE).

Bachelor of Science Degree in Engineering Technology

Students desiring this degree must select one of the following four options available:

Construction Management (code 3-4376):

The primary purpose of the Construction Management program is to provide students the opportunity to obtain a quality education in construction which will qualify them for positions of leadership and responsibility in the construction industry.

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 construction program is a member of the Associated Schools of Construction, an organization dedicated to the development and advancement of construction education. The construction program is accredited by the American Council for Construction Education (ACCE).

Soll Soll Remove Sensing (3) F

catal un color rever color to an effect

Electronics (code 3-4377):

This program focuses on the application of scientific and engineering knowledge and methods with technical skills to the field of electronics. The electronics technologist is applications oriented, building upon a background of applied mathematics including the concepts and application of calculus.

Manufacturing (code 3-4378):

The Manufacturing major prepares individuals in the various skills necessary in adapting new scientific knowledge to new systems.

Research in the field of manufacturing has produced much new knowledge in recent years. Many of these achievements have been unused due to the shortage of manufacturing technologists specifically trained to convert this information into practical devices and systems. The Bachelor of Science with a major in Manufacturing is a technologist who can bridge the gap between scientific advancement and practical manufacturing devices and systems.

Quality Assurance (code 3-4379)

Commitments and challenges to increase the quality of American goods and services have become major focuses and are being given top priorities in business and industry. There is a growing need for people who have the necessary skills in both the technical and managerial aspects of Quality Assurance to effectively run modern businesses. The scope of Quality Assurance functions continues to expand, opening up new challenges for graduates in this field.

Quality Assurance graduates are prepared to serve in quality control, quality assurance, metrology, software quality assurance, configuration management, statistical process control, quality engineering and testing aspects of industry. This preparation includes both manufacturing and service companies.

Computer Technology (code 3-4380)

The primary objective of the Computer Technology Option program is to prepare graduates to pursue career related to manufacturing of computers, components, and systems and the application of computers in manufacturing industry. Emphasis is placed on specific job skills required of entry-level professionals in computer manufacturing 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/ABET criteria for accredited programs in engineering technology. The graduates of this program will typically find employment in industry and other organizations where a combination of practical hardware and software background is impor-

Engineering Technology Facilities

The multimillion dollar building for engineering and industrial 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 and computers.

Bachelor of Science in Engineering Technology

All Engineering Technology students must have received a minimum grade of "C" in each of the prerequisites for any engineering and industrial technology course. In addition to any other all-university requirements regarding grade point averages for graduation, an engineering and industrial technology student must achieve a minimum 2.0 GPA in all Engineering Technology courses

Students enrolled in the Engineering Technology B. S. program must complete a minimum of l35 units. These courses cover the broad disciplines and functions of Engineering Technology.

Requirements for the Bachelor of Science in Engineering Technology (code 3-4375):

Lower Division Technology Core Courses

The following courses comprise the Lower Division Technology Core, which is required in all baccalaureate degree options in the Department of Engineering Technology:

CHEM 111A, 117, MATH 120, PHYS 100A, 100B, ET 101, 121 (for Construction Management Option ONLY), 170 (for ALL other Options), 202, 204, 205, 205L.

Upper Division Technology Core Courses

Construction Management

ECON 300, ET 300, 309, 410.

Electronics, Manufacturing and Quality Assurance

ECON 300, ET 300, 301, 301L, 306, 307, 309, 311, 410, 418, 475.

Option in Construction Management (code 3-4376)

Lower Division: ET 221, 225, 225L, 232, 235, 235L, ACCT 201.

Upper Division: ET 304, 321, 322, 323, 323L, 325, 326, 327L, 328, 330, 421, 422, 423, 424, 426, 428, 431, 440

Select two units of approved electives in consultation with an advisor from the following: ET 374, 409A, 438, 497, FIN 342, CE 433.

Option in Electronics (code 3-4377):

Lower Division: ET 250, 250L, 252, 252L, 255, 255L, 260, 260L

All transferring students, who satisfy lower division courses, shall take ET 275 for 3 units.

Upper Division: ET 341, 341L, 350, 350L, 360, 360L, 442, 442L, 444, 445, 445L, 460, 460L.

Select four units of approved electives in consultation with an adviser from the following: ET 387, 387L,

390, 390L, 409B, 441, 488, 488L, 489, 489L, 492L, 497.

Computer Technology Option (code 3-4380)

Lower Division: (9 units) ET 250, 250/L, 252, 252L, 255, 255/L, 286 or CECS 172, ET286/L or

Upper Division: (45 units)

CECS 172,

General Technical Requirements (11 units)

ET 301, 301/L, 307, 320, 495;

Option Requirements (30 units) ET 386, 386/L, 387, 387/L, 388,

388/L, 442, 442/L, 486, 486/L, 488, 488/L, 489, 489/L, 491, 491/L, 492, 492/L, 494, 494/L.

Option Electives (4 units)

ET 306, 311, 390, 390/L, 409, CECS 325, CECS 448, CECS 449;

Total Units for Option Requirements: 57 units

General Education: (43 units)
Lower Division Technology Core

Course: (26 units)
ET 170, CHEM 111A, MATH 122,
PHYS 100A, PHYS 100B, ET 101,

202, 204, 205, 205/L; Upper Division Technology Core Courses: (9 units)

ET 300, 309, 410;

Option Requirements: 57 units
Total Units for Major: 135 units

Option in Manufacturing (code 3-4378)

Lower Division: ET 244, 244L, 264, 264L, 265, 265L

Upper Division: ET 302, 304, 312, 361, 361L, 362, 362L, 363, 365, 371, 371L, 390, 390L, 465, 466, 466L, 474, 474L, 495

Select five units of approved electives in consultation with an adviser from the following: ET 374, 409C, 413, 461, 472, 492, 492L, 497

Option in Quality Assurance (code 3-4379)

Lower Division: ET 220, 244, 244L, FIN 222

Upper Division: ET 302, 312, 313, 313L, 320, 361, 361L, 371, 371L, 390, 390L, 413, 416, 419, 420, 496

Select four units of approved electives in consultation with an adviser from the following: ET 314, 318, 374, 409D, 461, 472, 497

Fieldwork Requirements:

Fieldwork experience is required, 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 or plant supervisor, facilities 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.

Requirements for the Certificate in Facilities Operations:

- The Certificate in Facilities
 Operations may be earned concurrently with or subsequent to the baccalaureate degree.
- 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.
- 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, 321, 374, 410, 431, 432, 433, 434 and 436.
- 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 for the Certificate in Safety Operations:

- The Certificate of Safety
 Operations may be earned concurrently with or subsequent to the baccalaureate degree.
- 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.

Engineering Technology Courses (ET)

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

Lower Division

101. Introduction to Engineering and Industrial Technology (1) F.S

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.)

121. Construction Drawing I (2) F.S

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.)

170. Industrial Drafting (2) F,S

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.

201. Cost Accounting for Engineering Technology (3) F,S

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 hours.)

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, laboratory 2 hours.) Traditional grading only.

204. Applied Mechanics-Statics (3) F,S

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. (Lecture 2 hours, activity 2 hours.) Traditional grading only.

205. Computer Applications (1) F,S,SS

Survey of computer applications in business, manufacturing, research and simulation. (Lecture-Discussion 1 hour.)

205L. Computer Applications Lab (1) F,S,SS

Corequisite: ET 205. Laboratory exercises in Basic programming to solve problems in business, manufacturing, research and simulation. (Laboratory 3 hours.) Lab fee: \$15.

207. Ergonomics (3) F,S

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)

220. Fundamentals of Inspection (2) F

Theory and application of inspection procedures, variables and attribute inspection, inspection exercises. (Lec 1 hr, activity 2 hrs)

221. Construction Drawing II (3) F,S

Prerequisite: ET 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.)

225.Construction Surveying (1) F

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) F

Prerequisite: ET 221; corequisite: ET 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) F,S

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) F.S

Prerequisites: ET 204, ET 232, Chemistry 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) F,S

Prerequisites: CHEM 111A, ET 204, ET 232; corequisite: ET 235, Laboratory exercises in support of ET 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.

244. Machine Tools (1) F,S

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) F,S

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) F

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) F

Prerequisites: PHYS 100 A&B; corequisite ET 250. Laboratory exercises will be conducted and 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 & Instrumentation Technology (3) F

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) F,S

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 nonsinusoidal 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) F,S

Prerequisites: MATH 120, PHYS 100 A&B, ET 250, 250L, corequisite: ET 252. Laborabory 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) S

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) S

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) F

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) F

Prerequisites: ET 170, 205L. Design of tools for production. Typical tooling problems include working drawings and hardware. (Lecture-Discussion 1 hour.)

264L. Industrial Tooling Laboratory (1) F

Prerequisites: ET 170, 205L; corequisite: ET 264. Laboratory experiments in tool design in relation to mass part production. (Laboratory 3 hours.)

265. Welding Metallurgy (1) F

Theory and applications of current and emergent joining processes with consideration of welding ability of metals and thermal effects on properties. (Lecture-Discussion 1 hour.)

265L. Welding Metallurgy Laboratory (1) F

Corequisite: ET 265. Applications of current and emergent joining processes with considerations of weldability of metals and thermal effects on properties. Welding techniques in selected processes exercised in laboratory. (Laboratory 3 hours.) Lab fee: \$15.

275. Circuit and Electronic Devices (3) F,S

For those transfer students who satisfy the lower division Electronics courses. Review of AC and DC theory including Ohm's law, Kirchhoff's laws, mesh and nodal analysis, complex numbers and sinusoidal wave forms. Analysis and design of solid state circuits using diodes and bipolar transistors. Elementary digital functions and their implementation. (Lecture-Discussion 3 hours.)

286. PASCAL Programming (2) F

Prerequisites: ET 205, 205L. Basic concepts of file organization and retrieval of data from magnetic tape and disc storage media. Introduction to PASCAL structured programming language. Applications to technology. (Lecture-Discussion 2 hours.)

286L. PASCAL Programming Laboratory (1) F

Prerequisites: ET 205, 205L; corequisite: ET 286. Laboratory exercises on PASCAL programming. Emphasis will be on applications to technology. (Laboratory 3 hours.) Lab fee: \$15.

Upper Division

300. Industrial Communications (3) F,S,SS

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. Materials of Industry (2) F,S

Prerequisites: ET 204, CHEM 111A. Study of physical and mechanical properties and applications of industrial materials. (Lecture-Discussion 2 hours.)

301L. Materials of Industry Laboratory (1) F,S

Prerequisites: ET 204, CHEM 111A; corequisite: ET 301. Laboratory investigation and experiments in the application of industrial materials. Field Trips. (Laboratory 3 hours.) Lab fee: \$15.

302. Industrial Electronics (2) F,S

Prerequisite: PHYS 100B. An overview of electronics principles and applications in electronics manufacturing industries including instrumentation and power distribution. (Lecture-Discussion 1 hour, Activity 2 hours.)

304. Applied Mechanics — Strength of Materials (3) F,S,SS

Prerequisite: ET 204. Analysis of strength and ridigity 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 (3) F,S

Prerequisites: ET 301, 301L. Survey course of the variety of methods used in industrial manufacturing and fabrication to form, finish, and fasten industrial products. (Lecture 2 hours, Activity 2 hours.)

307. Industrial Safety (3) F,S,SS

Prerequisite: ET 300. 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, 3 hours.)

308. Systems Safety (3) F

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 Administration (3) F.S.SS

Prerequisite: ET 300. Theories, principles, and concepts of Industrial Administration. 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.)

310. Industrial Hygiene (3) S

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 Assurance (3) F,S,SS

Prerequisite: ET 202. Quality assurance principles and practices in industry, including management concepts, inspection practices, costs of quality and testing functions. (Lec-Discussion 3 hrs.)

312. Statistical Quality Control (3) F.S

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) F,S

Prerequisites: ET 220, 311. Instrument calibration, standards and precision measurement for quality assurance and reliability. (Lec-Discussion 1 hr.)

313L. Metrology Laboratory (1) F.S

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) F,S

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) F

Prerequisites: ET 306, 313/L. 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) F

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.)

320. Software Quality Assurance (2) F

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.)

321. Construction Supervision (2) S

Prerequisites: ET 235, 235L. A study of the duties and responsibilities of construction onsite 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) S

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) F

Prerequisite: ET 304. Soil composition, description, and classification; soil compaction; determination of physical properties of soils. (Lecture-Problems 2 hours.)

323L. Soils Mechanics Technology Laboratory (1) F

Prerequisites: ET 304; corequisite ET 323. Laboratory investigation and experiments in the phenomena of soil mechanics. Field trips. (Laboratory 3 hours.)

325. Construction Materials and Methods (3) F,S

Prerequisites: ET 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) S

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) F,S

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) F,S

Prerequisites: ET 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) F,S

Prerequisites: ET 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.)

341. Solid State Electronics II (3) F.S

Prerequisites: ET 260, 260L. Miller's Theorem, integrated circuits, feedback, operational amplifiers, Fourier series, distortion, modulation, phase-locked foops, linear and non-linear circuits, and breadboarding. (Lecture-Discussion 3 hrs)

341L. Solid State II Laboratory (1) F,S

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) F,S

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) F,S

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 Instrumention (2) F,S

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) F,S

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. Metallurgy and Applications (2) F

Prerequisite: ET 306. Physical and process metallurgy for modern industrial applications, including metallurgical principles, theory and practices in thermal treatment processes to ferrous and non-ferrous metals, plastic deformations in metals and powder metallurgy. (Lecture-Discussion 2 hours.)

361L. Metallurgy and Applications Laboratory (1) F

Prerequisite: ET 306; corequisite: ET 361. Laboratory exercises in metallurgical specimen preparations for microscopic examination of metal structures, heat treating and test evaluations of both ferrous and non-ferrous metals. (Laboratory 3 hours.)

362. Heat Treating (1) S

Prerequisites: ET 361, 361L. Theory and applications of thermal treatment processes to non-ferrous and ferrous metals with resulting changes in properties as used in current production. (Lecture 1 hour.)

362L. Heat Treating Laboratory (1) S

Prerequisites: ET 361, 361L; corequisite: ET 362. Metallographic study of heat effects of thermal treatments of metals, and mechanical properties of metals. (Laboratory 3 hours.) Lab fee: \$15.

363. Kinematics of Mechanisms (3) F

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. Industrial Fluid Power (3) S

Prerequisites: PHYS 100A, ET 302. Fundamentals and application of hydraulic, pneumatic and vacuum power as used in current manufacturing plants. (Lecture-Discussion 3 hour.)

371. Nondestructive Testing (1) F,S

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) F,S

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) F,S

Prerequisite: ET 170. Planning practices, procedures and requirements for laying out industrial facilities. (Lecture-Discussion 2 hours, Activity 1 hour.)

386. Sensor Based Computer Applications (2) F

Prerequisite: ET 286L Theory and concepts of programming, hardware configuration, functional capabilities of minicomputer systems including peripheral devices. (Lecture-Problems 2 hours.)

386L. Sensor Based Computer Applications Laboratory (1) F

Prerequisites: ET 286L; corequisite: ET 386. Laboratory exercises in programming sensor based computers. Topics included are number systems, minicomputer structure, mnemonic, binary code, peripheral devices operations, stand alone operations, and system operations. (Laboratory 3 hours.) Lab fee: \$15.

387. Robot Programming and Applications (2) S

Prerequisites: ET 205, 205L. Concepts of computer control systems, robot computer languages, teach modes, play-back modes, analysis of computer systems in industrial robots, data acquisition/handling/conversion. Includes investigation and study or real applications and microcomputer programming simulation. (Lecture-Problems 2 hours.)

387L. Robot Programming and Applications Laboratory (1) S

Prerequisites: ET 205, 205L; corequisite: ET387. Laboratory exercises in industrial and educational robot operation and applications. Robot systems and its computer language instructions will be used. (Lab 3 hours.) Lab fee: \$15.

388. Technical Applications Using Programming Languages (2) S

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 Laboratory (1) S

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. (Laboratory 3 hours.) Traditional grading only.

390. Computer Aided Drafting (1) F,S

Prerequisites: ET 170, 205L. Use of microcomputer workstations to solve computer aided drafting/design problems using commercial software packages. (Lecture-Discussion 1 hr.)

390L. Computer Aided Drafting Laboratory (1) F,S

Prerequisite: ET 170, 205L; corequisite: ET 390. Laboratory study in the use of PC-computers to solve graphics communication problems. (Laboratory 3 hours.) Lab fee: \$15.

401. Human Factors in Accident Prevention (3) F

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 hours.)

404. Investigation of Accidents (3) S

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.)

409. Senior Problems in ET (1-3) F,S

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. (A) Construction Management, (B) Electronics Technology, (C) Manufacturing Technology, (D) Quality Assurance, (E) Computer Technology.

410. Cost Analysis (3) F,S,SS

Prerequisite: Economics course. 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. (Lec-Discussion 3

412. Expert Systems Applications (3) S

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) F.S

Prerequisites: ET 306. Examination of the acquisition function within the industrial complex. (Lecture-Discussion 3 hours.)

416. Advanced Quality Systems and Analysis (3) S

Prerequisites: ET 312, 313, 313L, 371, 371L. Advanced study of principles and practices of production quality systems, including problemsolving techniques, advanced inspection systems, productivity and quality improvement methods. Also included is analysis of product development from design to manufacturing, and quality systems audits. (Lec-Discussion 3 hrs.)

418. Methods Analysis (3) F,S,SS

Prerequisites: ET 306, 410, Simplification of manufacturing operations; motion and time study, standards, value analysis, planning and control; emphasis on operation analysis for optimum production economy. (Lec-Discussion 3 bts)

419. Design of Experiments (3)

Prerequisite: ET 416. Advanced statistical analysis applied to Quality functions; Comparative and single factor experiments, Factorial Designs, and Multiple regression. (Lecture-Discussion 3 hours.)

420. Reliability and Maintainability (3) S

Prerequisites: ET 419. Principles and Practices of reliability; reliability analysis and design; testing for reliability. Maintainability concepts. (Lecture-Discussion 3 hours.)

421. Construction Planning and Scheduling (3) F,S

Prerequisite: ET 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) F

Prerequisites: Physics 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) S

Prerequisites: ET 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) F,S

Prerequisites: ET 410, 421. Characteristics, capabilities, limitations, economics and utilization of general building and heavy construction equipment. (Lecture-Discussion 3 hours.)

426. Construction Law (3) F,S

Prerequisites: ET 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 bours.)

428. Construction Proposals and Specifications (3) F

Prerequisites: ET 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) F,S

Prerequisites: ET 410, 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) F

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) S

Prerequisite: ET 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) F

Prerequisite: ET 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) S

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) F

Prerequisite: ET 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) F,S

Prerequisites: ET 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.)

441. Theory of Electronic Control (3) S

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) F,S

Prerequisites: ET 255, 255L. Sequential logic circuits and systems and applications of integrated circuits to logic controls. Counters, data storage, registers, circuit synthesis, and analysis. (Lecture-Problems 2 hours.)

442L. Computer Circuits Laboratory (1) F,S

Prerequisites: ET 255, 255L; corequisite: ET 442. Laboratory study of digital computer circuits design and implementation. Standard designing and troubleshooting procedures will

be discussed. Topics covered are multivibrators, registers, counters, decoders, arithmetic circuits, and memory. (Laboratory 3 hours.) Lab fee: \$15.

444. Telecommunications (3) F,S

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 (2) F,S

Prerequisite: ET 341L, 442L. Design, processing and applications of monolithic and hybrid microcircuits for analog and digital systems. (Lecture 2 hours.)

445L. Microelectronics Laboratory (1) F,S

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) F

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) F

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.)

460. Electronic Packaging and Design (2) F,S

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) F,S

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. PERT/CPM (3) F

Prerequisites: ET 205, 205L, 306. Project planning, scheduling and control by critical path method, work breakdown structure, mater and control level schedules and milestone charts. Cost optimization through resource allocation. Computer and noncomputer methods presented. (Lecture-Problems 3 hours.)

465. Automated Production Systems (3) S

Prerequisites: ET 410, 418, 475. 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.)

466. Foundry Technology (1) S

Prerequisite: ET 306. Foundry practices and casting techniques used in industry. (Lecture-Discussion 1 hour.)

466L. Foundry Technology Laboratory (1) S

Prerequisites: ET 306; corequisite: ET 466. Foundry practices and casting techniques in laboratory environment. (Laboratory 3 hours.) Lab fee: \$15.

472. Computer Integrated Manufacturing (3) F

Prerequisites: ET 205L, 390, senior standing. 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 3 hours.)

474. Manufacturing Processes Theory (2) S

Prerequisite: ET 244L, 370L, 466L. Metal removal processes emphasizing milling, grinding turret and tracer lathe and cutter sharpening. Application of machinability theory to practice. Production feeds, speeds, and tool wear measurement. (Lecture-Discussion 2 hours.)

474L. Manufacturing Processes Lab (1) S

Prerequisite: ET 244L, 370L, 365, 466L; corequisite: ET 474. Laboratory on Metal removal processes emphasizing milling, grinding turret and tracer lathe and cutter sharpening. (Laboratory 3 hours.)

475. Proposals and Specifications (3) F,S

Prerequisite: ET 418. Development of the technical knowledge necessary to structure an industrial proposal in logical stages. An analysis of the different forms of letters of transmittal, inquiry, bidding specifications and a diagnosis of the financial, technical and management aspects of a proposal, leading to a contract. (Lecture-Activity 3 hours.)

486. Data Structures (2) F

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) F

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.

488. Microcomputer Systems (2) F,S

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

488L. Microcomputer Systems Laboratory (1) S

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) F,S

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) F,S

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. (Lecture-Problems 2 hours.)

491L. Microcomputer Development Systems Laboratory (1) F,S

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. Robotics Systems (2) S

Prerequisites: ET489, 489L. 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-Problems 2 bours.)

492L. Robotics Systems Laboratory (1) S

Prerequisites: ET489, 489L. Corequisite: ET 492. Laboratory exercises on robotic systems. Emphasis will be on analysis and synthesis of the sensing, programming and actuating sub-systems within industrial and educational robots. (Laboratory 3 hours.) Lab fee: \$15.

Legonalary (1) F.S.

494. Applied Systems Development Project (2) F,S

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 Lab (1) F,S

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.

495. Manufacturing Systems (3) F,S

Prerequisites: ET 418, 460. Application of analytical, planning and control techniques to the resources of industry including the physical plant, equipment, inventories, personnel and supplies used in the production of products and services. (Lecture-Discussion 3 hours.)

496. Adv Quality Systems and Analysis (3) S

Prerequisites: ET 419, 420. Quality systems analysis and applications. Course includes indepth 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, (Lecture- problems 3 hours.) Traditional grading only.

497. Advanced Study in Technology (3) F,S,SS

Prerequisites: Senior standing in industrial technology, consent of instructor. Advanced work done within the area of specialization designed for the industrial technologist who desires upgrading in his/her field of concentration. Covers new information in or related to industrial technology. (Lecture-Discussion 3 hours.)

48py Epitropi's Reducation and 1-

Mechanical Engineering College of Engineering

Department Chair: Ortwin Ohtmer Department Office: ECS Building, Room 651

Telephone: (310) 985-4407 Faculty: Professors: Mihir K. Das, Simon deSoto, Walter E. Edelman, Jr., C. Barclay Gilpin, Min-ten Jahn, Ernest R. Mijares, Edward Miller, Ortwin Ohtmer, Leonardo Perez y Perez, Reza Toossi, Bruce J. Torby, Hillar Unt, J. Richard Williams, Hsien-Yang Yeh; Associate Professors:Ramin Esfandiari, Karl-Heinrich Grote, Sally McInerny, Hamid R. Rahai, Jalal Torabzadeh, Hung V. Vu; Adjunct Faculty: Lee S. Akin, Stuart D. Hann, Shozo Koshigoe, Feng S. Ku, Chester R. Kyle, Mark N. Larson, John L. Mason, Jack Medoff, Wan-tswan Tsai, Paul Van Valkenburgh, Khang H. Vu. Emeritus Faculty: Chester R. Kyle, Herluf P. Nielsen, Richard C. Potter, Sabri Sungu, Ching H. Tsao, Hans H. Vandermeyden. Undergraduate Advisor:

Hillar Unt
Graduate Advisor: C. Barclay Gilpin
Department Secretary:
Donna Paoli

The Department

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 biologi-

cal 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). 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 Engineering Degree Option in Materials Engineering

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 for the Option in Materials Engineering (code 3-4352)

Lower Division: CHE 200; CHEM 111A, 111B; CE 205; EE 212; 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.

Bachelor of Science in Engineering Degree Option in Industrial-Management Engineering

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 for the Option in Industrial-Management Engineering (code 3-4342)

Lower Division: ACCT 201; CHEM 111A; CE 205; EE 212; FIN 222; MATH 122, 123, 224; ENGR 101; ME 172, 205; PHYS 151, 152, 154.

Upper Division: CE 406; ECON 300; FIN 324; IS 410; 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.

Bachelor of Science in Engineering Degree Option in Ocean Engineering

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 26foot 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 for the Option in Ocean Engineering (code 3- 4358)

Lower Division: CHEM 111A; CE 205; EE 212; 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

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.

Industry sponsored scholarships (Alcoa Foundation) are available to upper division mechanical engineering students. Further information is available in the department office.

Requirements for the Bachelor of Science in Mechanical Engineering (code 3-4350)

Lower Division: CHEM 111A; CE 205; EE 212; 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: Dr. Edward Miller. Professors: Mihir K. Das, Walter Edelman, Jr., C. Barclay Gilpin, 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 he 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 polymerics industry and degradation of polymerics. 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 for the Certificate in Industrial Plastics Processing and Design

- (1) Bachelor's degree in engineer-
- (2) Satisfactory completion of the 23 units listed below;
- (3) Approval of the certificate committee for admission to the certificate program. An advisor will be appointed at that time;
- (4) Advisor's approval of completion of special project.

Required Courses

Polymeric Processing: TED 370, 470; ME 471, either ME 472 or 476; TED 492 (four units minimum) and/or ME 450. Properties of Polymers: DESN 253; ME 373, 374, 424.

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 for the Certificate In Energy Conversion and Power Systems:

- 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 for the Master of Science in Mechanical Engineering:

(1) 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:

(a) A minimum of 21 units in engineering or mathematics courses with 18 units of 500- and/or 600-level course mechanical engineering:

(b) Six units of electives selected from approved upper-division or graduate courses from appropriate areas;

(c) 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)

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

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 I (3) F,S

Graphics concepts and visualization. Basic geometric elements, shapes, sizes and patterns using AutoCAD. Solid modeling and 3-D views from different viewing directions. Elementary designs with dimensioned drawings. (Lecture-problems 2 hours, design laboratory 3 hours.) Traditional grading only.

205. Computer Methods in Mechanical Engineering (2) F,S

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) F,S

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. Engineering Design Graphics II (2) F,S

Prerequisite: ME 172. Advanced graphical expressions using AutoCAD; 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 1 hr, design laboratory 3 hours.) Traditional grading only.

Upper Division

305. Numerical Methods in Mechanical Engineering (3) F,S

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 differential equations; initial-value problems, boundary-value problems. Partial differential equations. Individual and/or group projects. (Lecture-problems 3 hours.) Traditional grading

322. Metallurgy and Materials Processes I (3) F,S

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. Materials and their roles in design and manufacturing. (Lecture-problems 3 hours.) Traditional grading only.

323. Engineering Metallurgy I Laboratory (1) F,S

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.

330. Engineering Thermodynamics I (3) F,S

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) F,S

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) F,S

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) F,S

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) F

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) S

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) F,S

Prerequisite: CE 205. 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 applications 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) F,S

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) F,S

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) F,S

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

376. Modeling and Analysis of Dynamic Systems (3) F,S

Prerequisites: ME 305, 371; CE 335. 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. Intro-

duction to feedback control systems. Lectureproblems 3 hours.) Traditional grading only.

379. Industrial Systems Engineering (3) F

Prerequisites: Upper Division Standing and M.E. 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) S

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 'realife' system. (Lecture-problems 3 hours.) Traditional grading only.

*405. Special Topics in Mechanical Engineering (3) F,S

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.

*407. Modern Developments in Ocean Engineering (1-3) F,S

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.)

*409, Modern Computational Aspects in Mechanical Engineering (1-3) F,S

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.

*425. Chemical and Electrochemical Manufacturing Processes (3) F

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) S

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.

*431. Heat Transfer Systems Design (3) F,S

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.

*450. Special Problems (1-3) F,S Prerequisite: Senior standing. Assigned topics in

Prerequisite: Senior standing. Assigned topics in technical literature or laboratory projects and reports on same.

*459. Professional Practice Seminar (1) F,S

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) F

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) S

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) F

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) S

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. Cur-

rent 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) S

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) S

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) F,S

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) F, S

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) F

Prerequisites: M E 322, 405, 409. 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) F,S

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) S

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) F

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.

Graduate Division

501. Engineering Analysis I (3) F,S

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) F.S

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) S, Even Years

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) F

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) F

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) S

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. Engineering Management Integration (3) S

Prerequisite: Graduate engineering standing. Integration of engineering project management techniques through the development of management operating documents, including consideration of constraints, parameters, technical skills, milestone schedules, interfaces, cost estimates and budgets. (Lecture-problems 3 hours.) Traditional grading only.

510. Solar Engineering (3) F

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-plat 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.

512./612. Computer Aided Design in Mechanical Engineering (3) F

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, represenation 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) F

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. Engineering Principles and Properties of Plastics (3) S

Prerequisite: M E 373. Nature of polymers, physical and mechanical properties of plastics. Polymerization reactions and production. Properties of co-polymers, polymer solutions. Viscoelastic properties of polymerics. (Lecture-problems 3 hours.) Traditional grading only.

527. Metals and Plastics Manufacturing Processes (3) S

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) F

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) F, Odd Years

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) S, Odd Years

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. Inviscid and Compressible Flows (3) F, Even Years

Prerequisites: M E 330, CE 335, MATH 370A, M E 405. Dynamics of ideal and compressible fluids; potential flow, vortex flow, the Navier-Stokes equations, steady and unsteady compressible flow, basic wave phenomena. (Lecture-problems 3 hours.) Traditional grading only.

538. Air Conditioning and Refrigeration (3) F

Prerequisite: M E 336, 431. Basic concepts in air conditioning psychrometry; calculation of heating and cooling loads in buildings; design of heating and air conditioning systems; principles of refrigeration and cryogenic engineering. (Lecture-problems 3 hours.) Traditional grading only.

540. Measurement Techniques in Fluid Mechanics and Heat Transfer (3) F, Odd Years

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. Aerodynamics of Vehicles and Structures (3) F

Prerequisite: CE 335. Theoretical and experimental aerodynamics applied to surface and flight vehicles such as automobiles and trains, conventional VTOL and STOL aircraft, parachutes and hang gliders; also applications to buildings, bridges and sailboats. Wind tunnel testing techniques. (Lecture-problems 2 hours, Laboratory 3 hours.) Traditional grading only.

543. Linear Finite Element Analysis (3) F

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 en-

gineering 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) F

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. Robot Manipulators (3) S

Prerequisites: M E 375, 501, 502. Robot arm kinematics. Robot arm dynamics. Planning of manipulator trajectories. Control of robot manipulators. Sensing. Robot programming language. Robots in flexible manufacturing system. (Lecture-problems 3 hours.)

561. Automotive Engineering (4) S

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) F

Prerequisites: M E 322, 405, 409. 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. Analytical Mechanics III. Advanced Dynamics (3) F, Odd Yrs

Prerequisites: M E 371, MATH 370A. Detailed study of particle and rigid body mechanics. Three dimensional analysis. Lagrange's equations and variational principles. Vibrating systems, variable mass problems, Euler's equations and gyromechanics. Introduction to simulation and numerical methods. (Lecture-problems 3 hours.) Traditional grading only.

576. Engineering Vibrations (3) S, Even Yrs

Prerequisite: M E 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. (Lecture-problems: 2 hours, Laboratory: 3 hours.)
Traditional grading only.

577. Advanced Mechanics of Deformable Bodies (3) F

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) F

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) F

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.

612./512. Computer Aided Design in Mechanical Engineering (3) F

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, represenation 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) F

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) S

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) S

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) S, Even Yrs

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) S, Even Yrs

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) F

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 Thermodynamics (3) F

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 Gas Dynamics (3) S, Odd Years

Prerequisites: M E 502, 532, and 537. Conservation equations, one-dimensional compressible flow, shock waves, one-dimensional unsteady flow, method of characteristics for plane and axisymmetric flows, slender-body theory. (Lecture-problems 3 hours.) Traditional grading only.

640. Inviscid Flows II (3) S

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) S Prequisites: ME 501, 521, and 536. Fundamen-

Prequisites: 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) S

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. Non-linear dynamic analysis, flutter analysis, random analysis. Required topics

for Ph.D. students: advanced numerical methods for flutter and random analysis. (Lectureproblems, 3 hours.) Traditional grading only.

644./544. Advanced Control of Mechanical Systems (3) F

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 (LOR). 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) F, Even Yrs

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) S

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) F

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) F, Even Years

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) F

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) F, Even Years

Prerequisite: M E 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) S

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) F,S

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) F,S

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) F,S

Prerequisite: Graduate standing in mechanical engineering. Theoretical and experimental problems in mechanical engineering requiring extensive analysis. Traditional grading only.

698. Thesis (2-6) F,S

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) F

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). (Lectureproblems, 3 hours.) Traditional grading only.

736./636. Analytical Thermodynamics (3) F

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. (Lectureproblems 3 hours.) Traditional grading only.

777./677. Digital Simulation in

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

743./643. Nonlinear Complex Structures and Mechanisms (3) S

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. (Lectureproblems, 3 hours.) Traditional grading only.

771./671. Random and Nonlinear Vibrations (3) F, Even Years

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.

Engineering (3) S

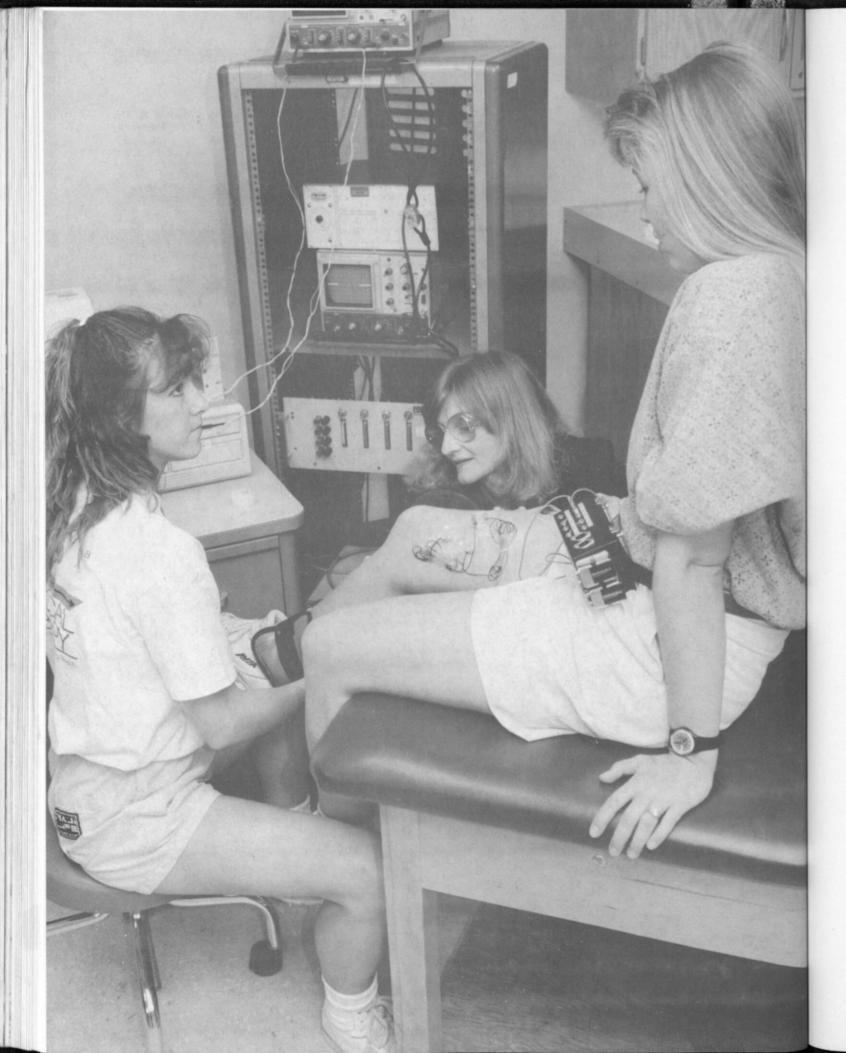
3 hours.) Traditional grading only.

The Date of the second second second death facilities BUL Advanced Gas, Dy Limite (3) S, Odd Years flow, shock waves, bright mensional to lead replace the second of the seco the femine, believes and retired screen all STREET, NASTRAM OF ANSTR. CORNERS Water Concrete connectable office of contribution

New year on thomas of indistrictly work isserted

counded and free turbulenty least loss bebruge

tion problems 2 Loyur Tight on the problems only



College of Health and Human Services

Dean: Donald P. Lauda
Associate Dean: William A. Sinclair
Director, Development and Grants:
Andrea Taylor
College Office: Industrial
Technology Building, Room 200
Telephone: 985-4194
Administrative Services Manager:
Nita Nuessle
Facilities Coordinator:
Denysia O'Connell
Director, Student Life and
Development: Cindy Hale
Assistant to the Dean:
Diana C. Walti

The College

The College of Health and Human Services offers a wide range of programs at the undergraduate and graduate levels. Included within the College are ten diverse departments, four separate programs, and five centers:

Departments:

Communicative Disorders
Criminal Justice
Health Science
Home Economics
Nursing
Occupational Studies
Physical Education
Physical Therapy
Graduate Center for Public Policy
and Administration
Recreation and Leisure Studies

Programs:

Aerospace Studies (Air Force ROTC) Gerontology Military Science (Army ROTC) Radiation Therapy

Centers:

Center for Criminal Justice
Research & Training
Center for Career Studies
Center for Health Behavior
Studies
Center for Successful Aging
Institute for CSULB/VA Joint Studies

Objectives

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;

The conduct of ongoing research, training, and community involvement by faculty and students.

To achieve these objectives, 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 Home Economics Physical Education Recreation

Bachelor of Science:

Criminal Justice
Dietetics and Food
Administration
Health Care Administration
Health Science
Nursing
Physical Therapy
Vocational Education

Bachelor of Vocational Education:

Master of Arts:

Communicative Disorders Home Economics Physical Education Vocational Education

Master of Science:

Criminal Justice
Gerontology
Health Care Administration
Health Science
Nursing
Nutritional Science
Recreation Administration

Master of Public Administration

Master of Public Health: Community Health Education

Certificates

Administration of Outdoor Recreation Resources Administration of Volunteer Services Child Development Community Physical Fitness Food-Service Systems Administration Gerontology Health Care Administration Leisure Counseling (Graduate Certificate) Nurse Practitioner Pre-Athletic Training Pre-Corrective Therapy Public Management Analyst Public Sector Employer-Employee Relations and Personnel Management Public Sector Financial Management School Nursing Credential Therapeutic Recreation Transportation Policy and Planning Travel and Tourism **Urban Executive Management** 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-ofthe-art classrooms and laboratories with equipment matching that of business/industry. You will have access to specialty laboratories and clinics. For example, you may visit our Communicative Disorders Speech and Hearing Clinic, Nursing Simulation Lab, or the Physical Therapy Labs and Clinic. You may become involved in a discussion of Recreation and Leisure Studies and its role in your life and that of others, or a discussion of nutritional needs in Home Economics, or on AIDS awareness in Health Science. You may swim in the Olympic size pool or be tested in the underwater weigh tank while enrolled in a Physical Education class. Criminal Justice may walk you through a forensic

investigation of a crime. Public Policy and Administration will offer you the opportunity to apply new knowledge, skills, and leadership techniques to the solution of public problems while Occupational Studies prepares persons to gain the competencies requisite for successful employment in secondary schools, community colleges and adult programs.

As the second largest of the University's six colleges, over two thirds of the facilities are laboratories to accommodate the laboratory-intensive programs. The College of Health and Human Services' programs combine theory with exciting practical experiences.

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 Train-

ing 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

Air Force ROTC, Archers, Army ROTC Association, Army ROTC Rangers (AROTC), Arnold Air Society (Aerospace Studies), California Nursing Student Association, Child and Family Association Student (CAFAS/ Home Economics), Pershing Rifles (AROTC), Silver Wings (Aerospace Studies), Student Council of Consumer Interests (Home Economics), Student Dietetic Association (Home Economics), Student Faculty Council (Home Economics), Students in Fashion.

Professional and Honorary Organizations

American College of Healthcare Executives, American Society of Interior Designers (ASID), California Association for Health, Omicron Tau Theta (Vocational Education), Phi Alpha Alpha (PAA), Phi Epsilon Kappa (Physical Education), Physical Ed., Recreation and Dance (CAHPERD), Epsilon Pi Tau (Oc-

cupational Studies), Eta Sigma Gamma (Health Science), National League for Nursing, Omicron Nu (Home Economics), Sigma Theta Tau (Iota Eta Chapter) Nursing Honorary Society.

College and Departmental Organizations

Health and Human Services Student Council, California Nursing Student's Association, Criminal Justice Students Association, Health Care Administration Student Forum, Health Care Forum, Health Science Student and Faculty Association, Technology Education Club, Physical Education Majors Club, Physical Therapy Student Association, Public Administration Student Association (PASA), Recreation Society, Home Economics Student Association, National Student Speech Language Hearing Association.

College-Based Courses (HHS)

292. Career Exploration (1-3) F,S

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.

Professor of Aerospace Studies:
Captain Robert Navarro
Department Office: Technology
Education Building 2, Room 100
Telephone: 985-5743
President of the Advisory
Council: Jack Fisher

Air Force Reserve Officer Training programs develop officer candidates who have broad understanding and high growth potential. Cadets develop leadership and managerial skills through dialogues, problem solving, and other planning activities. All course work is done on campus except Field Training (conducted at an active Air Force base) and Light Aircraft Training for ROTC (conducted at Hondo Field, Texas). All cadets attend either a four- or six-week Field Training camp during the summer between the sophomore and junior years. Field Training emphasizes military orientation for the officer candidate. Cadets receive physical training and participate in competitive team sports. They are trained in drill and ceremonies and observe selected Air Force units performing day-to-day operations.

Upon completing the ROTC program and obtaining a bachelor's degree, cadets are commissioned as second lieutenants in the Air Force and serve a minimum of four years fulltime active duty. Flight-qualified candidates attend flight training after graduation. Other graduates begin active duty in a specialty consistent with their academic major, their desires, and existing Air Force needs. Graduates may request a delay from entry on active duty to continue their education or may apply for Air Forcesponsored graduate study to begin immediately upon starting active duty.

Applying for Admission to the Program

CSULB students enroll in Aerospace Studies by signing up for courses in the same manner as other university classes. Academic classes are open to all CSULB students, whether cadets or not. Students in other Cal State Schools use the concurrent enrollment system. Students who are not enrolled in any Cal State School enroll through the CSULB Extended Education Office. Freshman and sophomore classes (AS 100/200) do not require advance application. Candidates pursuing an Air Force commission must compete for enrollment in the AS 300/400 classes. This competition, which normally occurs in the fall of the sophomore year, includes the Air Force Officer Qualifying Test, a physical examination, and a personal interview.

Supplemental Courses Program

The AFROTC Supplemental Courses Program enhances the value and performance of persons commissioned through AFROTC. The program consists of required and recommended college or university courses. All contract cadets (ROTC scholarship and AS 300/400 cadets) must successfully complete, or demonstrate proficiency in, the required supplemental courses in addition to all Aerospace Studies courses. Each contract cadet completes one semester of college-level math. Cadets on AFROTC scholarship also complete one semester of collegelevel English composition and one academic year of a foreign language. All students are encouraged to complete a speech class.

Courses (A S) Lower Division

100. The Air Force Today I (1) F

Introduction to the U.S. Military and the U.S. Air Force (USAF) organization and functions; human rights issues; the Soviet threat; Strategic Air Command organization, command, control, and weapons systems; introduction to North American Air Defense Command (NORAD). (Lecture 1 hour; Laboratory 1 hour — required only of AFROTC cadets.)

101. The Air Force Today II (1) S

Examines the Navy, U.S. Army; tactical air, airlift systems; logistics, air training, and communication commands; Reserves, National Guard and separate operating agencies; and the nature of warfare. (Lecture 1 hour; Laboratory 1 hour — required only of AFROTC cadets.)

Aerospace Studies Alr Force ROTC College of Health and Human Services

200. The Development of Air Power I (1) F

Developing of aerospace power in the United States through World War II. (Lecture 1 hour; Laboratory 1 hour — required only of AFROTC cadets.)

201. The Development of Air Power II (1) S

Post World War II development of aerospace power; emphasis on international confrontations involving the U.S. including Cuba and Vietnam. (Lecture 1 hour; Laboratory 1 hour — required only of AFROTC cadets.)

Upper Division

300. Air Force Management and Leadership I (3) F

Examines motivation, behavior processes and group dynamics in an Air Force environment; will address the planning, organizing and coordination functions of the manager as well as concepts and techniques for decision making.

301. Leadership and Management (3) S

Examines current leadership theories and models and their applicability for junior military officers. Emphasizes specific interpersonal skills: counseling, oral and written communications, supervision, coordination and decision-making. Traditional grading only. (Lecture 3 hours; Laboratory 1 hour — required only of AFROTC cadets.)

400. National Security Forces in Contemporary American Society I (3) F

Examines armed forces as an integral element of society; military image and profession in today's society; civil-military values and socialization process; factors influencing the formulation and implementation of national strategy. (Lecture 3 hours; Laboratory 1 hour — required only of AFROTC cadets.)

401. National Security Forces in Contemporary American Society II (3) S

Examines basic concepts and U.S. evolution of U.S. strategy; contemporary and future strategic issues; military justice system. (Lecture 3 hours; Laboratory 1 hour — required only of AFROTC cadets.)

490. Independent Study (1-3) F,S,SS

Prerequisites: Consent of instructor. Individual research and study approved by program director. May be repeated for a maximum of six units.

Communicative Disorders

College of Health and Human Services

Department Chair: Walter H. Moore, Jr. Department Office: Language Arts Building (LAB), Room 102 Telephone: 985-4594 Faculty: Professors: Randall C. Beattie, Walter H. Moore, Jr., Bruce P. Ryan, Lynn Snyder, Carolyn Wardrip-Fruin; Associate Professors: Duane C. Craven; Emeritus Faculty: JoAnn R. Yates, Virginia G. Warren. Department Secretary: Anne Bykerk-Plante Clinic Secretary: Victoria Sanchez Technician: Rodney Pau The Department

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 and 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 and licensing by the State of California.

Bachelor of Arts in Communicative Disorders (code 2-6842)

Students desiring a bachelor's degree in Communicative Disorders must complete ANTH 170 and a course in language and culture/society, (e.g. ANTH 412l or SOC 485l), before 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, educational audiologists or teachers of the severe language disordered must be admitted to the graduate program in speech pathology or audiology.

Clinical-Rehabilitative Services — Language, Speech and Hearing Specialist Credential:

Candidates must:

A. Complete the master's degree in speech pathology.

B. Complete EDP 350, 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:

A. Complete the master's degree in audiology.

B. Complete EDP 350, 451 or 564, C D 280, 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:

A. Complete the master's degree in speech pathology;

B. Complete ED P 350, ED P 451 or ED P 564, C D 483, 489, EDEL 450, 460, 470, C D 686A (in order to complete 100 contact hours as a Language, Speech and Hearing Specialist trainee in the school setting) and C D 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 Degree

Admission to the Graduate Program:

Enrollment in 500/600 level courses in communicative disorders is restricted to students who have been admitted to the graduate program of the department. Students wishing to be admitted must complete the following procedures:

(A) Students must meet the criteria for acceptance by the University as a graduate student; (B) Every student (new or continuing) must apply to the Office of Admissions and Records to obtain admission to the University with graduate standing;

(C) 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:

(1) Change of objective form available at department office (continuing CSULB students only);

(2) 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:

(a) a GPA of 3.0 or better in the last 60 units of coursework; and

(b) confirmation of acceptable GPA obtained during the final senior semester.(3) 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. (4) 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.

(D) 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.

(E) 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. In addition to courses in (a) anatomy and physiology of the speech and hearing mechanism, (b) phonetics, and (c) introduction to communicative disor-

ders, the applicant must have 24 units of course work in speech science, speech-language pathology or audiology. If student has not completed sufficient units or courses to meet this requirement, he/she may enroll in the University as an 'unclassified' graduate student to complete the required undergraduate courses prior to being admitted 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 six times per year. A detailed description of the test is available at the Testing Office);

(5) maintenance of a GPA of 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 for the Master of Arts in Communicative Disorders (code 5-6842)

Students must elect one of two available options: audiology or speech pathology.

For speech pathology 39 units of course work are required: C D 696, 662, 663, 664, 665, 666, 669A or 669C, 669D, 669F, 669G, 669J, 670 or C D 686A and C D 698 or 695 (Comprehensive Examinations) plus a three-unit elective. Within the context of the clinical courses (CD 669A, 669B, 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) or 679, 680, and either 698 or 695 (Comprehensive Examinations) and 3 units of electives.

Regulations governing the preparation and eligibility for an administration of comprehensive examinations are available in the Department Office. Departmental regulations concerning preparation of theses are also available in the office.

Special Program for Students Who are Bilingual in Spanish:

Students who can demonstrate native proficiency in Spanish as well as advanced proficiency in English may take the clinical practicum courses with a bilingual supervisor, working with clients who are monolingual in Spanish, monolingual in English, and bilingual. See Bilingual Coordinator for details.

Courses (C D)

Lower Division

060. Special Topics (1) F,S
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.

A. Speech Improvement

B. Speech Improvement - Articulation
C. Speech Improvement - Stuttering

D. Speech Improvement - Voice

260. Introduction to Communicative Disorders (3) F.S

Historical and interpersonal 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) F

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) S

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) F,S

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 Lanuage (3) F,S

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) F, S

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) F,S

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) F,S

Principles of language and speech development related to cognitive, linguistic and communication behaviors of monolingual and billingual children. Not open for credit for communicative disorders majors. (Lecture-Discussion)

373. Audiology I (3) F,S

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) F,S

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) S

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) F

Prerequisites: C D 260, 271, 329, 330. Etiology, assessment, and treatment for disorders of phonology.

460./560. Language Assessment of the Limited English Proficient Child (3) F,S

Prerequisites: C D 329 and C D 481A, or equivalent, or permission 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) S

Prerequisite: C D 261, 271, 329, 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) F

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) F

Prerequisites: C D 261, 271, 329 and 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) S

Prerequisite: C D 481A. Neurophysiological and neurolinguistic 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) F

Prerequisites: C D 261, 271, 329, 330 and either ANTH 170 or a course in language and culture/society. Corequisites: C D 456 and 481A. Introductions to principles underlying assessment procedures in speech and 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) S

Prerequisites: C D 432, 456, 476, 481A, 483. Corequisites: C D 466, 481B. Introduction to 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). 45 hours of clinic observation and participation will be distributed equitably between campus clinic, schools, and hospital/rehabilitation settings. (Lecture 2 hours, laboratory 3 hours).

490. Special Studies in Communicative Disorders (1-3) F,S

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.

491. Proctoring in Communicative Disorders (2-3) F,S

(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 under-

graduate courses under the specific direction of the course instructor. May be repeated for credit to a maximum of 6 units.

499. Directed Studies in Communicative Disorders (1-3) F,S

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) F, Even Years

Prerequisite: Consent of instructor. Acoustics/ decibel, psychoacoustics, calibration of puretone and speech audiometers, sound field calibration, industrial audiology and noise measurement. (Lecture 1 hour, laboratory 6 hrs.)

531./431. Pediatric Audiology (3) S

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, audiomy 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) F,S

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) F,S

Prerequisites: C D 329 and C D 481A, or equivalent, or permission of instructor. Provides an understanding of the Non-Discriminatory assessment process for the Limited English Proficient child referred for a Language Assessment.

566./466. Speech Pathology II: Fluency Disorders (3) S

Prerequisites: C D 261, 271, 329, 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) F, Odd Yrs

Prerequisite: Consent of instructor. Electroacoustic 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) F

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) F

Prerequisites: C D 261, 271, 329 and 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) S

Prerequisites: C D 581A/481A. Neurophysiological and neurolinguistic 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.

582A. Teaching the Severe Language Handicapped Child (3) S

An introduction to the core curriculum components of Math, Reading and Social Studies. The course will include: theoretical bases, normal developmental patterns, assessment procedures for diagnostic and placement purposes, instructional methods, common learning difficulties, and the scope and sequence of each content area as defined by the current State framework.

582B. Teaching the Severe Language Handicapped Child (3) F

Prerequisites: C D 582A. Incorporation of a language base into the curriculum areas of Reading, Spelling, Math, Social Studies, Science, Health, Written Language, Music, and Art. The course will include: A description of the SLH Classroom at all levels, qualifying criteria according to state regulations, interpretation and integration of academic/speech & language assessment, development of IEP's, specific teaching strategies, behavioral management techniques for the classroom, mainstreaming, vocational implications, and supervision of the classroom aide. Traditional grading only. (Lecture 2 hours, laboratory 3 hours.)

590. Advanced Topics and Current Issues in Communicative Disorders (1-3) F,S

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) S

Prerequisite: C D 481A, 696. The subsystems of language: linguistic structure, cognitive competency and communication abilities are investigated in six major language intervention therapeutic approaches.

663. Seminar in Disorders of Phonology (3) F

Prerequisites: C D 456 or equivalent, 696. 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) S

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) F

Prerequisites: C D 481B, 696. Provides an understanding of neuropathological 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) F

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) F,S

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.

669B. Clinical Practice with Pre-School Language Disordered Children (2) F,S

Prerequisites: C D 489; pre- or co-requisite: C D 662 or consent of instructor. Student conducts individual and group language therapy, under supervision, within a nursery school. Student makes a developmental diagnosis through assessments and formal tests.

669C. Clinical Practice With Language Delayed/Disordered Children (2) F,S

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) F,S

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) F,S

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) F,S

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) F,S

Prerequisite: At least one of the C-D 699A 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) F,S

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) F,S

Prerequisites: C D 669A,B 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) S, Even Years

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) S

Prerequisite: Consent of instructor. Emphasis will be placed 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 indepth knowledge in areas of interest, and will allow the instructor to share areas of expertise.

675. Assessment of Central Auditory Nervous and Vestibular Systems (3) S, Odd Years

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)

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: C D 669A or B or C, 679 (2-2); with a minimum of 125 clinical contact hours and with a minimum GPA of 3.0 in clinical practice. Advanced clinical practice in audiology with hearing impaired persons in a community

686A. Advanced Field Studies with Communication Handicapped (5) F,S

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) F,S

Prerequisites: Passing of CBEST, completion of C D 582A and 582B, 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. (Fieldwork)

695. Directed Readings (1-3) F,S

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

696. Research Methods: Applied & Basic (3) F

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) F,S

Pre- or Corequisite: C D 696 and consent of instructor. Independent research under supervision of a faculty member.

698. Thesis (1-4) F,S

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 Department Chair: Ronald E. Vogel Department Office: Social Science Public Affairs Building (SS/PA),

Telephone: 985-4738 Faculty: Professors: Harold K. Becker, Judy H. Kaci, George Rush, Paul M. Whisenand: Associate Professor: Harvey N. Morley. Emeritus Faculty: A. C. Germann, John H. Good, C. Robert Guthrie,

John P. Kenney Undergraduate Advisor: Judy H.

Graduate Coordinator: Harold K. Becker Office Manager: Trevor Rodriguez

For additional information, students should contact the department office.

The Program

Room 162

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

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 maximum of 24 units of lower division criminal justice courses are acceptable for transfer. Fifteen units will be accepted for Criminal Justice 101, 151, 155, 157, and 161 if equivalent subject matter has been completed at a community college. It should be understood that these will not satisfy upper division major requirements.

Three options are available:

- corrections
- law enforcement
- security administration

Bachelor of Science in Criminal Justice Option in Corrections (code 3-1032)

Upper Division: Complete a minimum of 39 units consisting of CRIM 301, 305, 356, 404, 468, 477, 480, 495 (student currently working fulltime will be required to substitute three units of CRIM 490 with 495); 9 units selected from CRIM 369, 405, 470, 475; and 6 additional units of upper division courses taken in the Department of Criminal Justice.

Supporting courses: Complete a minimum of 9 units of upper division social science courses (taken outside the Department of Criminal Justice) supporting major objectives. Courses are to be selected in consultation with a criminal justice advisor.

Option in Law Enforcement (code 3-1036)

Upper Division: Complete a minimum of 39 units consisting of CRIM 301, 305, 351, 353, 404, 480, 495 (students currently working full-time will be required to substitute three units of CRIM 490 with 495); 12 units selected from CRIM 315, 325, 361, 405, 421, 422, 423, 424, 425, 482, 483, 492, 493; and 6 additional units of upper division courses from the Department of Criminal Justice.

Supporting courses: Complete a minimum of 9 units of upper division social science courses (taken outside the Department of Criminal Justice) supporting major objectives. Courses are to be selected in consultation with a criminal justice advisor.

Option in Security Administration (code 3-1038)

Upper Division: Complete a minimum of 39 units consisting of CRIM 301, 305, 331, 404, 437, 480, 495 (students working full-time will be required to substitute three units of CRIM 490 with 495); 3 units selected from CRIM 351, 353, 358; 9 units selected from 332, 336, 425, 431, 435; and 6 additional units from upper division courses from the Department of Criminal

Supporting courses: Students must complete a minimum of 9 units of upper division social sciences courses (taken outside the Department of Criminal Justice) supporting major objectives. Courses are to be selected in consultation with a criminal justice advisor.

Minor in Criminal Justice

Requirements for the Minor in Criminal Justice (code 0-1031)

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

Criminal Justice

College of Health and Human Services

of upper division criminal justice clas-

Master of Science in Criminal Justice

Graduate study in criminal justice provides the opportunity for individuals to meet (1) the need for adequately prepared educators to fill community college positions in criminal justice, (2) the need for highly skilled and broadly educated persons to engage in research, (3) the need for persons planning professional careers in the administration of criminal justice, and (4) the need for persons with advanced education to engage in the administration of programs of court administration, corrections, policing and 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 to assure leadership positions and permit an exchange of student-faculty ideas to further the spirit of research and scholarship to enhance professional and personal capabilities.

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. 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 depart-
- (2) Scholastic achievement as represented by official transcripts of all undergraduate course work in major. Each applicant should request that a copy of the official transcript be sent to the graduate advisor in the Criminal Justice Department in addition to the copies required by the Office of Admissions and Records;
- (3) Transcripts of Graduate Record Examination:
- (4) Resume and statement of goals;
- (5) Three letters of recommendation from persons able to testify to the student's academic ability.

Prerequisites:

- (1) A bachelor's degree with a major or minor in criminal justice or a related discipline. Adequate undergraduate preparation shall be determined the Department Graduate Committee; experience in a criminal justice agency will be given significant consideration on a case-by-case basis:
- (2) A student must have an undergraduate upper division average of 3.0 (B) or better, unless an exception is made by the Department Graduate Committee.
- (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, unless an exception is made by the Department Graduate Committee.

Advancement to Candidacy:

- (1) Student must satisfy the general University requirements for advancement to candidacy, as specified in this bulletin:
- (2) The graduate program must be approved by the department graduate advisor and Director of Graduate Studies and Research, College of Health and Human Services;
- (3) Students must complete CRIM 581, CRIM 582, CRIM 583 and have passed the Graduate Writing Proficiency Examination prior to advancement to candidacy.

Requirements for the Master of Science in Criminal Justice (code 6-1031)

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 graduate advisor. Students must take a minimum of 18 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 300-400 level courses designated with a * in CSULB catalog. Undergraduate courses that are not designed with a * may not be applied toward the master's degree. All students must earn a grade of "A" or "B" for each reguired course and may not have more than 6 units of "C" grades apply toward the master's degree.

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 graduate advisor. Student must take a minimum of 22 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 300-400 level courses designated with a * in the CSULB catalog. Undergraduate courses that are not designed 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 and may not have more than 6 units of "C" grades apply toward the master's degree.

Comprehensive Examinations Prerequisites:

Advancement to candidacy, CRIM 697 and CRIM 699.

Each student will be required to answer one question in each of the following areas: theories of crime; research design; and synthesis of criminal justice. Each student will also be require to answer one question related to his/her area of concentration.

Comprehensive examinations will be given on one day each semester. Students taking comprehensive examinations for the first time must take all four examination questions on the same 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 portions 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) F,S

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) F

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 Evidence (3) F

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) S

In-depth study of the role and responsibilities of each segment within the administration of 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) Spring, Even Yrs

Prerequisites: CRIM 101. Fundamentals of investigation; collection and preservation of physical evidence; sources of information; interview and interrogation; follow-up investigation. (Lecture 3 hours.) (CAN AJ 8)

Upper Division

301. Contemporary Issues in Criminal Justice (3) F,S

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) F,S

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) F,S

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 'handson' approach to computer applications.

305. Ethical Concerns in Criminal Justice (3) F,S

Identifies and explores ethics, values definitions and applications in criminal justice system: police, courts, probation, parole, corrections and private security organizations. Discusses remedial strategies and behavior relating to unethical behavior from an individual and group perspective. (Lecture 3 hours)

315. Organizational Behavior in Criminal Justice Systems (3) F

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) F,S

Prerequisite: CRIM 315. 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.

331. Security Systems (3) F

Introductory and comparative look at the role and function of security in today's society. Attention focused on the common and unique aspects of security relating to specific environments: hospitals, aerospace, amusement parks, and others. Attention also given to the legal aspects governing security operations. (Discussion 3 hours).

332. Risk Management (3) S

Prerequisite: CRIM 331. Theory and application of the principles of risk analysis, audit and disaster recovery planning. Consideration of the effect of operational and physical security on threats and vulnerabilities. (Discussion 3 hours).

336. Government Security (3) F

Historical, philosophical and legal basis for federal government security programs. Application of the Industrial Security Manual to government contracts. Major espionage cases and their impact on United States security are reviewed. (Discussion 3 hours).

351. Advanced Criminal Law (3) F,S

Prerequisite: CRIM 151. Jurisprudential philosophy and case study of common law and statutory crimes; includes functions and development of substantive criminal law; elements of criminal liability; specific crimes and defenses.

353. Advanced Criminal Procedure and Evidence (3) F,S

Prerequisites: CRIM 155, 157. 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. Not available for students with credit in CRIM 357.

356. Legal Aspects of Corrections (3) S

Emerging rights of the convicted offender are explored with focus upon constitutional guarantees, appellate courts' decisions and their impact upon administration. Statutory laws with constitutional interpretations as they affect and implement the specialized areas of probation, parole and correctional institutions will be explored. Not available to students with credit in CRIM 354.

358. Legal Aspects of Security Systems (3) S

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) S

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) F,S

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) S

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) F,S

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) F,S

Theoretical foundations of stress based on current research findings with emphasis in 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) F,S

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.

422. Comparative Criminal Justice Systems (3) F,S

Survey of nationwide and worldwide criminal justice philosophy and technique. Evaluation of current major hypotheses; review of recent developments and contributions by agencies and academic institutions; review of current literature in the field.

423. Supervising Criminal Justice Employees (3) F,S

Prerequisites: Senior Standing. Open to Criminal Justice majors only. Techniques utilized in the supervision of criminal justice employees: instructional and disciplinary methods; supervisory investigations and reports; performance ratings.

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. Criminal Justice Resource Management and Budgeting (3) F.S

Prerequisites: Senior standing. Open to Criminal Justice majors only. A study of resource allocation, budgeting and strategic planning for the criminal justice manager.

431. Industrial Security Administration (3) S

Prerequisites: CRIM 331 or consent of instructor. Study of management and organizational theory applied to security environments. Impact of sociological principles on the organization, administration and evaluation of security programs.

*435. Theories of Physical Security (3) S

Prerequisite: CRIM 331 or consent of instructor. Review and application of principles of physical security to the protection of facilities, personnel, documents and products in select environments.

*437. Contemporary Issues in Security Systems (3) F

Prerequisites: CRIM 431. Challenges to security and the impact of contemporary social trends on the solution. An analysis of conflicting expectations and principles.

451./551. Criminal Justice Legal Systems (3) F,S,SS,W

Prerequisite: CRIM 353 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, Seminar.

468. Correctional Systems (3) F,S

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) F

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) S

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) F,S

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. Introduction to Research Methods in Criminal Justice (3) F.S

Prerequisite: Any basic course in statistics. Introduction to basic techniques in criminal justice research including library research, report writing, research design models, sampling techniques, questionnaire construction, interview techniques and participant observation.

481. Community Relations in Criminal Justice (3) F,S

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) F

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) F.S

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) S

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) F.S

Juvenile justice prevention and control programs; delinquency theories; police, court and correctional agencies' roles and responsibilities.

490. Independent Study (1-3) F,S

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.

*491. Political Terrorism (3) F,S

Comprehensive description of international political terrorism and the relationship to similar characteristics in the United States. The course will consist of lectures, class discussion and individual research on national and international terrorism, role of police and military, national and political violence, historical and current trends, and recommended criminal justice responses. Emphasis will be placed on criminal justice methods to deal with terrorism. Traditional grading only. (Seminar)

*492. Criminal Justice Response to Domestic Violence (3) F,S

Prerequisites: CRIM 301 or consent of the instructor. 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. Not available to students with credit in CRIM 499C Domestic Violence.

493. Computer Applications in Criminal Justice (3) F,S

Prerequisites: CRIM 101 or 301. Computer technology and its application to criminal justice. Use of data processing in training, research, field operations, supervision, and administration. Federal, state, local and private application programs. Civil liberties, data bank security and related problems, alternatives, and policy options. Not available to students with credit in CRIM 499: Computer Applications in Criminal Justice.

*495. Internship (3) F,S

Prerequisite: Consent of instructor. 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.)

496. Internship (6) F,S

Prerequisite: Consent of instructor. Supervised work experience in criminal justice agency in the immediate area. (Not open to employed criminal justice officials nor students with credit in CRIM 495.)

499. Special Topics in Criminal Justice (1-3) F,S

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.

Graduate Division

512. Problems in Urban Criminal Justice (3) S

Control and prevention of crime in urban settings; inter-agency relationships; the changing law enforcement processes.

531. Analysis of Security Systems(3) F,S

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) F

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) F,S,SS,W

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. Traditional grading only. Seminar.

581. Theories of Crime Causation and Prevention (3) F,S

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) F

Prerequisites: one undergraduate statistics 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) S

Prerequisites: One undergraduate research 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) F,S

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) F,S

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.

621. Seminar in Criminal Justice Administration (3) S

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) S

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) S

Intensive study and individual research of the problem areas in the broad spectrum of criminal justice.

630. Seminar on Organized Crime (3) S

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) S

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) S

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) F

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) F

Prerequisites: Advancement to Candidacy. 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) S

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) F,S

Prerequisites: CRIM 582 and CRIM 583 and 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) F,S

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) F,S

Prerequisites: Advancement to candidacy and CRIM 695. Student conducts field research to complete thesis project; data is analyzed and completed thesis prepared. Student must orally defend thesis. Students in thesis option must complete 4 units of CRIM 698. CRIM 698 not available to students in comprehensive examination option. Traditional grading only.

699. Integrated Analysis of Criminal Justice (3) F

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.

Gerontology
College of Health and Human Services

Director: Jeanne E. Bader Department Office: Home Economics, 128 Telephone: 985-4056 Faculty: Professors: Janet Black, Kay Cerny, Sigrid Deeds, Connie Evashwick, Gail Frank, Catherine C. Goodman, Sarath Gunitilake, Kenneth Gregory, Robert Harman, Joellen Hartley, Harold Hunter, Mary Jacob, Carol Kellett, James J. Kelly, Barry Lavay, Walter MooreAssociate Professors: Jeanne Bader, Michael Blazey, Karna Bramble, Janet Fisher, Kathy Halberg, Valerie McKay, Marilyn Potts, Susan Rice, Lee Skov Assistant Professors: Sharon Guthrie, Pamela Roberts, Medeleine Rose, Barbara White Visiting Professor: Igor Persidsky Emeritus Faculty: William E. Buckner, Dorothy L. Fornia, Byron C. Kluss, Wanda Pentecost, Vivian M. Sucher, Virginia Warren Department Secretary: Audrey F. Green

An Advisory Committee composed of representatives of diverse University departments and community service programs advises the

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 19 CSULB departments. These are Anthropology, Biology, Communicative Disorders, Educational Psychology, Finance, Health Care Administration, Health Science, Home Economics, Marketing, Nursing, Physical Education, Physical Therapy, Political Science, Psychology, Public Policy and Administration, Recreation, Social Work, Sociology, and Speech Communica-

Approved gerontology options include certificates at the undergraduate and graduate levels 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:

- a. Develop the desired competencies necessary for success in administrative roles related to the aging population.
- b. Acquire advanced education and professional training in gerontology in order to become administrators of state and federal programs, senior centers, retirement homes, and heads of programs in higher education.
- c. Enhance understanding of the concepts and application of administrative skills relative to various minority and ethnic populations.
- d. Acquire expertise in planning, developing and implementing innovative programs to meet the needs of older persons.
- e. Demonstrate the ability to conduct research focusing upon the myriad of problems in administration, design and evaluation of gerontological programs.
- Acquire an understanding of the values and ethics pertinent to gerontology.

Retention Criteria

- Maintain a GPA of 3.0 in all work completed at CSULB or all graduate work transferred to meet graduate requirements.
- Continued satisfactory progress toward the degree objective.

Advancement to Candidacy

- Satisfy the general university requirements for advancement to candidacy and departmental criteria for admission.
- Satisfactory completion of the CSULB Writing Proficiency Examination.
- Maintain a 3.0 GPA in all Graduate work completed at CSULB and transfer courses.
- 4. Completion of a minimum of six units of graduate work.
- Enrollment in the semester or summer session in which advancement takes place.
- Filing of the student program for the Master of Science Degree in Gerontology after completion of 4 above.
- 7. A written program approved by the Director of Gerontology and the College of Health & Human Services Associate Dean of Graduate Studies

Requirements for the Master of Science in Gerontology

- 1. A minimum of 37 units with at least 28 units of 500 and/or 600 series courses in Gerontology including 696, 697, and 698 (thesis), or
- A minimum of 37 units with at least 24 units of 500 and/or 600 series courses in Gerontology, including 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 is designed to train individuals as specialists in gerontology within a major area of study. Alumni work in community programs, health service 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 for the Certificate in Gerontology

- (1) A bachelor's degree;
- (2) 24 units distributed as follows: Required courses (12 units): GERN 400I, 464, AP 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 E. Bader, 128 Home Economics, (310) 985-4056.

Courses (GERN)

400l. Perspectives on Gerontology (3) F,S

Prerequisites: ENGL 100 or its equivalent and upper division status. Multidisciplinary presentation of the scientific and social issues in aging. (A) biophysical, (B) psychological perspectives, and (C) sociological concepts.

420./520. Personal Finance for the Aging (3) F

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 H EC 420 and H EC 520. (Lecture-discussion 3 hrs)

*424. Independent Living for the Disabled and Elderly (3) F,S

Prerequisite: H EC 321 or consent of instructor. Home management concepts as related to the physically disabled and the elderly in the near environment. Rehabilitation procedures for independent living. Emphasis on research findings in regard to functioning in the home and family. (Lecture-discussion 3 hours.)

*425. Gerokinesiatrics (3) F,S

Prerequisites: A/P 202, 207, GERN 400I, or consent of instructor. The rationale, organization and conduct of exercise programs for the older adult. (Lecture-laboratory.)

*439. Nutrition and Aging (3) F

Prerequisites: H EC 232 or 331 or AP 401. 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. (Lecture-discussion 3 hours.)

*464. Sociology of Aging (3) F,S

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 the United States. Cross-cultural and aging differences will be explored. Social analysis of age-related policies and exploration of alternatives. Same course as SOC 464. Traditional grading only.

*482. Physical Assessment and Aging (3) F,S

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. Aging and Mental Health (3) F,S

Intervention strategies, preventive and supportive, used in working with independent older persons. Social aspects and clinical research related to gero-psychiatry. Same course as SW 485.

*486. Communication Problems of Aging (3) F,S

Prerequisite: Communication Problems of Aging; 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.

*499. Special Studies (1-3) F,S

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) F

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

H EC 520 and H EC 420. (Lecture-discussion 3 hours.)

526. Economics of Aging (3) F,S

Prerequisite: GERN/H EC 420/520 or consent of instructor. Concepts specific to the economic consequences of an aging population and the economic status of the aged along with alternative policy choices and their consequences. (Seminar, 3 hours.) Traditional grading only.

550. Aging and Social Policy (3) F,S

Prerequisite: GERN 464/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) F,S

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 HEC 563.

592. Internship in Gerontology (3) F,S

Prerequisite: GERN 550 and GERN 600, consent of Director of Gerontology Program. Administrative internship in an approved agency or organization serving older adults. May be repeated to a maximum of six units for the degree. Traditional grading only.

600. Administration and Management of Programs for Older Adults (3) F,S

Prerequisite: Six units of gerontology graduate courses. Concepts and theories of administration and management of programs for the older adult (Seminar 3 hours.) Traditional grading only.

605. Seminar in Current Issues & Trends in Gerontology (3) F,S

Prerequisite: Investigation of current issues, trends, and research in administration management of older adults and programs from a multi-cultural perspective. (Seminar 3 hours.) Traditional grading only.

696. Research Methods (3) F,S

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) F,S

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) F,S

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.

acquired territories be embles for 10 probablists.

1994-1995 / Health Care Administration Program

Health Care Administration Program

Department of Health Science College of Health and Human Services

niques, for the health care system; (2) Department Chair: Sarath Gunatilake Program Director: Harold R. Hunter to provide continuing education for health administrators in practice as Department Office: Applied Arts well as others in administrative and and Sciences Building leadership positions in the administra-(AS 2), Room 115 tion of the delivery of health services; Telephone: (310) 985-4057 (3) to consult and to participate in Faculty: Professor: Adela de la community service activities which Torre, Connie J. Evashwick, Harold complement the instructional and re-R. Hunter: Associate Professor: search functions of the faculty and James H. Swan; Assistant provide appropriate learning experien-Professor: David Udy; ces for students; and (4) to conduct Emeritus Faculty: Robert E. Tumelty studies in the administration and Advisory Council: Sam Ervin, CEO operation of the health care delivery and President, SCAN Foundation; system which will contribute to Richard Toral, CEO ADMAR; Carmen development of faculty teaching Ness, Vice-President, Pacificare; abilities and overall professional David Jones, Director of Human growth. Resources Services, The program is designed for the McDonnell-Douglas Corporation; professional administrator or those Dan Heslin, Director of Employee who wish to become administrators Benefits, Rockwell International; within organizations which deliver per-Gustavo Valdospino, Executive sonal health care services. Two pat-Director, Los Alamitos Medical terns of preparation are offered: Center; Robert Nelson, Executive (1) Master of Science in Health Care Director, Harriman Jones Medical Administration; Clinic; Janet Parodi, President and (2) Certificate in Health Care Ad-CEO Community Hospital, Long ministration. Beach; Mary Piccione, Administrator, UC Irvine Medical Center; Michael

Potts, Director Orange County

French Center, Hillhaven

Corporation: Marika Bonner,

Building Trades Council AFL-CIO;

Executive Director, Orange County

Medical Association; Jeremiah Tilles,

MD, Associate Dean, UCI College of

Associate Administrator, St. Mary's

Medicine: David B. Tillman, M.D.,

Medical Center; Richard Travis,

Collins, President and CEO,

Ph.D., Director of Managed Care,

UCI, MC Garden Grove; Thomas

Memorial Medical Center; Tom

Manager, Southern California

Permante Medical Group,

Hospital.

The Program

Uram, Director, Health Care Agency

of Orange County; Peter Pellerito,

Kaiser-Permanente MCP; Jule V.

Moravec, Ph.D., Medical Center,

Director, Veteran's Administration

The Health Care Administration pro-

gram has four major objectives: (1) to

provide course work and related ex-

ministrators, skilled in the application

of organizational and managerial tech-

perience in order to prepare ad-

Feri Kidane, CEO John Douglas

The schedule of graduate and undergraduate courses offerings is in the regular Schedule of Classes.

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 and management of these systems including related sub-elements of management: 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.

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, and health insurance firms.

Requirements for Completion of the Certificate in Health Care Administration:

- (1) A bachelor's or advanced de-
- (2) Consultation with the Director of the program;
- (3) A minimum of eighteen units are required and may include:
- a. Forms of Organization and Operation: HCA 402/502
- b. Administration and Management: HCA 312, 314, 341*, 353*, 410 or the equivalent graduate course if applicable.

* Prerequisite: ACCT 210, 3 units. Prerequisites: ECON 201 and 202. Course substitutions may be made with the consent of the Director.

Master of Science in Health Care Administration

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.

Master of Science in Health Care Administration (code 6-1205)

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.

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.
- (5) A current and complete resume including references.
- (6) Submission of scores on recent Graduate Management Admission Test (GMAT).

Prerequisites:

(These courses or equivalent)

- (1) ACCT 201,
- (2) ECON 201 or 300,
- (3) C/ST 200, and
- (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. 502, 506, 510, 515, 524, 530, 535, 685, 695, 698, and HCA 451.

- 2. Completion of any one of the courses in site specialization: 536, 537, or 538.
- Completion of two approved courses within one of the functional specializations.
- Completion of an approved project and internship.

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) S

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) S

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) S

Prerequisites HCA 416 and statistics. 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) F,SS

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) F

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)

342. Budgeting for Health Care (3) S

Prerequisite: HCA 341. Focus is on the budgetary process, to include the development, management and control of budgets. Budgeting tools will

be reviewed and emerging techniques will be examined. (Lecture)

353. Marketing for Health Services Organizations (3) S

Prerequisites: ECON 201 and 202. Development of formulated programs based on analysis, planning, implementation, and control whose purpose is to bring about voluntary exchanges of values with target markets to meet the organizational goals of health institutions. Design of services to include pricing, communication, distribution, motivation and service.

402./502. The Health Care System (3) F,S,SS

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) F

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) F

Prerequisite: C/ST 200 Evaluation of concepts, analysis and design of management information systems; management decision models, strategies for implementing system changes. (Lecture)

422. Global Issues in Health Services Administration (3) F,S

Prerequisites: ENGL 100 and upper division standing. Contemporary problems in health services developed as an interrelated system. Rural health problems, issues of the elderty, 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 administration problems and issues will be analyzed. Traditional grading only. (Discussion,

445. Health Planning (3) F,W

Contemporary approaches to the administration of community-wide health planning (macro) and the administration of in-house facility health planning (micro) to include the development of the institutional plan.

450./550. Quality Assurance of Health Care (3) F

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) S

Prerequisites: Economics 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) F

Prerequisites: Introductory course in statistics, consent of instructor. 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.

480. Internship in Health Care Administration (3) F,S,SS

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) F,S

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.

495. Integrative Seminar (3) F

Prerequisite: Completion of all other required major courses. Integrative experience focusing on the student's ability to apply the concepts of health care administration as demonstrated by the development and defense of a research paper. Traditional grading only. (Seminar)

499. Directed Studies (1-3) F,S

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) F,S

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) F,S,SS

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) F,S

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) F

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) F

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) S

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) F'

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) F

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) S

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) F

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) S

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 Maiors.

538. Long Term Care Management (3) F

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) S

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) F,S

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) F,S,SS

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.

695. Integrative Seminar: Critical Analysis of the Health Care System (3) F,S

Prerequisites: 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) F,S,SS

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.

Students desiring information should contact the department office for referral to one of the faculty advisors: Directors of community health education, school health/education health care administration program, radiation therapy option, or graduate studies in health education.

Department Chair: Sarath Gunatilake

Department Office: Applied Arts

and Sciences (AS 2), Room 115

Deeds, Dale E. Evans, Connie J.

Forouzesh, Robert H. Friis, Susan C.

Giarratano, Sarath Gunatilake, Alan

Assistant Professor: David Udy;

Education: Liaison, CSULB/VA

Telephone: (310) 985-4057

Evashwick, Mohammed R.

C. Henderson: Associate

Joint Studies Institute:

Mohammed Forouzesh

Sigrid G. Deeds

Behavior Studies:

Stephanie Eatmon

Susan C. Giarratano

Department Secretary:

John A. Torney

Susan A. Steinhoff

The Department

tion Therapy.

Connie J. Evashwick

Director, Health Care

Professors: Gail W. Farmer;

Director, Community Health

Director, Graduate Studies:

Director, Center for Health

Director, Radiation Therapy:

Directors, School Health

Education: Dale E. Evans,

Administration: Harold R. Hunter

Emeritus Faculty: Donald A. Beegle,

The Department consists of areas of

study: Graduate study in Health Care

Administration (described separately

in this Bulletin), undergraduate and

graduate study in Health Education,

and an undergraduate option in Radia-

Peter A. Cortese, Catherine Irwin,

Marion B. Pollock, Alan R. Probst,

Faculty: Professors: Sigrid G.

Program in Health Education

Health education programs can help participants enhance health and prevent disease and disability, as well as help improve the well-being of people in organizations, such as schools and businesses, and communities. Health education training focuses on the environmental influences which include the cultural and

societal context in which health behavior occurs as well as the processes for developing and changing individual attitudes and behaviors toward health.

The focus of health education is upon planned change. Individuals are encouraged to take responsibility for their own health and to assume responsibility for the health of their families and communities.

As our society continues to change and health problems are redefined, it is increasingly apparent that future health advances will not come from new technology. Rather, positive difference will occur primarily as the result of community, group, and individual actions related to education. lifestyle, environment, and the organization and delivery of health ser-

An Undergraduate Handbook and a Graduate Handbook are available for students. Brochures describing the Undergraduate program, Credential program and the Master's program in Health Science are also 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, and (5) Master of Public Health Degree in Community Health Education.

Bachelor of Science in Health Science

The basic requirements for graduation with a B.S. Degree in Health Science consist of (1) completion of General Education requirements, (2) completion of degree major requirements, (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

Major Core Requirements: All Health Science majors must complete the reguired core. The core of the Health Science program contains five areas of competencies: Statistics, Program Development, Professionalism, Health 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.

Health Science

College of Health and Human Services

Requirements for the Bachelor of Science:

Required Core: 15 units.

(A) Statistics: H/SC 403 or ED P 419 (B) Program Development: H/SC

430 or 460 (C) Professionalism: H/SC 301 or

451 (D) Health Organization: H/SC 401; 420I or 450

(E) Health Promotion: H/SC 435

Option in Radiation Therapy (code 3-1212)

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 utilizing 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 Committee on Allied Health Education and Accreditation of the Medical Association in cooperation with the Joint Review Committee on Education in Radiologic Technology as well as the State of California, Department of Health Services, Radiologic Health Branch.

All Health Science majors and minors are responsible for requirements specified in the University Bulletin. Students are encouraged to sign up with a faculty advisor by contacting the Directors of Community Health Education or Graduate Studies. The faculty advisors will discuss and review the students' academic programs with them. Students who encounter difficulty with their programs should contact their advisors. Students also have the responsibility of keeping track of unit totals required for graduation and insuring that these unit requirements are met.

Requirements for the Option in Radiation Therapy (code 3-1212)

Preprofessional

During the preprofessional component of the Radiation Therapy Option, the student completes all of the general education requirements of the University as well as the following prerequisite courses: A/P 202, 207, PHYS 100A, B, MATH 112, PSY 100, ENGL 200, BIOL 200, C/ST 200, H/SC 200: one course selected from the following ANTH 150 or SOC 135. Department core courses H/SC 403, 429, 435 and may be taken during the preprofessional component. Several option prerequisite courses also fulfill GE requirements. The student will also schedule an appointment for consultation with 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 lock-step 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:

- Obtain personal malpractice insurance.
- 2. Maintain full-time student status during the professional program.
- Complete one designated session (6 weeks), each summer in the clinical setting.
- 4. Complete all of the following Upper Division 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.

Option in Community Health Education (code 3-1213)

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: AP 107, BIOL 200, CHEM 200; MICR 100, 101; SPAN 101A 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, HEC 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: SPCH 332, 334, 335.

Option in School Health Education (code 3-1215)

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 200; MICR 100 or BIOL 350; MICR 101; PSY 100; SPAN 101A or language equivalent approved by Department advisor.

Upper Division: H/SC 301, 401, 403, 405, 421, 422, 423, 425l, 427, 430, 435, 440; HEC 232 or 430; PSY 351 or SOC 335l; SPCH 332 or 335; SOC 336

Requirements for the Option in Health Care (code 3-1216)

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 on 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 Program:

Once admitted to the University, students are required to do 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, CHEM 200, MICR 100, 101.

Upper Division: (39 units): Required Core: 15 units (one course from each area); courses must be selected in consultation with an option advisor: (a) Statistics: H/SC 403, ED P 419; (b) Program Development: H/SC 430, 460; (c) Professionalism: H/SC 301 451; (d) Health Organization: H/SC 401, 420l, 450; (e) Health Promotion: H/SC 435; additional coursework: HCA 411, H/SC 452; one of the following: ANTH 353, HEC 430, H/SC 400, or SOC 462; one of the following: C/ST 200, PPOL 350, or ECON 300; An emphasis in either (a) Providing Service (12 units): HCA 410, 465, ED P 434 or NRSG 202, 202L, and one of the following: ANTH 319, GERN 482, NRSG 253, or NRSG 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, NRSG 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, 420l, 421, 422, 423, 425l, 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 School Health/ Credential Coordinator Advisor.

Graduate Program in Health Education Accredited by the Council on Education for Public Health:

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 examination of an in depth health topic. The graduate 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 Graduate Advisor.

Admission Requirements:

(1) Each applicant must request a copy of official transcript(s) of all work be sent to the Graduate Advisor 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 Department Graduate Advisor.

(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 will be credited to a student's program requirements upon Departmental acceptance to the graduate program.

(6) Submission of Part "B" of the CSU 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 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.

Advancement to Candidacy:

(1) Satisfy the general University requirements for advancement to candidacy;

(a) pass the Writing Proficiency Exam;

(b) have 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 Department Graduate Advisor and the Associate Dean of Academic Programs of the College of Health and Human Ser-

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 a copy of official transcript(s) of all work

be sent to the Graduate Advisor 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 Department Graduate Advisor.

(4) Acceptance by the University as a student with graduate standing.

(5) A maximum of 9 units of graduate work at the post-bac-calaureate level will be credited to a student's program requirements upon Departmental acceptance to the graduate program.

(6) Submission of Part *B* of the CSU 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 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.

(9) At least one year's full-time (or equivalent) paid or volunteer experience in Community Health Education or a closely related health role. Preference will be given to those with greater experience and ability.

Advancement to Candidacy:

- Satisfy the general University requirements for advancement to candidacy;
- (a) pass the Writing Proficiency Examination:
- (b) have 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 Department Graduate Advisor and Associate Dean for Academic Programs of the College of Health and Human Services.

Requirements for Completion of the Master of Public Health in Community Health Education:

- (1) A minimum of 42 units of approved upper division and graduatelevel 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) 3 units of electives at the 500/600 level;
- (c) H/SC 585, a supervised fieldwork experience (6 units)
- (2) A comprehensive written examination (see Department for guidelines).

Courses (H/SC)

Lower Division

150. Medical Terminology (1) S

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) F

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. (Laboratory 6 hours.) Traditional grading only.

210. Contemporary Health Problems (3) F,S

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) F,S

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) F,S

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) S

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) S

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. (Lecture-discussion 2 hours, Laboratory 1 hour.) Traditional grading only.

330. Topographic Anatomy (2) SS

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) SS

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) F,S

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) F,S

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) F,S

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) F,S

Prerequisites: SOC 250 or PSY 210 or equivalent. Analysis and interpretation of quantative 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) F,S

Prerequisite: H/SC 403 or equivalent. Design, use of standardized measurements, data colleciton, 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 hours)

411A. Health Science for Elementary Teachers (3) F,S

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) F.S

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) S

Prerequisites: AP 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.

420l. International Health (3) F,S

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) F,S

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) F,S

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) F,S

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) F,S,SS,W

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)

425l. Human Sexuality and Sex Education (3) F,S

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) F,S

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 sychosocial, 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) F,S

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) F,S

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) F,S

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)

439. Health Science in the Work Place (3) S

A survey of the range of roles and work settings filled by community health educators in Los Angeles and Orange Counties. There will be site visitations, observations of community health educators in the work setting and extensive discussion with health educators who fill a wide range of roles in the community.

*440. Applied Concepts of Health Science (4) F,S

Prerequisite: Health Science 430. Identification 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: AP 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) F

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) S

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.

*452. Research Design for the Health Care Professional (3) S

Analyses of current research designs applicable for the health care professional, including experimental and non-experimental design; interpretation of statistics; determination of validity and reliability; sampling and developing a research proposal.

*460. Health Care Program Development (3) F

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) F

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) S

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) F

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) F

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) F

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. Field Experience in Community Health Education (3) F.S

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) F,S

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,B. Internship in Health Care (1-3) F,S

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.

*499. Special Studies (1-3) F,S

Group investigation of selected topics. Topics to be announced in the *Schedule of Classes*. May be repeated for credit to a maximum of nine units with change of topic.

Graduate Division

500./400. Principles of Epidemiology (3) F.S

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.)

501. Public Health Organization (3) F

Prerequisite: Undergraduate major in Health Science or related field. Analysis of the components of public health from a historical, organizational and administrative perspective. Topics to include organization of health care delivery, financing health care, health care planning, evaluation of health care systems and analysis of contemporary public health issues.

503. Advanced Community Health Statistics (3) F,S

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) F,S

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 hourse)

524./424. Principles of Asian Health Sciences (3) F,S,SS,W

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) F,S

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) F,S

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) F

Identification and analysis of current trends, philosophies and issues in health science.

581. Curriculum Development in Health Education (3) F,S

Prerequisites: H/SC 430, 440. Principles of curriculum development; selection and evaluation of resource materials; theory and practice in measurement in health education.

585. Practicum in Community Health Education (6) F,S

Prerequisite: Consent of instructor. Extended fieldwork experience under guidance of faculty and field supervisors in an approved community health education program of an official or voluntary health agency. (12 consecutive weeks: 480 hours.)

590. Independent Study (1-3) F,S,SS

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) S

Prerequisites: H/SC 625 or consent of instructor. Process and techniques of community analysis and program planning.

625. Advanced Community Health Education (3) F,S

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) F,S

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 releivant experiences in the graduate program. Traditional grading only.

696. Research Methods (3) F,S

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) F,S

Prerequisite: Advancement to candidacy. Independent investigation of research problems in health education.

698. Thesis (1-3) F.S

Prerequisites: H/SC 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

rounding 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

Acting Department Chair:

Faculty: Professors: Gail C. Frank,

Mary Jacob, Carol E. Kellett, James

James E. Koval

Reiboldt.

Telephone: 985-4484

Department Office: Home

E. Koval, Ramses B. Toma;

Associate Professors: Jeanne

Bader, Helen Lee, Nilufer Medora,

Sue Stanley, Richard V. Tuveson;

Goldstein, Jacqueline Lee, Wendy

Buckner, Grace E. Dinerstein, Arlene

Maxine K. Keenan, Mary F. Kefgen,

Mable S. Moore, Bonnie J. Rader,

The faculty of the Department of

Home Economics seeks to prepare

graduate and graduate levels to enter

ing the quality of individual and family

life in the context of the near environ-

To prepare men and women to the

highest standards for professions in

home economics and related fields re-

quiring a bachelor's and master's de-

To prepare students to function

while enhancing their own physical,

To provide continuing education

To provide information to a diverse

and post-master's study in profes-

sional fields of Home Economics.

student population and the com-

munity about current services and

career opportunities as well as the

potential for emerging professional

careers in a changing society.

methodology and useful resources on

the university campus and in the sur-

To employ the most effective

ment through the lifespan.

within the diversity of human relations

psychological and emotional develop-

ment. The following objectives have

professions concerned with enhanc-

both women and men at under-

Mildred S. Rodriguez, Merna A.

Samples, Marilyn Vanderwarf,

Marion A. Wharton.

Graduate Advisor:

Richard V. Tuveson

Audrey F. Green

The Department

been articulated:

aree.

Department Secretary:

Assistant Professors: Avery E.

Emeritus Faculty: Dorothy W.

Baker, Zelpha Bates, William E.

A. Hamilton, Talma B. Hupfield,

Economics Building, Room 001

The Department of Home
Economics is accredited by the
American Home Economics Association (AHEA). The Didactic program in
Dietetics is Plan V program approved
by the American Dietetic Association
(ADA).

The Department of Home Economics offers programs of study leading to the bachelor of arts, bachelor of science, master of arts, and master of science degrees.

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 home economics and related fields.

Programs of study cover various aspects of the field — Child Development and Family Studies; Consumer Affairs; Food and Nutrition; Textiles, Clothing and Fashion Merchandising; and Home Economics Communication.

Requirements for the Ryan Single Subjects Teaching Credential, eligibility for membership in the American Dietetic Association, and American Society of Interior Designers, preparation for careers in home economics cooperative extension service, business and home economics in community service may be met.

The department serves the needs of students completing majors in other fields who find that certain aspects of home economics are important to their professional objectives or personal interest.

Students may prepare for careers in business, human services, cooperative extension, education and community service aspects of home economics. Listed below are some career possibilities:

Home Economics

College of Health and Human Services

Consumer Affairs:

consumer credit counselor, consumer education consultant, energy conservation specialist, financial counselor, merchandising manager, marketing consultant, sales representative

Child Development and Family Studies:

hospital/child life specialist, foster care, adoption, marriage and family counselor, maternal and child health director, child care teacher/director, consultant (children's media, clothing, toys), parent education and family life education

Dietetics and Food Administration:

clinical dietitian; consultant; community nutritionist; foodservice manager in hospitals, schools, universities, airlines, restaurants, and business; researcher in food industry and nutrition

Textiles, Clothing and Fashion Merchandising:

buyer-retailing, manufacturer's representative, product designer-pattern maker, store operations manager, stylist-fashion director, textiles (testing and evaluation) specialist

Home Economics Communication

adult and child care education, business, industry's communication services, cooperative extension service, government and community agency services

Home Economics Teacher Education:

teacher in junior and senior high school; education programs in cooperative extension; education program specialist in business, industry and government; teacher in adult or vocational education; teacher in California community colleges.

Bachelor of Arts in Home Economics

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 home economics 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. In addition, for design course work to be considered for transfer in the area of Interiors, a portfolio must be presented to an Interiors faculty advisor for review.

Requirements for the Bachelor of Arts in Home Economics

Students shall select an option in consultation with a faculty advisor and with departmental approval. Advisement materials are available in the Home Economics Department office. Programs of study and course requirements are:

Option in Child Development and Family Studies (code 2-1012)

Child Development and Family Studies: A/P 107 or 207; PSY 100; SOC 100 or ANTH 120; H EC 111, 111L, 211, 214, 232, 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 H EC 319, 323, 342, 410, 416A, 416B, 417, 418, 419, 433, or courses not taken above. Students must achieve a "C" or better grade in each course of the Child Development and Family Studies program to progress in the sequence of study.

Option in Home Economics Communication (code 2-1013)

Home Economics Communication prepares students for careers in teaching, business, industry and government

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; H EC 111 and 111L, 141, 232, 235, 241, 251, 254, 312l, 321, 323, 327, 333, 342, 353, 412 or 413, 433, 486, 492 or 314 or advisor approved alternate, 499; plus a minor in a supporting area to meet career goals. Candidates for the Ryan Single Subject Credential must take professional education requirements.

Option in Consumer Affairs (code 2-1014)

ECON 201 and 202 or 300; ENGL 100; ENGL 101 or 300 or 317; PSY 100; CHEM 100 or 111A or 201A; ACCT 201; H EC 232, 241, 251 or 252 or 253, 312I, 321, 323, 326, 420, 422, 425, 426, 427, 429, 486, 492 or 497, 499; MKTG 300, 490, plus 9 units of advisor approved electives. Students must achieve a "C" or better in each course of the Consumer Affairs program to progress in the sequence of study.

Option in Fashion Merchandising (code 2-1015)

CHEM 100 OR 111A OR 201A; ECON 201 and 202 or 300; ENGL 101 or 300 or 317; HIST 111 or 131; PSY 100; SOC 100 or ANTH 120; H EC 232, 251, 252 or 254, 253, 255, 312I, 321, 353, 355, 450 or 453; 455, 456, 457, 459, 486, 492 or 497, 499; ACCT 201; IS 240; MKTG 300; plus 9 units of advisor approved electives. Students must achieve a "C" or better grade in each course of the Fashion Merchandising program to progress in the sequence of study.

Apparel Design and Merchandising Concentration

AP 107/207; CHEM 100 or 111A; ECON 201 and 202 or 300; ENGL 101 OR 300 OR 317; HIST 111 or 131; PSY 100; SOC 100 or ANTH 120; H EC 232, 251, 253, 254, 255, 312I, 321, 353, 355, 357, 450 or 454, 452, 453, 455, 456, 457, 459, 486, 492 or 497; 499; ACCT 201; IS 240; MKTG 300. Student must achieve "C" or better grade in each course of the Apparel Design and Merchandising concentration to progress in the sequence of study.

Option in Textiles and Clothing (code 2-1016)

A/P 107 or A/P 207; CHEM 100 or 111A or 201A; ECON 201 and 202 or 300; ENGL 101 or 300 or 317; HIST 111 or 131; PSY 100; SOC 100 or ANTH 120; H EC 232, 251, 253, 254, 255, 312l, 321, 353, 357, 450 or 457, 452, 453, 454, 456, 459, 486, 492 or 497, 499; MKTG 300; plus 9 units of advisor approved electives. Student must achieve "C" or better grade in each course of the Textiles and Clothing program to progress in the sequence of study.

Bachelor of Science in Dietetics and Food Administration

Students must complete a minimum of 128 units to receive the Bachelor of Science degree in Dietetics and Food Administration. In addition to fulfilling general education requirements, a minimum of 40 units in Home Economics is required, 24 of which must be upper division. The courses which will provide these units are determined by the emphasis of study chosen by the student. The three emphases of study are Nutrition and Dietetics, Food Science, and Foodservice Systems Management. The Nutrition and Dietetics emphasis 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.

Requirements for the Bachelor of Science in Dietetics and Food Administration (3-1018):

Home Economics courses required of all students in each of the three emphases include: H EC 232, 234, 235, 3121, 321, 331A, 332, 336 and 499.

Supporting professional courses for all emphases include ENGL 100, SOC 100, MICR 210, A/P 207 or 209 or 342 and 342L; BIOL 260 or ED P 419 or C/ST 210 or IS 310 or H SC 403.

Students may enroll in the CSULB Master of Science degree in Nutritional Science to further enhance their knowledge and competencies. Refer to the ADA Approval Pre-Professional Practice Program (AP4) description which follows.

Courses required to complete the selected emphasis of study are listed below

Nutrition and Dietetics Emphasis

Minimum Course Requirements (in addition to the common Home Economics and supporting professional courses):

Lower Division: CHEM 111A, PSY 100, IS 240. ENGL 101 or 317,

Upper Division: CHEM 327, 448 and 449, HRM 361 or PSY 381, HEC 331B, 333, 436, 436L, 438, 461, 486, and three units of HEC 490 or 492 or 497. Additionally, a minimum of 6 units of electives is selected in consultation with a faculty advisor.

If a stronger foundation in chemistry is desired, CHEM 321A and 321B 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.

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 preprofessional practice program. The didactic program is currently granted approval status by the American Dietetic Association Council on Education, Division of Education Accreditation/Approval, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and the United States Depart-

ment 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 H EC 335 and H EC 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 a student's didactic academic program by the CSULB Didactic Program Director requires that the student complete courses HEC 337, 436L and 438 at CSULB.

Food Science Emphasis

Minimum Course Requirements (In addition to the common Home Economics and supporting professional courses):

Lower Division: CHEM 111A, CHEM 111B, PSY 100 and 230, MATH 115S or 120, PHYS 100A and a speech elective selected by advisement

Upper Division: CHEM 327 and 448 or equivalent, MICR 473, MKTG 300, ENGL 317 or course approved by advisor, H EC 338, 432, 435, 464, a minimum of three units of H EC 492, and a minimum of one unit of H EC 497.

Foodservice Systems Management Emphasis:

Minimum Course Requirements (in addition to the common Home Economics and supporting professional courses):

Lower Division: CHEM 201A, ACCT 201, ENGL 101 or 317, PSY 100 and IS 240.

Upper Division: CHEM 201B, HRM 361 or PSY 381, ECON 300 (or ECON 201 and 202), ACCT 310 or MKTG 300, H EC 331B or 433, 333, 335, 337, 486, and three units of H EC 492 or 497.

Additionally, a minimum of 8 units to be selected from the following in consultation with a faculty advisor: HEC 334, 434, 437, 464, and additional units in HEC 492.

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 for the Certificate In Foodservice Systems Administration

- (A) A bachelor's degree in dietetics/food administration, business administration, or other related fields;
- (B) Satisfactory completion of the following courses:
- (1) Nutrition: H EC 232; (2) Food Preparation and Service: H EC 235,333;
- (3) Foodservice Management: H EC 334, 335, 337, 434, 492; (4) Business Administration: ACCT 201, HRM 361, 362, 440, MGMT 300, MKTG 300, IS 240;
- (5) Related Fields: CHEM 201A and 201B, ECON 300.
 (C) Maintain a GPA of 2.5 in the
- courses of the program and overall; (D) Consultation with and certification of successful completion by the

ment of Home Economics.

Courses taken under the Credit/No
Credit grading option may not be applied to this Certificate program.

Director of the Program in the Depart-

Child Development Certificate (code 1-1040)

Child Development in the Home Economics 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. Field-work opportunities where students have direct experiences with children and families in the community are provided. Specifically, the program qualifies the students to apply for the Children's Center Instructional and Supervisory Permits from the State of California which are required for teaching in and directing of child care programs.

The Certificate in Child Development may be earned in conjunction with the baccalaureate degree or teaching credential in home economics or related field. Courses offered for the certificate may be the same ones used to satisfy, where applicable, major, minor, credential, or general education requirements.

Requirements for the Certificate:

- (1) Bachelor's Degree in Home Economics or related field;
- (2) 36 units distributed as follows: Lower division (12 units): H EC 111, 111L, 211, 214, 232.
- Upper Division (24 units): H EC 311 or 314, 312l, 411, 413, 414 or 415, 416A, 418.

Certification of 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, Home Economics.

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 Home Economics

Each applicant should request that a copy of the official transcript of all college course work be sent to the Coordinator of Graduate Studies in the Home Economics Department in addition to the copies required by the Office of Admissions and Records.

Prerequisites:

- (1) A bachelor's degree with a major in home economics; or
- (2) A bachelor's degree with a minimum of 24 units of upper-division courses in home economics;
- (3) An undergraduate overall GPA of at least 3.0. 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 Coordinator of Graduate Studies;
- (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 prereq-

uisite(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 Coordinator of Graduate Studies.

Advancement to Candidacy:

- (1) Satisfy the general University requirements for advancement to candidacy;
- (2) Completed 9 units of graduate courses including Home Economics 696:
- (3) Successful completion of Writing Proficiency Examination;
- (4) Approval of the Coordinator of Graduate Studies, and Associate Dean of the College of Health and Human Services.

Requirements for the Master of Arts in Home Economics (code 5-1020)

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 Home Economics;
- (2) At least 18 units of 500/600-level courses in Home Economics including H EC 696;
- (3) An approved course in statistics:
- (4) A thesis or creative project, H EC 698, plus oral thesis or creative project presentation.

Comprehensive Examination Students:

- (1) Completion of a minimum 36 units of approved upper-division and graduate course with a minimum of 21 units in Home Economics;
- (2) At least 18 units of 500/600-level courses in Home Economics including H EC 696;
- (3) An approved course in statistics;
- (4) A mini-research project, H EC 697, and a comprehensive examination.

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:

- Specialize in clinical/community nutrition, food science and foodservice systems management;
- 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 Pre- Professional Practice Program (AP4);

3) 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 Home Economics in addition to the copies required by the Office of Admissions and Records. Three letters of recommendations and the 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. Admission to the program is dependent on approval by the department Graduate Coordinator.

Prerequisites:

- I) 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. Students who show academic potential for postgraduate study as judged by the GRE score may be given conditional status;
- 2) Students in a conditional status must take at least 9 units of qualifying courses designated by the faculty in the specified subject matter area and the Graduate Coordinator, to achieve a GPA of 3.0 within one year of admission. These qualifying courses may not be included in the graduate program of study. Conditional status must be removed prior to enrolling in 500/600 level courses;
- Students from other disciplines will be required to complete prerequisite courses before enrolling in 500/600 level courses;
- 4) 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 H EC 331 A 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, H EC 331 B 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;

5) 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 H EC 696;
- Successful completion of Writing Proficiency Examination;
- 4) Approval of the Graduate Coordinator, the Associate Dean of Graduate Studies, Research and Faculty Affairs, College of Health and Human Services.

Requirements for the Master of Science in Nutritional Science:

- Completion of a minimum of 34 units of approved upper- division and graduate courses;
- At least 18 units of 500/600 level courses in Home Economics which include H EC 696, 697, 698 and those specified for the 3 emphases;

Clinical/Community Nutrition: H EC 530A, 530B, 562, 591B or 635 Food Science:

H EC 533, 535, 562, 564, 597, 635, 532 pending course approval Foodservice Systems Management:

- H EC 533, 534, 562, 592, 635
 3) An advanced statistics course: EDP 519 or H/SC 503 or BIOL 563 or
- 4) Selection of appropriate electives by advisement to meet the competencies of each emphasis:
- 5) An overall GPA of 3.0 or better;
- 6) A written thesis
- Oral presentation of the thesis.

American Dietetic Association (ADA) Approved Pre- Professional Practice Program (AP4)

The Department of Home
Economics offers a combined Master
of Science in Nutritional Science and
AP4 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 AP4, the student will be eligible to write the Registration Examination for Dietitians.

The AP4 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 AP4. The field experience is conducted off campus at a variety of excellent facilities. Opportunities exist in acute and longterm 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:

- Completion of Plan IV/V 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 AP4
 Director including three letters of
 recommendation, application fee,
 copies of all college transcripts and
 personal interview with Program Direc-

Program Requirements

Upon satisfactory completion of the Professional Practicum in Dietetics, H EC 591A and Seminar in Dietetic Practice, H EC 591B, and completion of two of the four core graduate courses, H EC 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 H EC 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 AP4. Students should contact the AP4 Director for complete details on this program.

Courses (H EC)

Home Economics
Communication and General
Home Economics

Upper Division

*486. Teaching-Learning Strategies in Home Economics (3) F,S

Utilize the principles and concepts of each area of home economics 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 Home Economics (3)S

Prerequisite: EDSS 300 H or teaching experience or consent of instructor. Utilizing knowledge and skills derived from the field of home economics as a basis for offering occupational opportunities for youth and adult through planning programs in school and community. (Lec-discussion 3 hrs)

*490. Special Topics (1-3) F,S,SS

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.)

492. Internship In Home Economics (3) F,S,SS

Prerequisites: Student must be a Home Economics major, have senior standing, a 2.5 GPA overall or a 3.0 GPA in the major and approval of a faculty member. Child Development and Family Studies: H EC 414 or 415 and 412 or 413 or 419; Consumer Affairs: H EC 321, 323, and 326; Fashion Merchandising: H EC 353, 450 or 457 and 455; Food Science: H EC 331B, 332 and 333; Foodservice Systems Management: H EC 331B, 332, 333, and 335; Gerontology: GERN 400, GERN 464/SOC 464, PSY 365 or HDEV 357, and A/P 401; Interiors: Environmental Factors: H EC 344A and 344B; Nutrition and Dietetics: H EC 331A, 331B, 332 and 333; Textiles and Clothing: H EC 357, 453 and 454. All students must have a "C" or better in major courses to be eligible.

Course Description: Field experience of 120 hours in which the student assumes a self-directed, responsible role in an agency, business or other community setting with professional supervision, consultation and evaluation. Placement must be approved by the instructor. The course may be repeated for a maximum of six units. (Seminar 3 hours.)

497. Directed Studies (1-3) F,S,SS

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 with consent of department chairperson. (Supervised activities.)

499. Perspectives in Home Economics (3) F,S,SS

Prerequisites: H EC 321 and 12 units of upper division coursework in Home Economics. Integrative overview of Home Economics as a profession in historic, contemporary and international perspectives. Emphasis on quality of life for individuals and families, contemporary issues, future directions, professional identity and leadership, public policy and marketing approaches. (Lecture-discussion, 3 hours.)

Child Development and Family Studies

Lower Division

111. The Preschool Child (2) F,S

Prerequisites: PSY 100, SOC 100 or 142 or ANTH 120 (may be taken concurrently), or equivalent. Behavior and development in early childhood, with emphasis on the interaction of parents, children and teachers. (Lecture 2 hours.) (111+111L CAN H EC 14)

111L. Observation of Preschool Children (1) F,S

Prerequisite or concurrent registration in H EC 111. Concepts underlying behavior and development in early childhood are applied through direct observation of young children in the preschool environment. (Laboratory 3 hours.) (111+111L CAN H EC 14)

211. Guiding Young Children (3) F,S

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) F,S

Prerequisites: H EC 111 and 111L; or HDEV 307l 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)

Upper Division

311. Prenatal Development and Infancy (3) S

Prerequisites: Upper-division standing, A/P 107 or 207, H EC 111 and 111L. Human development from conception through prenatal development, childbirth, the neonatal period, infancy and tod-dlerhood with emphasis on the various aspects of development and the environmental social factors essential for human growth. (Lecture-discussion 3 hours.)

312l. Family and Personal Development (3) F,S,SS,W

Prerequisites: PSY 100, SOC 100 or 142 or ANTH 120, ENGL 100 and upper-division status. Inter-disciplinary 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) F

Prerequisites: H.EC 111 and 111L, or ED P 301 or PSY 361 or HDEV 307; or consent of instructor. Behavior and development in middle and late childhood and adolescence, with emphasis on individual and cultural differences. (Lec-disc. 3 hrs)

319. Family Stress and Coping (3)S

Prerequisites: H EC 312I 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 (Lec-discussion 3 hrs)

358. Fathers and Fathering (3) S

Prerequisites: PSY 100 and SOC 100 or H EC 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.)

410. International Families: Families in Cross-Cultural Perspectives (3) S

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) F,S

Prerequisite: Upper-division standing, H EC 311 or 314, or ED P 301 or HDEV 307 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) F,S

Prerequisites: Upper-division standing, H EC 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. (Lec-discussion 3 hours.)

*413. The Family in the Community (3) F,S

Prerequisites: Upper-division standing, H EC 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. (Lec-discussion 3 hrs.)

414. Fieldwork with Preschool Children (3) F,S

Prerequisites: H EC 111 and 214 or consent of instructor. Supervised teaching/learning experience with preschool children including development of skills for observation and assess-

ment 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) F,S

Prerequisites: H EC 111 and H EC 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. (Lec 1 hr, lab 6 hrs)

416A. Introduction to Administration and Supervision of Child Development Programs (3) F

Prerequisite: H EC 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) S

Prerequisite: H EC 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) F

Prerequisites: H EC 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) S

Prerequisites: H EC 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) F

Prerequisites: H EC 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.)

Interiors: Environmental Factors

Lower Division

The Interiors: Environmental Factors Option housed within the Department of Home Economics has been merged with the Design Department in the College of the Arts. The Department of Home Economics is no longer accepting applications for the Interiors: Environmental Factors Op-

tion. All students interested in Interior Design should consult with the Department of Design.

Program accredited by the Foundation of Interior Design Education and Research (FIDER). ART 181 or 100, H EC 141, 142, 143, 232, 241, 312, 321, 340, 342, 344A, 344B, 348, 353, 433, 441A, 441B, 446, 447, 492, 499; TED 247, 347; CHEM 100; plus 9 units of advisor approved electives. Student must achieve "C" or better in each course of the Interiors program to progress in the sequence of study. Transfer credit for courses completed at another college must be approved by faculty in a portfolio review.

141. Techniques in Applied Arts(3) F,S

Basic concepts and techniques of applied art including use of media and art equipment, presentation techniques and graphic communication. (Laboratory 6 hours)

143. Color: Theory and Application (3) F,S

Essential theories of color perception. Applied problems dealing with color interaction phenomena, effects and functions. (Disc. 3 hrs.)

241. Contemporary Housing and Interiors (3) F,S

Analysis of the factors in design of human environments. Consideration given to psychological, functional, technical and aesthetic concepts. (Lecture-discussion 3 hrs.)

242. Techniques of Applied Art II (3) F

Prerequisites: H EC 141 and DESN 142. Advanced concepts and techniques of applied art including organization of design program information into scheduled production of 3-dimensional project, relating abstract concepts of orthographic drawing to a 3-dimensional form, presentation of project in a variety of media. Traditional grading only. (Laboratory 6 hours.)

Upper Division

341. Interior and Exterior Materials and Resources (3) F

Prerequisite: DESN 142. Interior and exterior materials and resources as related to Interiors with compliance to the Uniform Building Code. Creative applications of processes and materials. (Discussion 3 hours).

342. Environmental Factors in Housing and Communities (3) F,S

Traces the factors which have influenced urban environments in the United States and their effect upon man now and in the future. Sociological, psychological, architectural, legislative, economic and technological factors are investigated. Their influence upon shelter, architecture, urban environments and man are explored. (Lecture-discussion 3 hours.)

344A. Interiors (4) F,S,SS

Prerequisites: H EC 142, 143, 348, 446, TED 347 and consent of instructor. H EC 446 may be taken concurrently. Design principles as applied to interiors. Analysis of materials and elements used in environmental planning with emphasis on residential design. (Discussion 3 hrs, lab. 3 hrs)

344B. Interiors (4) F,S,SS

Prerequisites: H EC 344A. Commercial interior design. Studio problems with emphasis on open and closed office space planning. Exploration of architectural and interior commercial systems. (Discussion 3 hours, laboratory 3 hours).

348. Perspective in Architecture and Interiors (2) F,S,SS

Prerequisites: ART 100 or 181, TED 247 or DESN 142. Perspective drawing of architectural interiors and exteriors. Includes various perspective approaches: shades, shadows, pen and pencil techniques. Same course as TED 348. (Laboratory 4 hours.)

*440. Environmental Factors and the Urban Family (3) F

Prerequisite: H EC 342 or consent of instructor. Critical analysis of the urban family's environment including aspects of shelter, community and the city. (Lecture-discussion 3 hours.)

*441A. Advanced Interiors (4) F.S.SS

Prerequisites: DESN 369; H EC 344A, 344B, 348, 353, 446. Research, development and design aspects in planning major commercial interior environments. (Discussion 3 hrs, lab 3 hrs).

*441B. Advanced Interiors (4) F,S,SS

Prerequisites: H EC 441A. Individual solutions to planning major commercial interior environments. (Discussion 3 hrs, lab 3 hrs.)

*443. Business Principles and Practices for Interior Designers (3) F

Organization, structure, business procedures, contracts, regulations, programming installations, compensation and fees, marketing and public relations in the interior and environmental design business. (Lec-discussion 3 hrs)

*445. Computer Graphics for Interiors and Architecture (3) S

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. (Discussion 2 hours, Laboratory 3 hours.)

*446. Presentation Techniques: Architecture and Interiors (3) F,S,SS

Prerequisites: TED 348 or H EC 348 and consent of instructor. Techniques in preparing two and three dimensional architectural and interior renderings and presentations. Same Course as TED 446. (Laboratory 6 hours.)

*447. Rapid Techniques: Architecture and Interiors Presentations (2) F,S,SS

Prerequisites: H EC 446 or TED 446 and consent of instructor. Methods of visual communication used in architecture and interior presentation with emphasis on development of professional formats using abstraction, fluidity and rapid techniques. Same as TED 447. (Laboratory 4 hours.)

Consumer Affairs

Upper Division

309l. Consumer Survival in the Legal & 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. (Lec-activity 3 hrs.)

321. Family Resource Management (3) F,S,SS

Prerequisite: Upper-division standing. Examination of basic principles of family management. Application of principles to personal and family settings. (Lecture-discussion 3 hours.)

323. Personal and Family Financial Management (3) F,S,SS

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) F

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.)

327. Household Equipment Technology (3) F

Prerequisite: Upper-division standing. Principles and consumer information needed for the selection, care and operation of equipment for the home environment. Application of basic physical science principles. (Discussion 2 hours, lab 3 hrs)

420./520. Personal Finance for the Aging (3) F

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. (Lec-disc. 3 hrs)

*422. Housing Policies: Public and Private (3) S

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 the Disabled and Elderly (3) S

Prerequisite: H EC 321 or consent of instructor. Home management concepts as related to the physically disabled and the elderly in the near environment. Rehabilitation procedures for independent living. Emphasis on research findings in regards to functioning in the home and family. (Discussion 3 hours.)

*425. Personal Financial Planning Analysis (3) S

Prerequisite: H EC 323 or consent of instructor. Analysis and protection of personal and family resources; planning and forecasting goals; development of financial strategies utilizing insurance, investments, tax management, pensions, wills and trusts. (Lec-discussion 3 hrs)

*426. Family Financial Problems (3) S

Prerequisite: H EC 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) S

Prerequisite: H EC 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) S

Prerequisite: 400-level 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) F

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.)

Food and Nutrition

Lower Division

232. Introductory Nutrition (3) F,S

Essential nutrients, their physiological functions and human needs during the life cycle; food sources as applied to selection of an adequate diet; problem encountered providing food to meet nutritional needs; food additives and consumer protection. (Lecture-discussion 3 hours.) (CAN H EC 2)

234. Orientation to Dietetics and Food Administration (2) F

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) F,S

Prerequisites: CHEM 111A or CHEM 201A. 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.) (CAN H EC 8)

Upper Division

301. College Dining Services and Bookstore Administration (3) S

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.

331A. Fundamentals of Human Nutrition (3) F

Prerequisites: HEC 232; A/P 207 or 209; CHEM 201B or 327 or equivalent. Nutritional needs with emphasis on the physiological and chemcal foundation for these needs; factors influencing nutrient needs. (Lec-discussion, 3 hrs)

331B. Fundamentals of Human Nutrition (3) S

Prerequisites: H EC 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) F,S

Prerequisites: CHEM 201B or 327, H EC 235, or equivalent. Composition and structure of foods; chemical changes in foods 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.)

333. Food Production Systems I (3) F,S

Prerequisites: H EC 232, 235, 321. Factors which influence family meal plans; food selection, preparation and service in relation to management of time, energy and money. Introduction to commercial practices. (Lecture-discussion 2 hours, laboratory 3 hours.)

334. Fundamentals of Food Service Sanitation & Safety (3) F

Basic biological information underlying good sanitary practices. Food-borne and waterborne diseases. Procedures for sanitation in the food-service 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) F, S

Prerequisites: H EC 333. Facilities of various types of large quantity food operations are utilized to provide students with production and operational experiences - menu planning, costing, standardizing recipes, serving and merchandising. Will be able to obtain Foodservice Sanitation Certificate of the National Restaurant Association. Field experiences include hospitals, restaurants, hotels, school districts, university dining halls, in-flight feedings and senior programs. (Lecture-discussion 2 hrs, lab 3 hrs.)

336. Cultural Aspects of Food and Nutrition (3) S

Prerequisites: PSY 100 or SOC 100 or ANTH 120 or equivalent; H EC 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. (Lec 3 hrs)

337. Foodservice Systems Management (3) S

Prerequisites: H EC 333 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) F

Prerequisites: H EC 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) F,S

Prerequisites: CHEM 201B, A/P 209, 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.)

430. Nutrition and Health (3) S

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) F

Prerequisites: CHEM 201B OR 327, H EC 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 the products. Experimental Laboratory Problems. (Lecture 2 hours, Lab. 3 hours.)

433. Nutrition in the Life Cycle (3)

Prerequisite: H EC 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. (Lec-discussion 3 hrs.)

*434. Cost Control in Food Service Operations (3) F

Prerequisite: H EC 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. (Lec-discussion 3 hrs)

435./535. Food Processing, Preservation and Packaging (3) SS

Prerequisites: H EC 332 or consent of instructor. Methods and research findings in food processing, preservation and packaging. Application of principles, and assessment of nutritional, physical, and organoleptic qualities. Evaluation of chemical additives. Microbiological aspects of food safety. Traditional grading only. (Lec-discussion 2 hrs, lab 3 hrs)

*436. Advanced Nutrition (3) F

Prerequisites: H EC 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) F,S

Prerequisites: H EC 436 (may be taken concurrently), CHEM 449. Designed to provide training in nutrition assessment and nutrition counseling. Use 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) F Prerequisites: H EC 335, H EC 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

*438. Diet Therapy (3) S

cussion 3 hours.)

Prerequisites: H EC 436, 436L (may be taken concurrently). Therapeutic nutrition. Metabolic changes in specific pathological conditions; dietary modifications used for treatment. (Lecture-discussion 3 hours.)

and observe operating principles. (Lecture-dis-

439. Nutrition and Aging (3) F

Prerequisites: H EC 232 or 331A or A/P 401. 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. (Lecture-discussion 3 hours.)

461. Community Nutrition (3) F

Prerequisites: Upper-division standing; H EC 331B. Survey of nutrition programs in community. Techniques of program planning, implementation, management evaluation. (Lec-disc, 3 hrs)

464./564. Sensory Analysis of Foods (3)

Prerequisites: H EC 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.)

Textiles, Clothing and Fashion Merchandising

Lower Division

251. Professional and Personal Apparel Selection (3) F,S

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) S

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. (Lec-disc 3 hrs)

253. Survey of Textiles for the Contemporary Individual (3) F

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) F

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) F,S

Organization, structure and interrelationship of industries and services that comprise the business of fashion; terminology, designers, trade organizations and publications. Professional opportunities explored. (Lec-discussion 3 hrs)

Upper Division

351. Fashion Promotion and Sales (3) F,S,SS

Prerequisites: HEC 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.)

353. Textiles (3) F,S,SS

Prerequisites: CHEM 100 or 111A or 201A or consent of instructor. Interrelationship of fiber, yarn structure, fabric geometry and finishing treatments to the textile's appearance, comfort, durability and maintenance. (Lecture-discussion 2 hours, laboratory 3 hours.)

354. Apparel Design: Analysis of Garment Design, Tailoring and Production Processes (3) F,S

Prerequisites: H EC 254 or consent of instructor. Analysis of traditional and contemporary processes in the design and production of tailored apparel. Application to apparel design and production processes for couture, ready-to-wear and individually produced garments. (Discussion, 2 hours, laboratory 3 hours.)

355. Fashion Merchandising Planning and Control (3) F

Prerequisites: ELM passage; ACCT 201; IS 240 or C/ST 200; H EC 251, 255. 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 plan procedures. (Discussion 3 hours.)

357. Apparel Design: Flat Pattern (3) S

Prerequisite: H EC 254 or equivalent. Exploration of the total design concept as it applies to pattern manipulation. (Discussion 2 hours, laboratory 3 hours.)

450./550. Cultural Bases of Textiles & Apparel Design (3) S

Prerequisites: H EC 251, 252 or 254, 353, ANTH 120 or SOC 100 or SOC 142 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. Impact of other cultures on Western fashion. Course may be repeated for up to 6 units with assignments of increasing levels of difficulty. (Seminar 3 hrs)

*452. Apparel Design: Draping (3) F

Prerequisites: H EC 254 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. Advanced Textiles (3) S

Prerequisites: H EC 353. Chemical and physical structure of fibers and finishes and physical structure of yarns and fabrics in relation to serviceability. (Discussion 2 hours, Lab. 3 hours.)

*454. Experimental Clothing (3) S

Prerequisites: H EC 254, 357 and 452 or consent of instructor. Solving clothing construction problems through the experimental process. Evaluation of equipment and supplied used in construction; garment recycling; individual investigation of a creative design process; techniques for using challenging fabrics. (Discussion 2 hours, Laboratory 3 hours.)

455. Fashion Merchandising (3) F

Prerequisites: H EC 252 or 254, 353 and 355 or consent of instructor. Application of merchandising concepts for budgeting, planning, buying, promotion, and selling of fashion goods and apparel in retail organizations. Traditional grading only. (Discussion 3 hours.)

456. Historic Perspectives of Fashion (3) F,S

Prerequisites: H EC 251, HIST 111 or 131 or consent of instructor. Social, political, economic, and religious forces which affect styles of clothing from antiquity to the present day. Emphasis on the relationship of historic styles to current fashion. Primary focus on the fashion influences of the western world. (Seminar 3 hours.)

457. International Textiles and Apparel (3) F

Prerequisites: ECON 201 and 202 or 300, H EC 253, 353 or consent of instructor. International, political and economic issues relevant to the textile and apparel industry. Emphasis on understanding international aspects of the textile and apparel industry in the United States. Traditional grading only. (Seminar 3 hours.)

*458. Theories and Issues in Textiles and Clothing (1-3) F,S

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 hours.)

*459. Apparel Behavior (3) F,S

Prerequisites: ECON 200, PSY 100 and SOC 100. Psychological, sociological and economic influences on the selection of individual and family clothing. (Seminar 3 hours.)

Graduate Division

511. Family Theories (3) S

Prerequisite: H EC 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. (Sem 3 hrs.)

515. Perspectives in Human Development (3) F

Prerequisite: H EC 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. (Sem 3 hrs)

520./420. Personal Finance for the Aging (3) F

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) F,S

Prerequisites: 400-level course in home management or family finance; PSY 351 or SOC 335. Indepth 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) F

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. (Sem 3 hrs.)

530A. Carbohydrates, Lipids and Proteins (3) F

Prerequisites: H EC 436, 436L, BIOI 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) S

Prerequisites: H EC 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. (Sem. 3 hrs)

531. Advanced Community Nutrition (3) S

Prerequisites: H EC 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)

532./432. Food Analysis (3) F

Prerequisites: CHEM 201B or 327, H EC 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 the products. Experimental Laboratory Problems (Lecture 2 hours, Laboratory 3 hours.)

533. Recent Advances in Food Science (3) S

Prerequisites: H EC 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 Foodservice Systems Research (3) F

Prerequisites: Graduate standing in food and nutrition or related fields. H EC 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) SS

Prerequisites: H EC 332 or consent of instructor. Methods and research findings in food processing, preservation and packaging. Application of principles, and assessment of nutritional, physical, and organoleptic qualities. Evaluation of chemical additives. Microbiological aspects of food safety. Traditional grading only. (Lecture-discussion 2 hrs., lab 3 hrs.)

550./450. Cultural Bases of Textiles and Apparel Design (3) S

Prerequisites: H EC 251, 252 or 254, 353, ANTH 120 or SOC 100 or SOC 142 or consent of in-

structor. 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. Impact of other cultures on Western fashion. Course may be repeated for up to 6 units with assignments of increasing levels of difficulty. (Sem 3 hrs.)

552. Garment Design (3) F

Prerequisites: H EC 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.)

561. Curriculum Development in Home Economics (3) S

Prerequisite: Field experience in home economics or a related area. Current philosophies and principles basic in the analysis and organization of curricular programs and materials. (Sem. 3 hrs)

562. Contemporary Issues in Nutrition (3) F

Prerequisite: H EC 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 Home Economics (3) S

Prerequisites: H EC 696, upper division statistics course. 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. Traditional grading only. Same course as GERN 563. (Seminar 3 hours.)

564./464. Sensory Analysis of Foods (3)

Prerequisites: H EC 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.)

591A. Professional Practicum in Dietetics (11) F,S

Prerequisites: H EC 531, 533, 534, 562, admission to the American Dietetic Association (ADA) Approved Pre-Professional Practice Program (AP4) and consent of instructor. Supervised onsite 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 H EC 591A are required for completion of the AP4, with a maximum of 11 units per semester. Not applicable toward the M.S. degree in Nutritional Science. Credit/No Credit grading only. Course may be repeated for a maximum of 22 units. (Clinical Practice.)

591B. Seminar in Dietetic Practice (1) F,S

Concurrent enrollment in H EC 591A. Oral and written presentations, critical review of case studies and practices in the American Dietetic Association (ADA) Approved Pre-Professional Practice Program (AP4) field experience, H EC 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 Home Economics (3) F,S,SS

Prerequisites: Graduate standing and consent of instructor. Field experience in which student assumes a self-directed, responsible role in a agency, business or other community setting. May be repeated to a maximum of six units. (Seminar 3 hours.)

597. Independent Study (1-3) F,S,SS

Prerequisites: H EC 400 level course in area of study. Varied learning activities utilized to achieve competency related to Home Economics not offered in regular course. Written report required. (Projects.)

599. Studio Problems (3) F,S

Prerequisite: H EC 597 or 697. Advanced individual graduate studio projects, with faculty supervision, related to specific functions and problems of selected human environments, (Supervised activities.)

605. Seminar in Administration of Home Economics Programs (3) F,S

Prerequisite: H EC 696 or consent of instructor. Application of administration, management and leadership theories to home economics 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 home economics administrator. (Seminar 3 hours.)

615A. Seminar in Child Development (3) S

Prerequisites: H EC 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) S

Prerequisites: H EC 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) S

Prerequisites: A: Family Finance: H EC 529, 696. B: Home Management: H EC 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,S

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.)

655 A,B. Seminar in Clothing and Textiles (3,3) F

A: Clothing. Prerequisites: H EC 450, 459, 696.

B: Textiles.

Prerequisites: H EC 450, 453, 696. Area of study will be announced in the *Schedule of Classes*. (Seminar 3 hours.)

665. Seminar in Home Economics (3) F,S

Prerequisites: H EC 696, consent of instructor, Identification and critical analysis of current issues, trends and philosophies in home economics. Exploration of possible future directions for home economics as a discipline and a profession. Focus is on the mission of contemporary home economics 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) F

Prerequisite: Upper-division course in statistics (may be taken concurrently). Problems in home economics with emphasis on the methods of research and use of the library. Required of all master's degree candidates in home economics. (Seminar 3 hours.)

697. Directed Research (1-3) F,S

Prerequisites: Advancement to candidacy, Home Economics 500 level course in area of study and 696. Independent study under the guidance of a faculty member. (Thesis.)

698. Thesis (1-4) F,S

Prerequisites: Advancement to candidacy, approval of department graduate committee. Planning, preparation and completion of a thesis related to the home economics field. (Thesis.)

Military Science

Army Reserve Officers Training Corps College of Health and Human Services

Program Director:
Major Daniel Hink
Program Office: Industrial
Technology Bldg. 213
Faculty: Assistant Professor:
MSG Robert Whitson;
Instructors: SFC Mark McPherson,
SGT William Kolar.
Staff: Ms. Sandy Matthews
Purpose

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 \$100 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 \$100 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 twoyear 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, Industrial Technology, Room 213), 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 pay at the rate of one-half of a Second Lieutenant's basic pay. All equipment, uniforms, room, board 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 twoyear 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 \$100 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 approximately \$600 during the six weeks. 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

- Written Communications (Category A) ENGL 100
- Human Behavior (Category D)
 HIST 162A or 162B or POSC
 100
- Computer Literacy
- Mathematical Reasoning (Category B) MATH 103 or 110

Courses (M S)

101. U.S. Defense Establishment(3) F,S,SS

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) F.S.SS

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) F,S,SS

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) F,S,SS

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) F, S, SS

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) (3 Hour Laboratory required of AROTC Cadets only.)

302. Leadership and Management II (3) F,S,SS

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) F,S,SS

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) F,S,SS

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) F,S,SS

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) F,S,SS

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.)

Nursing

College of Health and Human Services

Department Chair: M. Christine Talmadge Department Office: Nursing Building, Room 17 Telephone: 985-4463 Faculty: Professors: Margaret Brady, Randy Caine, Loucine Huckabay, Kathleen Keller, M. Adrienne Mayberry, Ruth G. Mullins, Barbara J. Nelms, Sharon L. Roberts, Martha A. Siegel, Judy E. Smith, Colleen Sparks, M. Christine Talmadge, Elaine E. White, Betty S. Williams; Associate Professors: Karna Bramble, Leayn Johnson, Bonnie Kellogg, Nancy Oliver, Barbara White; Assistant Professors: Veronica Barnes, Natalie Cheffer, Eileen Croke, Rebecca Dahlen, Farideh Khoiny. Emeritus Faculty: Joan Cobin, Elizabeth Kaufman, Margaret L. Koehler, Flora Meisenheimer, Barbara B. Minckley, Beth Moore, Wanda Pentecost, Eva Sakamoto, Vivian Sucher, Dorothy L. Walsh.

The Department

Students desiring information should contact the department office for dates of open 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 write 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 National League for Nursing.

The purpose of the bachelor of science program in nursing is to prepare graduates to function as a professional nurse in the primary care role 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, intellectual curiosity and 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 accepted as a nursing major, basic students are required to do the following:

- Earn a "C" grade or better and a GPA of 2.5 or better in all prerequisite courses;
- (2) Complete a test that assesses their 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;

The Ac year perio receive a

- (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 — Basic (code 3-1072)

Required Prerequisite Courses: CHEM 201A, 201B, A/P 208, 209, MICR 210, NRSG 200, PSY 100, and SOC 100; or equivalent.

Required Support Courses: A/P 206, 305; H EC 339.

Required Nursing Courses: NRSG 200, 200L, 202, 250, 250L, 300, 300L, 302, 307, 350, 350L, 351, 352, 356, 356L, 357, 400, 402, 402L, 450, 450L, 452, 452L.

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 to practice nursing in California;
 - (2) Have 56 transferable units;
 - Obtain malpractice insurance;
- (4) Have completed the following courses: Psychology, Sociology, Chemistry, Microbiology, Anatomy, Physiology with a *C* grade or better in each and a 2.0 GPA in these prerequisite courses;
- (5) Attend a group counseling session for R.N. students and complete a student profile;
- (6) Submit unofficial transcripts of any previous college work to the Nursing Department.

(7) Earn a passing score on the Writing Proficiency Examination.

Further information regarding admission to nursing courses is available from faculty members who are registered nurse advisors.

Graduates of diploma schools of nursing are urged to seek information/admission to a community college that offers the opportunity to earn credit for a diploma nursing program.

All courses offered by the Nursing Department are letter graded unless otherwise specified in the Schedule of Classes.

Requirements for the Bachelor of Science — R.N. (code 3-1073)

Required Prerequisite Courses: One course in each of the following: A/P, Microbiology, Introductory Chemistry, Psychology, and Sociology.

Required Support Courses: CHEM 201B, A/P 305, NRSG 305, NRSG 305L

Required Nursing Courses: NRSG 305, 305L, 307, 355, 355L, 356, 356L, 357, 400, 402, 402L, 450, 450L, 452, 452L.

Course of Study:

A specific combination of general education, prerequisite nursing and elective courses totaling 132 units are required for graduation. All 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 course 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 sequence. A nursing course may be repeated one time. The nursing sequence of courses requires a minimum of six semesters for the 'basic student* and four semesters for the *R.N. student.* A break in the sequence of courses necessitates readmission on a space-available basis

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, Psychiatric/Mental Health, or Critical Care. Students entering this program must meet admission requirements for the RN complete an Independent Study NRSG 490 course and the following prerequisite courses: CHEM 201B. A/P 305, NRSG 356, 356L, 307, and 357. A specific combination of general education, prerequisite nursing and elective courses totaling 129 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 1 NRSG 305, 305L, 355, 355L
- Term 2 NRSG 400, 402, 402L
 Term 3 NRSG 452, 452L, 696.
- 660A • Term 4 NRSG 680A, 680AL,
- 698 • Term 5 NRSG 680B, 680BL,
- 660B, 698

 Term 6 NRSG 680C, 680CL,

Option B — Comprehensive Examination

- Term 1 NRSG 305, 305L, 355, 355L
- Term 2 NRSG 400, 402, 402L
 Term 3 NRSG 452, 452L, 696.
- 660A • Term 4 NRSG 680A, 680L
- Term 5 NRSG 680B, 680BL, 660B
- Term 6 NRSG 695, 680C, 680CL

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 a nurse practitioner or clinical specialist 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;
- (2) Current license to practice as a registered nurse in California;
- (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 60 hours of clinical practice;
- (6) An Upper division or graduate level course in Pathophysiology;
- (7) An upper division public health nursing course;
- (8) 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.

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; Critical Care, 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 660 and 680 series of courses.

Requirements for the Master of Science in Nursing (code 6-1072):

- Completion of a minimum of 36 units in upper division and graduate courses;
- (2) Completion of NRSG 680 (at least six units), 680L (at least six units), 660 (six units), 696 (3 units) and 695 (3 units) or 698 (4 units);
- (3) An overall GPA of 3.0 or better in all courses;
- (4) Completion of an approved thesis or comprehensive examination

Courses (NRSG)

Lower Division

150. Explorations in Nursing (3) F.S

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. Basic Health Theory and Nursing Skills (3) F,S

Prerequisites: Sophomore standing, A/P 208, 209, CHEM 201A, 201B, MICR 210, one psychology course and one sociology course (six units), consent of instructor. Corequisites: NRSG 200L, 202, H EC 339 and A/P 206. 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 as the framework for nursing practice. (Clinical processes 3 hours.)

200L. Health Skills Laboratory I (3) F,S

Prerequisites: Same as NRSG 200. Corequisites: NRSG 200, 202, H EC 339 and A/P 206. Guided utilization of beginning level theory and skills in a simulation and clinical laboratory, based on the concepts of nursing

process in patient care delivery (laboratory 9 hours.) Credit/No Credit grading only. Course fee: \$47 for materials to be used throughout the pre-licensure program; not refundable.

202. Human Awareness in the Health Profession (3) F,S

Prerequisites: Admission to the Undergraduate nursing program, consent of instructor. Introduction of understanding the psycho-social and cultural factors which influence the responses to and on the health professional-client interaction. Primary focus is on communication theory, helping modes and communication with diverse, people. Clinically oriented simulated projects and activities provide opportunities for application of theory. Traditional grading only. (Lecture-Activity, 3 hours.)

250. Intermediate Health Theory and Nursing Skills (3) F,S

Prerequisites: A/P 206, NRSG 200, 200L, 202, H EC 339 and consent of instructor. Corequisites: NRSG 250L, 356, 356L, and A/P 305. Development of intermediate level theory of physiological and psycho-social wellness and accountability. Application of recognized physical and social science prinicples and current research findings to intermediate level runsing theory and skills essential to the actualization of the nursing process. (Lecture-discussion 3 hours.)

250L. Health Skills Laboratory II (3) F,S

Prerequisites: Same as NRSG 250. Corequisites: NRSG 250, 356, 356L, and A/P 305. Guided laboratory experience to assist the student to synthesize intermediate level theory and gain skills in application of selected nursing process activities in simulation and in direct patient care. (Laboratory 9 hours.)

300. Nursing Process I (2) F,S

Prerequisites: NRSG 250, 250L, 356, 356L, A/P 305, consent of instructor. Corequisites: NRSG 300L, 302, 307, 351. Exploration of psycho-social concepts, cultural and environmental influencing factors relative to wellness-illness individuals and family groups. Group interaction is directed toward development of self awareness as well as development of professional role. (Clinical processes 2 hours.)

300L. Nursing Process Laboratory I (6) F,S

Prerequisites: Same as NRSG 300. Corequisites: NRSG 300, 302, 307, 351. Experience in using established nursing interventions to assist man to manipulate a moderate number of overt and covert variables which interfere with his adaptation on the health-illness continuum. The use of some alternative nursing interventions will be encouraged. Withdrawal from NRSG 300L requires withdrawal from NRSG 302. (Laboratory 18 hours.)

302. Clinical Studies I (2) F,S

Prerequisites: Same as NRSG 300. Corequisites: NRSG 300, 300L, 307, 351. Group interaction concerned with synthesis of knowledge and experience comparing and contrasting trends in nursing interventions in a variety of situations and clinical settings.

Withdrawal from NRSG 302 requires withdrawal from NRSG 300L. (Clinical processes-2 hours.)

305. Nursing Assessment I (2) F,S

Prerequisites: Admission to the University as a nursing major, current California RN license, and consent of instructor. Corequisites: NRSG 305L, 307, CHEM 210B. Use of concepts and theory to structure assessment and intervention with emphasis on the psycho-social modes of adaptation. Included are selected concepts of communication, psycho-social assessment, influencing factors, therapeutic relationships, nursing process and expanded role of the nurse. (Lecture-discussion 2 hours.)

305L. Nursing Assessment Laboratory I (2) F,S

Prerequisites: Admission to the University as a nursing major, current California RN license, and consent of instructor. Corequisite: NRSG 305, 307. CHEM 201B. Guided assistance to help the student identify and continue development of individual strengths and competence in nursing practice. Emphasis is on communication skills both individual and in groups and psycho-social assessment. (Laboratory 6 hrs.)

307. Human Life Cycle I (3) F,S

Prerequisites: Junior standing, consent of instructor. Corequisite: NRSG 300 or 305, or R.N. admitted as a nursing major. Study of the physiological, social, intellectual and emotional development of persons as individuals and as family members from conception through adolescence. (Lecture-discussion 3 hours.)

350. Nursing Process II (2) F,S

Prerequisites: NRSG 300, 300L, 302, 307, 351. Consent of instructor. Corequisites: NRSG 350L, 352, 357. Group interaction drawing on knowledge and experience from a variety of focused on the nursing process and includes the decision making process, group dynamics and leadership skills. (Clinical processes-2 hrs)

350L. Nursing Process Laboratory II (6) F,S

Prerequisites: Same as NRSG 350. Corequisites: NRSG 350, 352, 357. Application of theory to clinical practice assisting individuals of various cultural and age groups to manipulate multiple variables that interfere with basic physiologic and psycho-social needs. Anticipation of nursing problems, assessment and nursing diagnosis, implementing and evaluating nursing interventions, is the framework for this laboratory. Emphasis is on student responsibility for own learning and behavior including dependent and interdependent relationships with other health team members. Withdrawal from NRSG 352 requires withdrawal from NRSG 350L. (Laboratory 18 hours.)

351. Legal Aspects of Health Care (2) F,S

Prerequisites: Same as NRSG 300. Corequisites: NRSG 300, 300L, 302, 307. Legal duties and responsibilities of nurses and other professional health care personnel in the delivery of health services. Professional licensure regulations and scope of nursing practice are emphasized. (Clinical processes - 2 hours.) Credit/No Credit grading only.

352. Clinical Studies II (2) F,S

Prerequisites: Same as NRSG 350. Corequisites: NRSG 350, 350L, 357. Theory base for assessment of an individual's position on the wellness-illness continuum by objective description of behaviors and identification of overt and covert bio-psycho-social variables. The emphasis will be acute pathological changes across various cultural and age groups. Withdrawal from NRSG 350L requires withdrawal from NRSG 350L (Leo-discussion 2 hrs.)

355. Dimensions in Professional Nursing (2) F,S

Prerequisites: NRSG 305, NRSG 305L, Junior standing, Current California RN License and consent of instructor. Corequisite: NRSG 355L, 356, 356L, 357, and A/P 305. A study of the nursing profession, its evolution, scope, function, organization and structure. The responsibilities of the nursing profession as a social force will be considered. Professional autonomy and legal ethical dilemmas as well as opportunities for expanded roles, new nursing practice delivery modes, leadership and management are explored as both theory, and problems in practice. (Lec-discussion, 2 hrs)

355L. Dimensions in Professional Nursing Lab (I) F,S

Prerequisites: NRSG 305, NRSG 305L, Junior standing, Current California RN license and consent of instructor. Corequisite: NRSG 355, 356, 356L, 357, and A/P 305. The application of NRSG 355 content in professional nursing practice is the focus for this field study. There will be clinical exploration and validation of theories and concepts. (Laboratory, 3 hours)

356. Physical Assessment for Nurses (2) F,S,SS

Prerequisites: NRSG 200, 200L, 202, AP 206; RN Pathway students: NRSG 305, 305L, CHEM 201B, or consent of instructor. Corequisite: NRSG 356L. Application of basic techniques of history taking and physical exam- ination which are used by the nurse in identification of patient problems. (Lec-Act 2 hrs.)

356L. Physical Assessment for Nurses Laboratory (1) F,S,SS

Prerequisites: NRSG 200, 200L, 202, AP 206; RN Pathway students: NRSG 305, 305L, CHEM 201B, or consent of instructor. Corequisite: NRSG 356. Application of 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. (Laboratory, 3 hours) Traditional grading only.

357. Human Life Cycle II (3) F,S

Prerequisites: Junior standing, NRSG 307, consent of instructor. Corequisite: NRSG 350 or 355 or R.N. admitted as a nursing major. 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. (Lecture-discussion 3 hours.)

400. Nursing Process III (3) F.S

Prerequisites: NRSG 350, 350L, 352, 352L; for RNs NRSG 355, 355L, 356, 356L, 357, A/P 305; 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-Activity 3 hours.) Traditional grading only.

402. Clinical Studies III (2) F,S

Prerequisites: NRSG 350, 350L, 352, 357. (NRSG 355, 355L for R.N.'s in place of NRSG 350, 350L, 352) and consent of instructor. Corequisites: NRSG 400, 402L. Group interaction which focuses on diversified and/or permanent interruptions in the health-illness continuum and associated nursing care in non-acute institutions and community facilities. Emphasis on the variety of life styles and diversified ethnic groups. (Clinical processes 2 hrs.)

402L. Clinical Studies Laboratory III (4) F,S

Prerequisites: NRSG 350, 350L, 352, 357. (NRSG 355, 355L for R.N.'s in place of NRSG 350, 350L, 352), consent of instructor. Corequisites: NRSG 400, 402. Evaluating multiple and diversified health problems (both temporary and permanent) of individuals, families and communities representing a variety of life styles with emphasis on care outside of acute care institutions. Experience will be provided to evaluate indicated and creative nursing interventions in a variety of settings. (Laboratory 12 hours.)

408. Culture and Health Care (3) SS

Prerequisite: Current license as an RN in the State of California. Successful completion of college level course in Pathophysiology, Physical Assessment, NRSG 405 or consent of instructor. Traditional grading only.

410. Health Teaching and Group Dynamics (2) SS

Prerequisite: Current License as an RN in the State of California. Successful completion of college level course in Physical Assessment, Pathophysiology, and Culture Health Care. Consent of instructor. Traditional grading only.

410L. Health Teaching and Group Dynamics (1) SS

Prerequisite: Current License as an RN in the State of California. Successful completion of college level course in Physical Assessment, Pathophysiology, and Culture Health Care. Consent of instructor. Traditional grading only.

412. Epidemiology in Public Health Nursing (2) SS

Prerequisite: Current License as an RN in the State of California. Successful completion of college level course in: Pathophysiology, Physical Assessment, NRSG 405, NRSG 408, or consent of instructor. Traditional grading only.

412L. Epidemiology in Public Health Nursing (1) SS

Prerequisite: Current License as an RN in the State of California. Successful completion of college level course in: Pathophysiology, Physical Assessment, NRSG 405, 408, or consent of instructor. Traditional grading only.

414. Health Care Systems (3)

Prerequisite: Current License as RN in the State of California. Successful completion of college level course in Physical Assessment, Pathophysiology, and Culture and Health Care. Consent of the instructor. Traditional grading only.

416. Principles of Community Health Nursing (2) SS

Prerequisite: Current license as an RN in the State of California. Successful completion of college level courses in: Pathophysiology, Physical Assessment, NRSG 405, 408, 410, 410L, 412, 412L, 414, or consent of instructor. Traditional grading only.

416L. Community Health Nursing Clinical Practice (3) SS

Prerequisite: Current license as an RN in State of California. Successful completion of college level courses in: Pathophysiology, Physical Assessment, NRSG 405, 408, 410, 410L, 412, 412L, 414, or consent of instructor. Traditional grading only.

X420. Prepared Childbirth Teachers (7) F,S,SS

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 childhearing 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 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. (Register through University Extension.)

X430. Women's Health Care Nurse Practitioner (6) F,S,SS

Prerequisites: Valid RN License; Corequisite; NRSG X430L. 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. (Register through University Extension.)

X430L Women's Health Care Nurse Practitioner Laboratory (6) F,S,SS

Prerequisites: Valid RN License; Corequisite: NRSG X430. 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. (Register through University Extension.)

450. Nursing Process IV (2) F,S

Prerequisites: NRSG 400, 402, 402L, consent of instructor. Corequisite: NRSG 450L, 452, 452L. The application of the nursing process using research methodology, teaching and learning theory in selected clinical settings. (Clinical processes 2 hours.)

450L. Nursing Process Laboratory IV (1) F,S

Prerequisites: NRSG 400, 402, 402L, consent of instructor. Corequisite: NRSG 450, 452, 452L. Completion of a research design in a clinical area selected by the individual student. Traditional Grading Only. (Laboratory 3 hours.)

452. Clinical Studies IV (2) F,S

Prerequisites: NRSG 400, 402, 402L, consent of instructor. Corequisite: NRSG 450, 450L, 452L. Exploration of didactic and experimental material specific to an area of concentration selected by the student. A) Clinical Studies IV, B) Community Health Nursing, C) Critical Care Nursing, D) Geriatric Nursing, D) Mental Health Nursing, (Clinical processes 2 hrs.)

452L. Clinical Studies Laboratory IV (4) F,S

Prerequisites: NRSG 400, 402, 402L, consent of the instructor. Corequisite: NRSG 450, 450L, 452. Experience in developing expertise by using the nursing process in the student's area of clinical concentration. (Laboratory 12 hours.)

4811. Parenting (3) F,S

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) F

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) Demand

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) Demand

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

556A. Conditions of Learning and Instruction in Nursing (2) F,S

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) F

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) S

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) F

Prerequisites: Graduate standing, consent of instructor. Study of the psycho-social development, needs and problems of the elderly and related nursing intervention.

558. Advocacy and the Nurse Practitioner (3) S

Emphasis is upon the nurse advocate's ability to relate the major social problems and the status of current/pending legislation to the elderly clients' needs, the health care delivery system and the health care the nurse practitioner provides.

559. Nursing Administration (3)

Theories, issues and application of techniques pertaining to management applicable to nurses in the clinical setting.

590. Independent Study (1-3) F.S

Prerequisite: Consent of a nursing faculty member. Independent research under the supervision of a nursing faculty member.

599./499. Special Topics in Nursing (1-3) Demand

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.

660A,B. Theoretical Base for Advanced Nursing Practice (3,3) F.S

Prerequisites: Pathophysiology, Physical Assessment. Study of the relationship of psychosocial theory to health care with an emphasis on the application of theory to clinical practice. Various sections will focus on different areas of clinical interest.

680A,B,C. Theories for Extended Nursing Practice (3,3,3) F,S

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 role of nurse practitioner or clinical specialist in clinical areas of concentration. May be repeated for credit with change of topic.

680L. Clinical Studies in Nursing (3,3,3) F,S

Corequisite: NRSG 680. A laboratory course offering clinical experience in selected settings to prepare the student for advanced nursing practice. May be repeated for credit with change of topic. A maximum of nine units for degree credit.

695. Professional Literature (3) F,S

Prerequisites: NRSG 696, 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.

696. Research Methods (3) F,S

Prerequisite: Upper division course in statistics. The research process in nursing including the use of theory, study design, data collection, data analysis and interpretation of findings.

698. Thesis (1-4) F,S

Prerequisites: Advancement to candidacy, NRSG 696, and consent of department graduate advisor. Planning, preparation and completion of a thesis in clinical nursing.

Occupational Studies College of Health and Human Services

Chair: Paul A. Bott
Department Office: Industrial
Technology Building, Room 233
Telephone: 985-5633
Faculty: Professors: Leonard O.
Albright, Robert Behm, Paul A. Bott,
Donald Lauda, Richard L.
Resurreccion, William V. Wittich;
Lecturer: Lynn Safarik
Emeritus Faculty: Boyd A. Davis,
Norman R. Stanger
Department Secretary: Robin Quirk
Credential Analyst:

The Program

Rosemary O'Keefe

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 Vocational Education (code 3-1027)

The Bachelor of Science in Vocational Education is offered primarily for persons who are currently serving in the work force in business, industry, labor and government. The primary goal of the program is to improve the delivery skills and standards of persons involved in human resource development programs related to these areas. The program is distinct from the Bachelor of Vocational Education (BVE), also offered here, which is directed primarily toward public school vocational education.

Admission Requirements:

Those interested in pursuing the Bachelor of Science in Vocational Education Degree must be admitted to the University in accordance with the provisions of the CSULB Bulletin. For admission into the degree program the student must have verified a competency, by education and/or occupational experience, in a field normally considered to be within the purview of occupational education.

Requirements for the Bachelor of Science in Vocational Education

132 units to include:

- (1) 24 units of Academic Core as follows: OCST 417I, 418, 420, 456, 470, 485, ET 300, ENGL 317:
- (2) 9 units of Training Techniques Courses as follows: OCST 402ABC, OCST 404, OCST 405:
- (5) 33 units of Training & Development Competency; A maximum of 9 units may be granted for prior learning; the remaining will be earned through transferred or advised course work. The courses for this area should be selected with your advisor.

(6) 15 units of electives.

Bachelor of Vocational Education (code 4-1027)

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:

- 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
- 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 consult-

ation 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.

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 Vocational Education (code 5-1027)

The Master of Arts degree in Vocational Education 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 vocational education consists of three parts. The first part is a 15 unit set of required or core coursework in the following

History and foundations of occupational education (OCST 501) Leadership development

Management skills (OCST 503) Research and evaluation (OCST 505 and 696)

(OCST 502)

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 propriety 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:

- A bachelor's degree in vocational al 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:

- 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 for the Master of Arts:

- (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) SS,W

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) F,S,SS

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) F

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.

388l. Technology Literacy (3) F.S.SS

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.) Same course as TED 388I.

401A. The Vocational Legacy (1) F,S,SS

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) F,S,SS

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) F.S.SS

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) F,S,SS

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) F,S,SS

Identification and development of specific units of instruction for occupational subjects.

*402C. Developing Training Objectives (1) F,S,SS

Identification and development of performance objectives for occupational subjects.

*404. Techniques of Occupational and Adult Instruction (3) F,S,SS

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) F,S

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.

417l. Work, Technology and Society (3) F,S

Study of the development of various elements that comprise the values of work held by contemporary society and the effects that these values have on individuals, society, schools, and the workplace.

*418. The Marketplace for Occupational Education (3) F,S

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) F

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) S

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) F

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) F,S

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) F,S

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 Special Needs Learners (3) S

Identification, assessment and instructional development strategies for handicapped and disadvantaged students in occupational education.

*461. Occupational Education for Disadvantaged and Culturally Different Learners (3) F,S

Techniques for teaching disadvantaged and culturally different learners in occupational education. Emphasis on methods, motivation, counseling and instructional organization.

*462. Occupational Education for Limited English Proficient Students (3) F,S

A convergence of bilingual and vocational education principles, leading to an understanding and application of strategies suitable for teaching occupational skills to limited English-speaking students. The focus is on teaching occupational skills in the learner's native language with Vocational English-as-a-Second-Language (VESL). Bilingual proficiency is desirable, but not required.

*470. Seminar in Occupational Education (3) F,S

Study of the major problems and issues confronting the educator and practitioner.

*480. Internship in Occupational Education (1-4) F,S

Internship in community or school employment and training development programs which involve instruction, administration and research within the career education spectrum.

*483. Senior Thesis or Project (1-3) F,S

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) F

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) F,S

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) F,S

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) F,S

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

Graduate Division

501. Foundations of Occupational Education (3) F,S

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) F,S

Prerequisites: OCST 485 or equivalent. Concepts and techniques of personal and professional administrative leadership.

503. Management of Occupational Education Programs (3) F,S

Advanced principles and procedures of management emphasizing local and county operations, and evaluation of occupational education programs.

504. The Environments of Occupational Education (3) F,S

Interrelationships among occupational education, business, industry, government and society.

505. Critical Analysis of Issues and Problems in Occupational Education (3) F,S

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.

506. Vocational ESL/ESP: Program Design and Instruction (3) F,S

Prerequisites: Admission to TESL certificate program, or instructor's consent. An examination of the integral role of tailored language instruction to the success of non- and limited-English speaking trainees and workers. This course will deal with vocational English as a second language, English for Specific Purposes, and English for Science and Technology settings. Key topics include language needs assessment, course design, instructional techniques, and testing in specified settings. (Seminar) Same course as LING 570.

508. Transition Services for Youth and Adults With Disabilities (3) F,SS

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. Industrial Program Development (3) F,S,SS

The selection and organization of industrial training curricula and development of courses of study to be used in public and private Technology Education programs. Same course as TED 591

593. Teaching Industrial Subjects (3) F,S,SS

Teaching techniques, philosophy, organization and planning in industrial training programs, public and private education. Same course as TED 593.

650. Seminar in Industrial Practices and Education (3) F,S,SS

Prerequisite: Consent of instructor. Study of selected topics in Technology 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. Same course as TED 650.

696. Research Methods in Occupational Education (3) F,S,SS

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) F,S,SS

Prerequisite: Advancement to candidacy. Research in an area of specialization under the direction of a faculty member.

698. Thesis (1-4) F,S,SS

Prerequisite: Advancement to candidacy. Planning preparation and completion of a thesis related to the occupational education field.

Physical Education

College of Health and Human Services

Department Chair: Dixie A. Grimmett Department Office: Applied Arts and Sciences Building, Room 101 Telephone: 985-4051 Faculty Professors: Daniel D. Arnheim, D. Margaret Costa, James A. Davis, Betty V. Edmondson, Barbara J. Franklin, John J. Garhammer, Dixie A. Grimmett, William S., Barry W. Lavay, Husak, Joseph A. Mastropaolo, Thomas D. Morgan, Clayre K. Petray, Jo A. Redmon, Charles R. Sandefur, Edward B. Souter, Dale P. Toohey, David J. Wurzer; Associate Professors: Janet M. Fisher, Keith Freesemann, John Gonsalves, Mary Ellen Leach, Ralph Rozenek, Douglas Young; Assistant Professors: Sharon Guthrie, Michael Lacourse. Emeritus Faculty: Kenneth Bartlett, Warren J. Boring, Daniel A. Campbell, Marguerite A. Clifton, James L. Comer, Walter Crowe, Dorothy Deatherage, Marcel J. DeLotto, Elizabeth O. DuPont, Dorothy L. Ericson, Dorothy L. Fornia, Betty Rose Griffith, Lois E. Johnson, Earl C. Kidd, Carl E. Klafs, Ruth Lindsey, M. Joan Lyon, John J. McConnell, Margaret E. Miller, Jack E. Montgomery, William Patterson, Robert A. Pestolesi, Don F. Reed, C. Patricia Reid, Jack W. Rose, Sarah A. Royal, Frances Schaafsma, Herman Schwartzkopf, L. LaVonne Stock, Robert W. Wuesthoff.

Department Secretary: Donna Sundly

The Department

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 Physical Education offers programs designed to satisfy the professional needs of prospective physical educators for various occupational roles. Courses are offered which meet requirements of the following: (1) the Bachelor of Arts degree with a major in Physical

Education; (2) Physical Education major leading to a single-subject teaching credential; (3) a minor concentration in Physical Education; (4) Adapted Physical Education Single Subject Emphasis Credential; (5) Certificate Programs; (6) the Master of Arts degree in Physical Education.

The department assumes the responsibility for the psychological, physiological, and sociological needs and interests of the college student through General Education and Physical Activity course offerings. Each new student enrolling in the University is required to have on file at the Student Health Service a completed health history record. A physical examination is no longer mandatory for an entering student. Students enrolling in physical education activity courses assume the responsibility for satisfactory health status appropriate for class activity.

Bachelor of Arts in Physical Education

Students pursuing a degree in Physical Education must complete core courses and skill proficiency requirements plus Track courses in a specific area or areas. In meeting the requirements of one major, the Department offers 5 specialized Tracks for study which permit students to develop conceptual understanding related to human movement and to focus on preparation for one or more specific occupational roles. The Physical Education major must show skill proficiency and knowledge in PED 263 and the personal performance activity units completed according to requirements of the CSULB lower division program in the Physical Education Major Core for specific Tracks prior to graduation. Upper division courses may not be waived by substitution or examination without Department petition and approval.

Requirements for the Bachelor of Arts in Physical Education (code 2-1201)

Core Courses:

Athletic Training and Fitness Tracks: PED 215, 263, and eight physical activity units distributed over a minimum of four activity categories: Aquatics: PED 125, 240; Combative: PED 106, 149, 249; Dance: PED 181, 185, 260; Individual/Dual Sports: PED 100, 112, 171, 264, 265, 266, 267; Wilderness Studies: PED 131, 242, 244, 246B; Team Sports: PED 250, 253, 255, 257; All students must have current Standard First Aid/CPR Certification prior to all courses involving field work or internship.

Adapted, Elementary School Physical Education, and Secondary School Physical Education Tracks:

PED 171, 215, 240, 260, 263, 265; Select two courses from PED 250, 253, 255, 257; Select one course from PED 264, 266, 267; Select one course from PED 149, 249 (Note: Majors completing PED 149 must select one additional course from PED 100-199); Select one additional course from PED 250, 253, 255, 257, 264, 266, 267; All students must have current Standard First Aid/CPR Certification prior to all courses involving field work or internship.

Upper-Division Core required of all students: PED 300, 301, 312, 315, 3321, 335.

In addition to the Physical Education Degree requirements, ALL Physical Education majors must satisfy the following Departmental policies at the time of University Graduation:

(1) Departmental approval and clearance is required for lower division courses and skill proficiencies.

(2) Current certification in First Aid Standard, Advanced, or EMT and Cardiopulmonary Resuscitation CPR.

(3) Receive a minimum grade of "C" in each physical education major and pre-requisite course required for graduation.

Proficiencies:

Each major is required to demonstrate proficiency at a 3.5 overall average level (1-5 scale) in PED 263 and the personal performance activity units completed according to the requirements in the

Physical Education Major Core for specific tracks prior to graduation.

Specific Requirements of the Tracks:

Select one of the following Tracks to complete the requirements for the Major:

Adapted Track: PED 320, 322, 370, 380, 387, 388; and select one course in Applied Theory from PED 350-369.

Athletic Training Track: PED 307, 308, 309, 310, 363, 407, HSC 427; EDP 434B; select one course from HEC 430 or HSC 210.

Elementary School Physical Education Track: PED 320, 322, 370, 380, 477, 483; select one Applied Theory Course from PED 350-369

Fitness Track: PED 210, 305, 363, 405, 489D; select three courses from PED 307, 309 or 320, 462/562, 483 (this course is a prerequisite to graduate statistics), 465/565, REC 425, HEC 430.

Secondary School Physical
Education Track: PED 320, 370,
380, 483; select eight units distributed over a minimum of three of
the five Applied Theories categories:
Combatives: PED 362, 364;
Dance: PED 360; Fitness: PED
363; Individual/Dual Sports: PED
365, 366, 369; Team Sports: PED
350, 353, 355, 356 (PED 307 may
be substituted for one of the Applied
Theory courses).

Adapted Physical Education Specialist Credential:

This program is designed for students interested in working with the disabled. Completion of this credential authorizes the teaching of physical education to the disabled, K-12. The Adapted Physical Education Specialist Credential must be obtained concurrently or after completion of the Single Subject Physical Education Credential, K-12. The requirements also include a Bachelor's Degree with a major in Physical Education which requires:

A minimum of 24 units as follows: PED 320, 322, 388, 489A, EDP 350; Select two courses from CD 380, EDP 405, 451, 561, 563.

Minor in Physical Education — Teaching (code 0-1201)

This minor is designed for those students who are striving for an additional credential. With the completion of this minor and a successful score on the National Teacher Examination in Physical Education, the University will recommend the additional credential in Physical Education. The Elementary and Coaching concentrations do not qualify as add-ons to the single-subject credential.

Requirements for the Minor in Physical Education — Teaching:

A minimum of 24 units as follows: PED 263, 301, 312, 380, 483, EDSS 300P; Six physical activity units distributed over a minimum of two categories from: Aquatics: PED 240; Combatives: PED 149, 249; Dance: PED 260; Individual/Dual: PED 171, 264, 265, 266, 267; Team: PED 250, 253, 255, 257 and select 4 units from PED 350, 353, 355, 356, 360, 362, 363, 364, 365, 366, 369.

In addition to the above, each student is required to demonstrate skill proficiency at an average 3.5 point level on a 5 point scale in PED 263 and the physical activity units distributed over a minimum of two activity categoties completed to satisfy requirements of this minor.

Requirements for the Concentration in Physical Education— Elementary Teaching:

A minimum of 21 units as follows: PED 301, 312, 315, 322, 370, 476,

Requirements for the Concentration in Physical Education — Coaching:

A minimum of 20 units as follows: PED 301, 307, 332I: a minimum of 11 units selected in consultation with appropriate PED Advisor from the following: PED 312, 350, 353, 355, 356, 363, 364, 365, 366, 369, 453, 458, 475, 489B.

Certificate Programs

The Department of 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 develop physical fitness. Course work is designed to prepare the student to promote, conduct and/or direct community fitness programs in the Y's, industry, commercial health clubs, hospitals, senior centers, retirement facilities and other public/private fitness, sport or aerobic centers.

Requirements for the Community Physical Fitness Certificate:

- Current certification in cardiopulmonary resuscitation and standard first aid;
- (2) Course work (35 units as follows): PED 301; 303 or A/P 202, 207, and PED 300; 305; 309; 363; 489D; H EC 232 or 430. In consultation with the advising coordinator, select five courses from one of the following, three of which must be from a single area.

Area I: ED P 434B, H EC 331, 433, 436, 436L, 461; PED 405, 425, 441/541, 462/562, 499 — Aerobic Danc/Tchrs, 499/699 — Clinical ECG, REC 312, 421, 425.

Area II: ACCT 201 or 205; HRM 361 or MGMT 303 or 421; MRKT 300, 330, or JOUR 270; IS 240, 242, 243; C/ST 200, 210, 280.

Area III: A/P 342, 342L, 345, 400, 441, 443, 446, 545; BIOL 260. Recommendation: ED P 191 or 391.

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 of the Wilderness Studies Certificate:

- Certification in First Aid and Cardiopulmonary Resuscitation;
- (2) Completion of Log of Outdoor Experiences;
- (3) Course work (31-33 units as follows): BIOL 100, PED 346, 447,

448, REC 490 with advisement. The following coursework must be taken in consultation with the advising coordinator: select four courses from PED 131, 153, 242, 244, 246B, 247A; select two courses from PED 243A, 243C, 245, REC 430; select one course from PED 141, 446, 497, 499; select one course from H EC 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 Physical Education.

Requirements for the Pre-Athletic Training Certificate:

- Certification in cardiopulmonary resuscitation and first aid;
- (2) Course work: (31 units as follows): PED 300, 301, 307, 308, 309, 363, 483, 489C; H EC 430.

Corrective Therapy Certificate (code 1-1060)

This program is designed to prepare the student to pass the American Corrective Therapy (Kinesiotherapy) Association Certification (ACTA) Test. ACTA 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 Corrective Therapy Track in the undergraduate curriculum plus 27 additional units. Information concerning specific requirements for admission to and retention in the program may be obtained from the Director of the Corrective Therapy Program in the Physical Education Department.

Requirements:

(1) Application and approval by Director;

- (2) Completion of Physical Education — Corrective Therapy Track;
- (3) Specialization course work requires a "B" or better grade for ACTA Certification;
- (4) Course work (as follows): PED 210, 309, 320, 322, 425, 489F, PSY 345, 370. HSC 210 or 411 or 427, PED 388, PED 405 or 499, PED 485, 588, 589.

Master of Arts in Physical Education (code 5-1201)

The Department of Physical Education offers graduate study for the master of arts degree in physical education. Curricular flexibility allows the student to pursue individualized goals of either comprehensive study or specialization within the scope of the profession. All candidates are required to complete a core of courses which includes a thesis or oral and written comprehensives. Detailed information about the general curriculum option and the specialization option is contained in the Handbook for the Master of Arts Degree in Physical Education, available upon request from the department office.

Prerequisite:

- (1) A bachelor's degree from an accredited institution with a major in physical education; or
- (2) A bachelor's degree with a minimum of 24 units of upper division courses in physical education composed of prerequisite courses needed for tentative degree plan and remaining courses to be selected by the student in conjunction with the student's major advisor and approved by the Physical Education 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 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 is available in the Testing Office (SS/A-216);

(3) A graduate program must have approval of the candidate's advisor, department graduate advisor, and Associate Dean of Graduate Studies, Research, and Faculty Affairs, College of Health anf Human Services.

Requirements for the Master of Arts Degree:

- (1) A minimum of 30 units with at least 24 units of 500 and/or 600 series courses in physical education, including PED 590, 696, 698, a thesis, and an oral examination over the thesis; or
- (2) A minimum of 36 units with at least 30 units of 500 and/or 600 series courses in physical education, including PED 590, 695, 696 and an oral and written comprehensive examination;
- (3) With either option 6-9 units of approved extension/continuing education or transfer credit is acceptable on graduate student programs. Specified upper division courses taken after the bachelor's degree may also be counted.

Courses (PED)

Activity Courses

100-199. Physical Education Activity (1) F,S

Broad range of PE 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 assume the responsibility for satisfactory health status appropriate for class activity. PED 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 PE Department. 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)

106AC. 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,B. Windsurfing

Fitness Activities (1)

140A,B. Aerobic Dance
141A. Bicycling
142. Low Impact Aerobics
144A. Fitness & Conditioning
146A. Jogging
151AC. Weight Training and
Conditioning

155. Stretching158. 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 (PED):

Physical education 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) F,S

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) F,S

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) F,S

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) F,S

An overview of human movement including professional preparation and employment opportunities. Orientation to current programs and proficiency requirements. Students entering the physical education major are required to enroll in this course their first semester of study.

230. Sports Appreciation (3) F,S

Introduction to the study of sport as social institution in American society, (Lec-disc, 3 hrs)

240. Lifeguard Training and Water Safety Instructor (2) F,S

Prerequisites: CPR and Standard First Aid Certification and PED 125 or equivalent. Instruction and techniques in lifeguard training skills, advanced swimming skills, basic water safety, emergency water safety, and infant and preschool aquatic awareness. Includes an opportunity to qualify for the American National Red Cross Safety Instructor's Certificate and American Red Cross Lifeguard Training Certificate. Open to all students. (Lec. 1 hr, Act 3 hrs)

242. Backpacking (2) F,S

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 Environment (3) F

Introduction to winter mountaineering skills; study of the mountain environment. An experiential field class.

243B. Spring/Summer Mountain Environment (3) S

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 Environment (3) F,S

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) F,S

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 Environment (3) F,S

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. Course includes field trip.

246A. Mountaineering (2) F,S

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.

246B. Winter Mountaineering (2) S

Introduction to the equipment, skills, techniques and judgment for winter wilderness travel and living involving snow. Course includes field trip.

247A. Techniques of Rockclimbing (2) F,S

Introduction to the basic skills, judgment and safety for technical rockclimbing. The skills and techniques of top roping, belaying rappels and self rescue. Course includes a field trip.

249. Techniques of Wrestling (2) F,S

Instruction and practice in takedown, breakdowns and controls, pinholds, escapes, reversals, blocks and counters.

250. Techniques of Basketball (1) F,S

(Open to Physical Education 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) F,S

(Open to Physical Education 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) F,S

(Open to Physical Education 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) F.S

(Open to Physical Education majors and minors only.) Instruction in individual and team techniques utilized in the sport of volleyball.

260. Fundamental Rhythms (2) F,S,SS

Instruction and practice in fundamental rhythms involving folk and social dance forms. Designed for physical education majors and minors, but open to all students. (Laboratory) Grading: Student Option.

263. Techniques of Physical Fitness (2) F,S

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) F,S

(Open to Physical Education majors and minors only.) Instruction and techniques in individual skills and strategies for successful performance in golf.

265. Techniques of Gymnastics (2) F

(Open to PE majors and minors only.) Instruction, techniques and evaluation in gymnastic skills and events which constitute the competitive programs for men and women.

266. Techniques of Badminton (1) F,S

(Open to PE majors and minors only.) Instruction and techniques in the skills and strategies for successful performance in badminton.

267. Techniques of Tennis (1) F,S

(Open to Physical Education majors and minors only.) Instruction, techniques and analysis in the concepts of teaching, coaching, and playing tennis.

Upper Division

300. Biomechanics of Human Movement (3) F,S

Prerequisites: A/P 202, satisfactory completion of a proficiency exam covering anatomy administered within the first two weeks of this course. Anatomical structure and function, and mechanical principles relating to human motion, including analytical application. (Lec, lab)

301. Exercise Physiology (3) F,S

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 adaptions 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) F

Introduction to community physical fitness, leadership, management and skill proficiency. (Lecture, laboratory.)

307. Prevention and Care of Athletic Injuries (3) F,S

Prerequisites: PED 210 or equivalent. Principles and techniques of the prevention and care of common athletic injuries. (Lecture, laboratory.)

308. Advanced Athletic Training (2) F,S

Prerequisites: PED 300, 307; A/P 202. 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) F,S

Prerequisites: PED 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) F,S

Prerequisites: PED 308, 309, and permission of instructor. Theory and application of therapeutic modalities and exercise rehabilitation commonly used in athletic training programs. Designed for physical education majors in the athletic training track. (Lecture: 2 hours, Laboratory, 2 hours)

312. Motor Learning (3) F,S

Prerequisites: A/P 202, 207; PSY 100. Principles of motor learning in the acquisition of motor skills. (Lecture, laboratory.)

315. Motor Development (3) F,S

Prerequisite or corequisite: PED 215. Developmental perspective of the factors which contribute to the acquisition of motor control from the period of infancy through adolescence. (Lecture, laboratory.)

320. Adapted Physical Education (3) F,S

Prerequisites: A/P 202. This course is designed to prepare physical education 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).

322. Physical and Motor Assessment (3) S

Prerequisites: PED 315, 320. Background in basic statistics or PED 483 strongly recommended. The selection, administration, and interpretation of tests used in the physical and motor assessment of individuals with exceptional needs. (Lecture, laboratory.)

332l. Sociocultural Dimensions of Sport and Human Movement (3) F,S,SS

Prerequisite: Upper-division standing. Sociocultural and psychological correlations to human movement. (Lecture-discussion, 3 hours.) Same course as SOC 332I.

335. Historical and Cultural Foundations of Sport in America (3) F,S

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) S

Survey of the Olympic movement, Identification of its trends and functions as a social force throughout the world.

338l. Women in Sport (3) F,S

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.)

339l. Psychology of Sport Behavior and Athletic Performance (3) F,S

Prerequisites: Upper-division standing, ENGL 100, PSY 100. Psychological dimentions of attitudes, behaviors, and performance in sport and exercise environments. Same course as PSY 339I. (Lecture-discussion, 3 hours.)

346. Wilderness Emergency Care (3) F

Prerequisites: One wilderness studies activity course or equivalent, PED 210. Techniques concerned with wilderness emergencies, including advanced first aid, cardiopulmonary resuscitation, search and rescue and emergency evacuation methods. (Lecture, laboratory.)

350. Applied Theory of Teaching and Coaching Basketball (2) F,S

Prerequisites: PED 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 I hr, Act 3 hrs.)

353. Applied Theory of Teaching and Coaching Soccer (2) F

Prerequisites: PED 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) F,S

Prerequisites: PED 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) F,S

Prerequisite: PED 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 I hour, Activity 3 hours.)

360. Applied Theory of Teaching Recreational Dance Forms (2) F.S.

Prerequisite: PED 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 I hour, Activity 3 hours.)

362. Applied Theory of Teaching Self Defense (2) F,S

Prerequisite: PED 149 or equivalent. Application of the theory and techniques of self defense and combative movement forms. Content focuses on analysis, teaching techniques and strategies. (Lecture I hr, Activity 3 hrs.)

363. Applied Theory of Teaching Fitness and Conditioning (2) F,S

Prerequisite: PED 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.)

364. Applied Theory of Teaching and Coaching Wrestling (2) F,S

Prerequisites: PED 249 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and strategy concepts used in teaching wrestling including coaching theories, principles and organization as an interscholastic sport. (Lecture I hour, Activity 3 hours.)

365. Applied Theory of Teaching and Coaching Gymnastics (2) F

Prerequisite: PED 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) F,S

Prerequisite: PED 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) F,S

Prerequisite: PED 171 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 I hour, Activity 3 hours.)

370. Movement Theory and Practice of Elementary Physical Education (3) F,S,SS

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 Physical Education majors. (Lecture, activity.) Grading: Student Option.

380. Principals, Organization and Management of Secondary School Physical Education (3) F,S

Prerequisites: PED 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) F,S

Prerequisites: PED 320,322. Corequisite: PED 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) F

Prerequisite: PED 387. Corequisite: PED 489A. Emphasis on program planning and the development of teaching skills in adapted PE.

405. Cardiopulmonary Aspects of Health-Related Exercise Programs (4) F,S

Prerequisites: PED 210 or current First Aid and CPR Certificates, PED 301, 305. 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) F

Prerequisites or corequisites: PED 300, 307, 308, A/P 202. Theory and management of specific injuries in physical education and athletics, including recognition, treatment and identification of trends in injury management.

425. Gerokinesiatrics (3) F

Prerequisites: A/P 202, 207 and GERN 400; or consent of the rationale, organization and conduct of exercise programs for the older adult. (Lecture, laboratory.)

441./541. Applied Biomechanics: Lifting and Work Capacity (3) S 1993 and every third semester thereafter

Prerequisites: PED 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.

447. Wilderness Studies: Principles and Methods (3) F,S

Prerequisite: Completion of a minimum of six units of wilderness studies course work. An investigation of the philosophies, principles and program methods underlying the conduct of wilderness adventure programs.

448. Wilderness Studies: Leadership Practicum (3) S

Prerequisites or corequisites: PED 346, 447. Analysis and practice of the leadership and teaching techniques appropriate to the conduct of wilderness adventure programs.

450./550. Instrumentation in the Exercise Sciences (3) F 1994 and every third semester thereafter

Prerequisites: Upper-division undergraduate or Graduate standing and PED 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. Upper division undergraduate students register in PED 450; Graduate students register in PED 550. Traditional grading only. (Seminar 3 hrs)

451./551. Advanced Exercise Physiology (3) S 1995 and every third semester thereafter

Prerequisites: Junior/Senior or Graduate standing and PED 301 or equivalent. Advanced concepts of exercise physiology. (Seminar, 3 hrs.)

452./552. Exercise Science: Tests and Training (3) F 1995 and every third semester thereafter

Prerequisites: Upper-division undergraduate or Graduate standing and PED 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. Upper-division

students register in PED 452; Graduate students register in PED 552. Traditional grading only. (Seminar 3 hours.)

453. Theory of Coaching Football (2) S

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.)

455./555. Biochemical and Hormonal Adaptations to Physical Activity (3) F 1995 and every third semester thereafter

Prerequisites: Upper-division undergraduate or Graduate standing and PED 301 or 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 PED 455; graduate students register in PED 555. Traditional grading only. (Seminar 3 hours.)

458. Theory of Coaching Swimming and Water Polo (2) F,S

Prerequisite: PED 240 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.)

462./562. Advanced Strength and Conditioning (3) F

Prerequisites: PED 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) S

Prerequisites: A/P 207, PED 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 brs)

475./575. Psychology of Coaching (3) F,S,SS

Current topics of psychological concern and application as related to athletic performance.

476. Physical Education for Elementary Teachers (3) F,S

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) S

Prerequisites: PED 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) F,S

Prerequisites: PSY 100, PED 370, senior standing and concurrent enrollment in PED 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) F,S

Prerequisites: Senior Standing. Principles and techniques of construction, organization, administration, interpretation and evaluation of measuring devices used in physical education. (Lecture: 2 hours, Laboratory: 2 hours.)

485. Neurological and Pathological Foundations for Corrective Therapy (3) F

Prerequisites: A/P 202, 207, PED 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) F,S

Prerequisite: Completion of physical education course requirements for the major track in which field work is taken. Supervised practice in working with individuals or small to large groups in public or private 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 Physical Education and Sport.

494./594. Exercise Science Internship (3) F,S

Prerequisites: Upper-division undergraduate or graduate standing and PED 301 or equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. Provide 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 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 PED 494; Graduate students register in PED 594. Traditional grading only. (Seminar)

*497. Independent Study (1-3) F,S

Prerequisites: Major or minor in physical education, senior status and consent of instructor. 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) F,S

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 of credit with change of topic.

A. Self-Defense for Women

B. Internship in Teaching Self-Defense *499. Special Studies (1) F,S

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 of credit with change of topic.

A. Biochemical Hormonal Adaptation Graduate Division

521. Sports Management (3) F 1994 and every third semester thereafter

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) F 1994 and every third semester thereafter

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) S 1995 and every third semester thereafter

Prerequisites: Undergraduate major in physical education, IM 300. A systems approach to designing instruction for the physical education program.

526. Applied Behavior Analysis in Physical Education (3) F 1995 and every third semester thereafter

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.

537. Physical Education for Special Populations (3) F 1995 and every third semester thereafter

Foundations in the organization and conduct of Adapted Physical Education.

538. Motor Dysfunction and the Exceptional Person (3) S 1995 and every third semester thereafter

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) F 1994 and every third semester thereafter

Prerequisite: PED 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) F 1995 and every third semester thereafter

Prerequisites: PED 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) F 1994 and every third semester thereafter

Prerequisite: PED 315 or equivalent. The study of major factors which contribute to the development of motor skillfulness from birth to maturity.

550./450. Instrumentation in the Exercise Sciences (3) F 1994 and every third semester thereafter

Prerequisites: Upper-division undergraduate or Graduate standing and PED 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. Upper division undergraduate students register in PED 450; Graduate students register in PED 550. Traditional grading only. (Seminar 3 hrs)

551./451. Advanced Exercise Physiology (3) S 1995 and every third semester thereafter

Prerequisites: Junior/Senior or Graduate standing and PED 301 or equivalent. Advanced concepts of exercise physiology. (Seminar, 3 hrs.)

552./452. Exercise Science: Tests and Training (3) F 1995 and every third semester thereafter

Prerequisites: Upper-division undergraduate or Graduate standing and PED 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. Upper-division students register in PED 452; Graduate students register in PED 552. Traditional grading only. (Seminar 3 hours.)

555./455. Biochemical and Hormonal Adaptations to Physical Activity (3) F 1995 and every third semester thereafter

Prerequisites: Upper-division undergraduate or graduate standing and PED 301 or 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 PED 455; graduate students register in PED 555. Traditional grading only. (Seminar 3 hours.)

560. Health Related Problems in Sport (3) F 1994 and every third semester thereafter

Prerequisites: PED 301 and 307 or their equivalents and A/P 202 and 207 or their equivalents. Examination of health problems related to engaging in vigorous physical activity. Traditional grading only. (Seminar)

561. Musculoskeletal Injuries in Sport (3) F 1995 and every third semester thereafter

Prerequisites: PED 300 and 307 or their equivalents and A/P 202 or its equivalent. An indepth 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) F

Prerequisites: PED 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) S

Prerequisites: A/P 207, PED 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).

573. History of Sport in the U.S.A. (3) F 1994 and every third semester thereafter

Prerequisite: PED 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) S 1995 and every third semester thereafter

Investigation of contemporary international sport in various world cultures.

575./475. Psychology of Coaching (3) F,S,SS

Current topics of psychological concern and application as related to athletic performance.

577. Sport in U.S. Culture (3) F 1995 and every third semester thereafter

Prerequisite: PED 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.

588. Clinical Basis of Corrective Therapy (3) F,S

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) F,S

Corequisite: PED 588. Instruction and observation in the Long Beach Veterans' Hospital.

589. Corrective Therapy Clinical Training II (3) S

Prerequisite: Satisfactory completion of PED 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, lab.)

589L. Corrective Therapy Clinical Training II (3) F,S

Corequisite: PED 589. Instruction and observation in the Long Beach Veterans' Hospital.

590. Statistical Analysis and Measurement in Physical Education (3) F,S

Prerequisites: EDSE 421, EDSS 450 P or 450 W, PED 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) F,S

Prerequisites: Bachelor degree with a major or minor in Physical Education or an approved related major; PED 521 or PED 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) F,S

Prerequisites: Bachelor degree with a major or minor in PE or an approved related major; PED 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) F,S

Prerequisites: Bachelor degree with a major or minor in 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) F,S

Prerequisites: Bachelor degree with a major or minor in PE 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) F,S

Prerequisites: Upper-division undergraduate or Graduate standing and PED 301 or equivalent. Consent of instructor required for upper-division undergraduate students prior to registration. The internship will provide 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 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 PED 494; Graduate students register in PED 594. Traditional grading only. (Seminar)

597. Independent Research (1-3) F.S.SS

Prerequisites: Consent of PE 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) S 1995, every third semester thereafter

Prerequisites: PED 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) F 1995, every third semester thereafter

Prerequisites: PED 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) F 1994, every third semester thereafter

Prerequisite: PED 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) F 1995 and every third semester after

Current trends, issues and research in physical education and sport.

674. Seminar in Philosophical Concepts of Sport and Physical Education (3) S 1995 and every third semester thereafter

In depth, critical analysis of philosophical movements affecting physical education with emphasis on practical application and future implications.

675. Seminar in Human Movement Theory (3) S 1995 and every third semester thereafter

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) S 1995 and every third semester thereafter

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) S

Prerequisites: PED 590, 696. Critical analysis and synthesis by comparative review of professional literature in physical education. Required of all candidates not electing thesis option.

696. Research Methods (3) F,S

Prerequisites: PED 590, undergraduate major in 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) F,S,

Prerequisites: PED 590, 696, advancement to candidacy. Research in an area of specialization under the direction of a faculty member.

698. Thesis (1-4) F,S,SS

Prerequisites: PED 590, 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

699. Seminar in Selected Topics (3) F,S

Prerequisites: Teaching experience. 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.

Department Chair: Ray J. Morris
Department Office: Industrial
Technology Building, Room 130

Faculty: Professors: Joyce Campbell, Charles L. Carter, Kay Cerny,; Associate Professors: Ray J. Morris, Albert C. Russo.

Emeritus Faculty: A. Jerome Nielsen

Telephone: 985-4072

Department Secretary: Lois M. Magette

The Department

Students desiring information should contact the department office for referral for advisement.

The physical therapy curriculum is a competency based program designed to prepare entry-level practitioners who will become an integral part of the medical rehabilitation team as a professional health care provider. Appropriate science, professional, medical and clinical experiences are provided. Successful completion of the degree requirements leads to a bachelor of science degree in physical therapy and qualifies one to write the State of California examination to practice as a physical therapist. The program is accredited by the American Physical Therapy Associa-

In accordance with a professional goal in physical therapy, all physical therapy entry-level education programs will preferably be conducted at the master's level. The program at CSULB is currently planning for this transition.

The comprehensive curriculum plan includes a sequence of integrated student-oriented learning experiences to enhance attainment of terminal competencies. As a professional health care provider the physical therapist will be able to:

- Determine the physical therapy needs of any patient referred;
- 2. Design a physical therapy plan of care;
- 3. Implement a physical therapy plan of care;
- Evaluate, interpret and respond to changes in physiological state;
 Identify and recommend solutions
- for architectural barriers;

Interact with patients and families;

7. Demonstrate safe, ethical, and legal practice;

8. Demonstrate appropriate and effective communication skills;

 Participate in the design and management of a physical therapy service;

 Apply basic educational concepts of learning theories;

11. Apply basic principles of the scientific method;

12. Assume responsibility for professional growth;

13. Identify activities between governmental, health and educational institutions;

14. Identify issues and problems in the health care delivery system;

15. Engage in the clinical decisionmaking process;

16. Design a program of self-learning and professional development.

Requirements for Admission

The pre-physical therapy education requirements are similar to pre-medical and pre-health professional programs. Students must follow a prescribed program which includes general education course work and appropriate physical, biological, and behavioral sciences.

The number of applicants to the physical therapy professional program exceeds the number that can be accepted. For this reason physical therapy applicants are subject to supplemental criteria in addition to those required for admission to the University. Admission is on a competitive basis and preference is given to California residents. Applicants with a bachelor's degree should consult the current CSULB catalog for second baccalaureate degree requirements.

Admission to the Professional Program:

In addition to meeting the University's academic standards for admission in good standing, the applicant must:

- Declare physical therapy as a major (if not declared prior to admission);
- 2. Complete and file a Supplemental Application with the Department;
- Complete a minimum of 76 semester units including all general education requirements and prereq-

Physical Therapy College of Health and Human Services

uisites. All lower-division General Education requirements and prerequisite courses must be completed prior to admission to the professional program.

NOTE: A maximum of 12 units may be completed during the application semester. Mid-term grades must be submitted and a final passing grade must be received by the department before final acceptance into the professional curriculum;

4. Complete PT 374 at this campus. Note: PT 374 may be taken at another campus, but few other universities offer an equivalent course. Opportunities to enroll in PT 374 at CSULB vary according to the demand and resources;

Submit transcripts of all academic work attempted;

6. Submit a minimum of three letters of recommendation;

7. Complete the Graduate Record Examination (verbal, quantitative and analytical portions);

8. Possess current CPR Certifica-

In determining the eligibility of an applicant for admission to the program, the admission committee will consider:

All information in the supplemental application.

2. All college/university academic work completed with emphasis on all prerequisite courses. The following courses and their semester unit values are the CSULB science prerequisites to the professional program: Statistics course (biostatistics preferred) (3), Human Anatomy - A/P 202 (3), Physics - PHYS 100A&B (8), Human Physiology - A/P 207 (4), General Psychology - A/P 207 (4), General Chemistry - CHEM IIIA&B (10), Organic Chemistry - CHEM 327 (3), Psychology of Disability - PT 374 (3);

Documented exposure to the practice of Physical Therapy in a variety of settings;

 The state of physical/emotional wellness in order to carry out the typical responsibilities of a therapist;

An interview of the applicant (at the discretion of the selection committee);

Results of the Graduate Record Examination (Graduate and/or Undergraduate).

Requirements for Admittance to Clinical Practice:

- Complete all requirements for the baccalaureate degree at the time of application for admission to clinical practice;
- 2. Earn a minimum of 2.0 (C) in each professional course attempted;
- Successfully complete a comprehensive examination.

Note: Students who complete the requirements receive a B.S. in Physical Therapy and after successful completion of an internship (PT 485), offered by the Physical Therapy Examining Committee, are qualified to write the licensing examination by the Physical Therapy Examining Committee.

Requirements for the Bachelor of Science in Physical Therapy (code 3-1226)

Lower Division: None.
Upper Division: A/P 307, PT 301, 302, 325, 350, 351, 353, 360, 371, 374, 380, 407, 430, 431, 440, 446, 450, 472, 475, 480.

Post Baccalaureate: PT 485.

Critical Dates:

- 1. February 15 and September 15: Supplemental physical therapy application and support documents (transcripts, references, etc.) due for fall and spring admission:
- May and January: Notice of Admission decision for fall and spring acceptance, respectively.

Courses (PT)

Lower Division

210. Orientation to Health Care Professions (1) F,S

Prerequisite: Consent of instructor. Orientation to health care professions.

Upper Division

301. Anatomy and Kinesiology I (4) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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 aspectic technique. (Lecture 2 hours, laboratory 3 hours.)

353. Principles of Physical Therapy III (3) F,S

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) F,S

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 specimans. (Lecture 2 hrs, laboratory 3 hrs).

371. Clinical Medicine I (3) F,S

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.

374. Psychosocial Aspects of Disability I (3) F,S

Prerequisite: PSY 100, 370 (may be taken concurrently) and consent of instructor. Survey of the psycho-social, emotional and cultural reactions to disease and disability.

380. Clinical Practice I (1-4) F,S

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.

401. Applied Anatomy (4) F,S

Prerequisites: A/P 202, A/P 207. Advanced study of the structure and function of the neuromusculatoskeletal systems with emphasis on the surface, muscle and joint anatomy, nerve, and blood supply. Includes dissection lab and prosected materials. (Lecture 3 hours, laboratory 3 hours.) Traditional grading only.

407. Systems Physiology for Therapists (3) F,S

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) F,S

Prerequisites: A/P 207, P T 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) F,S

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) F,S

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) F,S

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 and Counseling for Therapists (2) F,S

Prerequisites: Admission to the physical therapy professional program and consent of the instructor. Application of basic educational concepts of learning theories in designing, implementing and evaluating learning experiences in order to teach patients and families, and to design and implement community education in-service programs. Traditional grading only. (Lecture.)

450. Principles of Physical Therapy VI (3) F,S

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).

460. Neuroanatomy (3) F,S

Prerequisite: P T 401. Investigation of human neuroanatomy including the peripheral, central and autonomic nervous systems. (Lecture 2 hours, (ab 3 hours). Traditional grading only.

461. Neuromuscular Physiology (4) F,S

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.

hotels, and patential restructed and

472. Clinical Medicine II (3) F,S

Prerequisites: Admission to the physical therapy professional program, P T 371 and consent of instructor. Pathology, clinical course, medical and/or surgical management and the role of the physical therapist in patient care, including the recognition, selection and performance of definitive physical therapy assessment procedures.

475. Research Methods (3) F,S

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) F,S

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.

485. Clinical Practice III (6) F,S

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) F.S

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.

499. Special Topics (1-3) F,S

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 Center for Public Policy and Administration

College of Health and Human Services

Director: Daniel M. Barber
Center Office: Social Science
Public Affairs (SS/PA), Room 159
Telephone: (310) 985-4177
Professors: Daniel M. Barber,
Stephen K. Blumberg, David W.
Fischer, Peter L. Shaw
Associate Professors: John W.
Ostrowski, Ruth A. Ross, Rodolfo D. Torres.

The Center

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 in 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, Transportation Policy and Planning, and Law Office Administration. 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 and perspective of the 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.

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 in public administration, or equivalent 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 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:

- a. A completed Center Application Form for the specific degree or certificate program.
- b. Official transcripts of all course work completed in higher education.
- c. Two letters of recommendation from members of the academic

profession under whom the applicant has studied, or from persons in positions of administrative leadership under whom the applicant has worked.

d. 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 formulate a Department Prospectus, or learning plan, in conjunction with a Center faculty advisor. The objective of the prospectus is to assist the student in developing an effective course of study to meet individual career needs and goals. 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.

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, Transportation Policy and Planning, or Law Office Administration, 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 for the Master of Public Administration:

- 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, 510, 650, 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;
- Additional elective course work in elective fields to meet the 36-unit minimum;
- Successful completion of a written Comprehensive Examination and PPA 697 Directed Research.

University Courses Acceptable for 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, 516, 517, 519; A/ST 592, 610; ART 545A-B; COTA 510, 520, 545, 610; CRIM 512, 531, 541, 551, 581, 582, 583, 599, 621, 622, 623, 624, 630, 640, 641, 650, 694; ECON 500, 510, 511, 537, 565, 571, 572, 581, 583, 586, 636, 650, 670, 686, 690; EDAD 541, 544, 641, 644, 647, 648, 649, 651, 657, 657F, 658, 658F, 659, 661; GEOG 540, 567, 588, 600, 640, 650, 652, 666; GERN 520, 526, 550, 600, 605; H/SC 500, 501, 503, 508, 516, 524, 528, 535, 570, 581, 624; HEC 511, 515, 520, 521, 529, 531, 533, 535, 541, 561, 562, 564; HCA 500, 502, 505, 510, 515, 524, 530, 535, 536, 537, 538, 550: HIST 508, 568, 577, 590, 592, 673: IS 501, 502, 525, 530, 580, 584, 625, 670; LI 510, 513, 520, 540, 550, 570; MGMT 510, 511, 512, 513, NRSG 556A, 556B, 557, 558, 559, 660A-B: OCST 501, 502, 503, 504, 505, 508, POSC 500, 550, 600, 610 620, 640; PSY 516, 527, 553, 554, 572, 576, 581, 585, 587; REC 500, 501, 502, 508, 521, 571, 587, 593, 595; SW 503, 505, 550, 594, 597A, 597B, 642, 643, 662, 663, 664, 665, 666, 667, 668, 669, 672, 673, 677, 681, 682; SPCH 503, 505, 510, 511, 512, 520, 521, 532, 534, 546, 549, 550, 551, 600, 610, 611, 620, 632.

A wide variety of courses in Engineering and Educational Psychology also are acceptable. Consult with Center Faculty.

Master of Public Administration with an 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.

Requirements for the Master of Public Administration Degree Option in Urban Affairs

- 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 PPA 500, 510, 610, 650, 660, 670, & 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, 520, 522, 523, 525, 527, 530, 540, 544, 546, 547, 548, 549, 550, 555, 565, 567, 571, 575, 577, 578, 580, 590; ANTH 516; C E 506; CRIM 512, 551, 581, 621, 622, 623, 624, 630, 640, 641, 650, 690; ECON 536, 537, 636, 650; EDAD 541, 544; ED P 520, 530, 536, 540, 555, 574, 575, 576, 582, 615; GEOG 567, 600, 650, 652, 666; HIST 568, 673; NRSG 557, 558; POSC 640, 660; REC 502, 521, 571;
- 5. Successful completion of a written Comprehensive Examination, and PPA 697 - Directed Research.

Master of Public Administration 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. 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. For this degree option, the experiential background would be targeted to the public works and infrastructure sector.

Requirements of the Master of Public Administration Option in Public Works Administration

- 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, 510, 554, 650, 660, 670 and 696; and C E 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, 520, 522, 527, 530, 535, 540, 544, 545, 547, 549, 550, 551, 552, 553, 555, 560, 565, 590; C E 504, 506, 520, 522, 564, 565, 602;
- 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, or a Masters Degree in Public Administration and a minimum of 10 years of progressively responsible management experience in government.

Requirements for the Certificate in Urban Executive Management

- 1. A minimum of 18 units in graduate course work, including 3 required and 3 elective courses;
- Satisfactory completion of PPA 544, 547, and 571;
- Satisfactory completion of 3 elective courses selected from PPA

512, 525, 530, 535, 545, 550, 565, and 575.

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 for the Certificate in Public Management Analyst

- A minimum of 18 units in graduate course work, including 5 required and 1 elective courses.
- 2. Satisfactory completion of PPA 515, 517, 520, 521, and 555.
- 3. Satisfactory completion of 1 elective course 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 for the Certificate in Public Sector Employer-Employee Relations and Personnel Management

- A minimum of 18 course units in graduate course work, including 3 required and 3 elective courses.
- 2. Satisfactory completion of PPA 510, 575, and 577.

 Satisfactory completion of 3 elective courses selected from PPA 527, 530, 565, 570, 578, and 580.

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 for the Certificate in Public Sector Financial Management

- (1) A minimum of 18 units in graduate course work, including 3 required and 3 elective courses;
- (2) Satisfactory completion of PPA 555, 565 and 567;
- (3) Satisfactory completion of 3 elective courses selected from PPA 520, 522, 527, 540, and 560.

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 for the Certificate in Transportation Policy and Planning

- A minimum of 18 units in graduate course work, including 3 required and 3 elective courses;
- Satisfactory completion of PPA 550, 551, and either 552 or 553;
- 3. Satisfactory completion of 3 elective courses selected from PPA 535, 540, 545, 575, 670; C E 506, 520, 522; ECON 636, 690.

Graduate Certificate in Law Office Administration (code 1-9000)

The Graduate Certificate in Law Office Administration is a six-course program concentrating on the subject areas necessary for the qualification of administrators in the field of law office administration. The program is especially designed for mature, mid-career professionals who have already achieved a measure of success in the practice of law office administration. Particular areas of knowledge will be developed in such subjects as management organization, financial management strategies, budget planning and forecasting, personnel management, and data processing and word processing systems.

Requirements for the Certificate in Law Office Administration

A total of six courses (18 semester units) required as follows: Students must also complete PPA 597 (for students currently employed as law office administrators).

Courses (PPA)

500. Foundations of Public Policy and Administration (3) F,S

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) F,S

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 objections.

512. Urban Executive Management (3) F,S

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) F,S

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) F,S

Preparation of written documents required of public administrators. Not open to students with credit in PPA 590.

517. Analytical Skills Development (3) F,S

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.

520. Governmental Administrative Services Analysis (3) F,S

An examination of the nature, purposes, uses and techniques of governmental administrative analysis.

521. Microcomputer Management for Public Administrators (3) F,S

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 microcomputer systems, and hands-on computer laboratory experience in the design, development and use of microcomputer applications.

522. Automating Government Administration (3) F,S

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) F,S

A seminar for public administrators in urban systems methodology, computer technology for urban systems, and the analysis of the subsystems and components that make up the municipal information system. System planning, management and control, as well as system measurement and evaluation, will be covered. Cost benefits and cost effective systems will be discussed.

525. Human Services Administration (3) F,S

Examination of social services agencies in the public sector and the unique administrative practices, policies and problems associated therein

526. Quantitative Systems Methods (3) F,S

Prerequisites: Completion of PPA 696 Research Methods in Public Administration. This course provides an introduction to advanced quantitative and analytical techiques used in the public sector. The focus of the course is on applications in systems theory and operations research. Specific topics and techniques include theories of system design, network planning and analysis, Bayesian probability, decision analysis, modeling and simulation, and forecasting. Emphasis in the course is placed on both undertsanding the appropriate uses of analtyical techniques and their application to common public sector problems.

527. Productivity in Local Government (3) F,S

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.

530. Manpower Planning for Public Sector Organizations (3) F,S

Examination of manpower programs and practices in the public sector with emphasis on federally subsidized programs and their implementation through local governments. Analysis of the functions of the manpower planner as they pertain to local market information; program monitoring and evaluation; and the human service delivery system.

535. Intergovernmental Relations (3) FS

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) F,S

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) F,S

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) F,S

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) F.S

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)F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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 Policy and Management (3) F,S

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.

553. Seaport Policy and Management (3) F,S

Seaport management, policy and planning; key management and staff tasks for cargo handling, storing, intermodal transfer, facility operation, planning and construction, funding; specialized functions include forecasting demand, capital facility design, construction, operation and funding; coordination with public and private agencies, licensing, safety, environment and inter-relationships with other transportation modes.

554. Public Works Facilities and Urban Policy (3) F, S

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. Local Government Budget Skills (3) F,S

Detailed exploration of the various budget systems available to local governments. Stress will be on building detailed knowledge and skills in techniques of relating revenues to expenditures, program budget design and analysis, and relating budgeting to the political process. Methods of balancing citizen demands with revenue limitations within a consumer-oriented society also will be considered, as will traditional and behaviorally-oriented budget controls.

560. Public Financial Management Techniques and Issues (3) F,S

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.

565. Local Government Finance Skills (3) F,S

Detailed examination of the local government finance function, and development of specific skills to be applied by the executive or middle management person in local government. Specific subjects will include accounting and its use; cash and debt management; public debt instruments; operating and capital budgeting; administration of property; sales, income, business and excise taxes; enterprise and miscellaneous revenue sources, control devices, systems and techniques; and state supervision of local finance.

567. Basic Governmental (Fund) Accounting (3) F,S

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) F,S

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) S

Increasingly, urban governments are being criticised 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) F,S

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) F,S

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.

578. Management Rights: Managing in a Union Environment (3) F,S

The course will assist students to learn methods and skills which are necessary to maximize the managerial influence in employee-manager relations in public sector agencies. Topics will include how to gain and maintain management rights; how to strengthen credibility with employees; how to avoid grievances; handling insubordination and abuse of sick leave; and effective liaison with associations and union representatives.

580. Affirmative Action (3) F,S

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.

582. Citizen Advocacy and Public Policy Making (3) F,S

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) F,S

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) F,S

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.

- A. Computer Applications Public
- B. Contract Public Services
- C. Higher Education Law
 D. Court Administration
- E. Waste Management Policy and Regulation
- F. Strategic Marketing for Public and Non-Profit Organizations
- G. Non-Profit Association Management
- J. Government/Community Relations
- K. Seminar on Public Policy and Higher Education

L. Race, Inequality and Public Policy 597. Directed Studies (1-3) F,S

Prerequisite: Consent of instructor, Independent study in public policy and administration

610. Seminar in Urban Affairs (3) F.S

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) F,S

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.

630. Public Works and Infrastructure Management (3) F,S

The course examines the nation's infrastructure condition and needs for physical plant and equipment such as water supply, waste management, energy transportation and buildings. The focus is upon Southern California within the state and national policy context.

650. Seminar on Issues In Contemporary Public Administration (3) F,S

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) F,S

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. Seminar in Public Policy Analysis (3) F,S

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.

680. Seminar in Urban Administration (3) F,S

Intensive study on the functions of the urban executive within the context of the urban environment. Focus is upon the role of the urban public executive in the decision process as it relates to organizational theory and structure, ethics, delivery of services, motivation and productivity, management monitoring and aucting. Students present term projects relating to current urban government, public and quasi-public agency issues.

696. Research Methods in Public Administration (3) F,S

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) F,S

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

Department Chair: Michael A. Blazey Department Office: AAS, Room 2 Telephone: (310) 985-4071 Faculty: Professors: Marilyn A. Jensen; Associate Professors: Michael A. Blazey, Kathleen J. Halberg, CeEtta Crayton; Assistant Professor: Kathy "KJ" James; Emeritus Faculty: Rhoda (Randy) Andersen, Jerry D. Byrd, David E. Gray, John (Jack) Minar Department Secretary: Quincy Bowyer Graduate Advisor: Kathleen J. Halberg

The Department

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 Na-

tional Recreation and Park Association and American Association for Leisure and Recreation.

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

Academic Program:

The curriculum is designed to prepare men and women for positions of leadership, supervision and administration in public recreation and park departments, armed forces recreation, employee recreation, therapeutic recreation, camping and outdoor education, voluntary youth and adult serving agencies, travel and tourism, and commercial recreation.

The curriculum includes selected courses in education and psychology to provide an understanding of people; courses in recreation leadership, programming, and the management of leisure services; and a variety of professional courses to develop an understanding of leisure and the leisure services profession.

Departmental Policies:

Each major student must maintain a cumulative 2.0 GPA on all units attempted and attain a minimum of a "C" grade in each course required in the major. Students earning less than a "C" grade in a required recreation prefix course must repeat that course. A recreation prefix course may be repeated only one time.

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 for the Bachelor of Arts in Recreation (code 2-1220)

Lower Division: REC 100, 211, 241;

Upper Division: REC 300, 304, 312, 340IC, 421, 425, 427, 475, 482, 483, 491, 495, 498.

Additional Courses: Each major student is required to complete courses from the following groups: Choose one course from the following: REC 402 or 408; Choose one course from the following: EDP 301, 302, 311, or PSY 370; Choose three courses from the following: REC 317, 323, 426, 450, 492, 493 or 494; Choose three units not used to meet other major requirements from the following: REC 215, 315, 316, 317, 323, 350, 401, 405, 407, 410, 413, 414, 415, 416, 426, 430, 450, 490, 492, 493, or 494.

Minor In Recreation (code 0-1220)

A minimum of 21 units approved by departmental advisor which must include: REC 211, 241, 312, 340l, 421 or 425, 484; one of the following: REC 315, 317, 482, 491, 493, 495, 497.

Certificate Program in Therapeutic Recreation (code 1-1150)

Requirements for the Certifiate in Therapeutic Recreation:

Completion of a baccalaureate or masters degree in recreation and leisure studies which may be awarded concurrently; satisfactory completion of 33 units (30 of which must be upper division) which must include: a) 15 units of core therapeutic recreation requirements as follows: REC 491, 492, 494, and 498, and b) 18 units of support course work including 3 units in the content area of anatomy and physiology, 3 units in the content area of abnormal psychology, and 3 units in the content area of human growth and development. Remaining units must comply with current course work requirements for professional level certification of the National

Council for Therapeutic Recreation Certification and the Recreation Therapy Certificate of the California Board of Recreation and Park Certification and must be approved by certificate advisor. Students must maintain a GPA of 2.5 in all courses in the certificate program.

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 for the Certificate in Administration of Volunteer Services:

- (1) A baccalaureate degree which may be awarded concurrently;
- (2) Satisfactory completion of 25 units which must include 10 units of core requirements as follows: REC 400, 488, 493 and 499; 15 units of elective courses including REC 410, REC 490; 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 adviser 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 for the Certificate in Administration of Outdoor Recreation Resources:

- (1) A baccalaureate degree which may be awarded concurrently;
- (2) Satisfactory completion of 24 units which must include 15 units of core requirements as follows: REC 430, 489, 495, 499 and either 317 or 486. Nine units of elective courses from Biology and/or Geography with approval of faculty 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 for 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 for the Certificate in Administration of Travel and Tourism:

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:

For REC 481: Permission of the instructor and 1,500 paid or volunteer hours of experience in a recognized travel/tourism situation, or REC 484; other course prerequisites as listed.

Course Requirements:

A total of 24 to 27 semester units as follows: REC 326, 450, 481, 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 for the Graduate Certificate In Leisure Counseling:

Satisfactory completion of 25 units of coursework which must include:

- (a) REC 402/502, 503, 588, 590;
- (b) EDP 434, 532, 533;
- (c) 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:

- 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 for the Master of Science:

- (1) Thesis option program: thirty 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 (1) F,S

Orientation to professional roles in the field of leisure services and the philosophy, academic requirements, and procedures of the Department of Recreation and Leisure Studies. (Discussion, 1 hr.)

211. The Recreation Program (3) F,S

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.)

215. Management of Outdoor Field Trips (1) F

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) F,S

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 (1) F,S

Orientation to professional roles in the field of leisure services and the philosophy, academic requirements, and procedures of Department of Recreation and Leisure Studies. (Disc., 1 hr.) Not open to students with credit in REC 100.

304. Computers in Leisure Services (3) F,S,SS

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.)

*312. Recreation Leadership (3) F.S

Prerequisites or corequisites: REC 211, 241. Theory and application of leadership as it pertains to leisure service agencies. Analysis of interpersonal and group skills necessary for effective leadership.

315. Recreational Sports Supervision (3) F,S

Organization and supervision of recreational sports for community-wide participation. (Lecture 2 hours, Activity 2 hours.)

316. Campus Recreation Services (3) S

Prerequisites: Junior Standing, Principles and practices in provision of recreation services on college, secondary, and elementary school campuses

317. Administration of Organized Camps (3) S

Program and administration of the summer camp, with special emphasis on the responsibilities of the camp counselor. Designed for students seeking summer camp employment.

320. The Universality of Play (3) F,S

Prerequisites: ENGL 100, Upper Division standing. Examination of the theories of play. Exploration of the ethnic orgins of play from an international perspective. Influence of play on the creativity, drive and self-image of society. Theory and practicum.

323. Environmental Interpretation (3) S

Prerequisites: Junior Standing. Principles and practices of environmental interpretation of out-door recreation resources.

*340l. Leisure in Contemporary Society (3) F,S

Prerequisite: Upper division standing. Intensive study of the new leisure and its impact on contemporary society.

350. Media Relations in Leisure Service Agencies (3) F,S

Basic knowledge and skills in media relations explored to provide techniques to effectively

promote and publicize recreation and leisure

400./500. Policy-Making Boards (1) S

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) S

On-site, hands-on experiences in swimming pool operation and facility management. Class-room theory in areas of pool water chemistry, filtration and public health requirements for private and public pool operation.

402./502. Leisure Counseling (3)

Current processes and procedures in leisure counseling. Includes techniques of leisure needs assessment, development of leisure resource files and leisure values orientation.

405. Management of Assaultive Behavior (1) F

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) F,S

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) F,S

Examines the basic legal, financial, and practical concerns related to starting a recreation business in California.

408./508. Aging and Leisure (3) F

Prerequisites: REC 211 and REC 312 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.

410. Designing Effective Workshops and Conferences (1) F

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) F,S

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 typi-

cal 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) F,S

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) F,S

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) F,S

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) F,S

Prerequisite: Lower division requirements. Concepts and techniques of supervision and administration in recreation agencies; emphasis on recruitment, assignment, evaluation and inservice training of recreation personnel.

*425. Finance and Marketing of Leisure Services (3) F,S

Prerequisites: REC 304, or consent of instructor. Types of financing in public and private sector; management by objectives as related to fiscal elements; marketing of leisure services in public and private sector agencies and organizations.

426. Travel/Tourism and Commercial Recreation (3) F,S

Prerequisites: REC 100/300, 241, and Junior standing. Current procedures and processes in developing and maintaining travel/tourism and commercial recreation enterprises. Discussion includes establishing a small commercial leisure enterprise, organizing and managing human resources and marketing the service or product and investigation of the burgeoning field of commercial leisure services. Traditional grading only.

*427. Legal Aspects of Leisure Services (3) F,S

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.)

*430. Recreation in the Ocean Environment (3) SS

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.

*450. Tourism Planning and Development (3) F,S

Analysis of elements which are included in a community development plan. Assessment of touristic potential of a region or site, enabling legislation, organization, and administration of a tourism development plan. Identification of sources of resistance and support.

*475. Philosophy of Recreation and Leisure (3) F,S

Prerequisite: Senior standing. Exploration of the philosophical and ethical bases for current practices in recreation and leisure service organizations. (Discussion, 3 hours.)

*481. Internship in Administration of Travel & Tourism (3) F,S

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 bulletin). 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.

*482. Human Services Programming in Urban Areas (3) F,S

Exploration of the social problems, minority populations and community resources of the urban impacted areas in relation to concerns of recreation and human needs.

483. Professionalism in Leisure Services (3) F,S,S

Corequisites: REC 498. Synthesis of experience gained from internship placement with theoretical and applied concepts learned in academic setting. Analysis of the future of leisure services and the individual student as a professional. Traditional grading only. (Sem, 3 hrs)

484. Field Work I (3) F,S

Prerequisites: Consent of instructor, REC 211, 241, 300, 312, 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.

485. Field Work II (3) F,S

Prerequisites: Consent of instructor, REC 211, 241, 300, 312, 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) F,S

Prerequisites: Consent of Instructor, REC 211, 241, 300, 312, senior standing; plus a minimum of 1,000 hours of verified paid or volunteer leadership experience, approved by faculty advisor. Supervised leadership in one of the following specialized recreation settings:

A - Outdoor Recreation

B - Therapeutic Recreation

C - Administration of Volunteers

D - Travel and Tourism

E - Commercial Recreation

Minimum of 80 hours of supervised experience
in an approved agency required. Not open to
students with credit in REC 486. Only one

*488. Internship in Management of Volunteer Services (3) F,S,SS

course in the 486 series may be taken.

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) F,S,SS

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) F,S

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.

*491. Foundations of Therapeutic Recreation (3) F,S

Philosophical and historical foundations of therapeutic recreation and principles of planning, implementing, and evaluating leisure services for individuals with disabilities. (Discussion 3 hours.)

*492. Individual Therapeutic Recreation Treatment/Program Plans (3) F,S

Prerequisite: REC 491 or consent of instructor. Corequisite: REC 494 or consent of instructor. 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; Clincial processes, 1 hour.)

*493./593. Management of Volunteer Programs (3) S

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.

Technology Education
College of Health and Human Services

*494. Management of Therapeutic Recreation Services (3) F,S

Prerequisites: REC 491 or consent of instructor. Corequisites: REC 492 or consent of instructor. Comprehensive therapeutic recreation program development, operation, and management. Advanced principles, issues, and trends in therapeutic recreation. (Discussion, 3 hours.)

*495. Recreation Resource Management (3) F,S

Prerequisites: Lower division requirements. Review of the techniques of recreation resource management; the roles of federal, state, county, municipal, and private agencies in the acquisition and development of these resources; and recreation area/facility planning, operations, and maintenance. (Lecture-discussion, 3 hours.)

*498. Internship in Leisure Services (6) F,S

Prerequisites: REC 475 and 1,000 hours of verified paid or volunteer leadership experience approved by faculty advisor. Corequisites: REC 483. 400 clock hours of supervised experience in an approved leisure service agency jointly supervised by university and agency personnel. Credit/No Credit grading only. (Field work, 6 hours)

499. Independent Study (1-3) F,S

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) S

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) F

Critical analysis and synthesis by comparative review of professional literature in the field of Recreation and Leisure Services.

502./402. Leisure Counseling (3) S

Current processes and procedures in leisure counseling. Includes techniques of leisure needs assessment, development of leisure resource files and leisure values orientation.

503. Leisure Counseling Practicum (2) F,S

Corequisite: REC 502/402. 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.

508./408. Aging and Leisure (3)

Prerequisites: REC 211 and REC 312 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.

521. Recreation Administration (3) F

Organizational theory; planning, staffing and budgeting of recreation programs in governmental and voluntary agencies.

571. Philosophy, Issues and Trends (3) F

Current philosophy, trends and issues in the field of recreation.

586. Internship in Therapeutic Recreation (3) F,S,SS

Prerequisites: B.A. degree in Recreation plus REC 491, 494, 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) F.S

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) F,S

Prerequisites: REC 502, 503, 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) F,S

Prerequisite: Consent of instructor. In-depth investigation of topics of current interest and concern to students experienced in recreation. May be repeated (with selection of different academic sub-topics) for a maximum of six units of elective credit. Topics to be announced in the Schedule of Classes.

591. Research Proposal Writing (1) F,S

Prerequisite: REC 696. Course is concerned with variations in research design and methodology. Completion of a thesis proposal is a requirement of this course.

593./493. Management of Volunteer Programs (3) S

This course is 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. Traditional grading only.

595. Management Studies (3) S

Administrative studies and surveys; procedures for conducting appraisals of recreation programs and facilities.

599. Independent Study (1-3) F.S.SS

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) F,S

Prerequisites: REC 698, advancement to candidacy. Independent investigation of field research problems in recreation.

698. Thesis (1-4) F,S

Prerequisites: REC 591, 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

329. Production Technology (3)

Faculty: Professors:

Associate Professors:

Becker, Colleen M. Hill.

Assistant Professor: Kurt H.

Boyd Davis, C. Thomas Dean,

Irvin T. Lathrop, Bill Macon, Paul

Powell, Robert D. Routh, James

Leonard Torres, Robert G. Trout.

151. Introduction to Graphic Arts

Principles of elementary typographic design and

layout, type composition and presswork. Discus-

sions and activities emphasize the letterpress, of-

fset lithography, silk screen and intaglio printing

processes, as well as bookbinding and paper

Principles of operation of various components

and the economics of selection and use of the

modern automobile. Practical experience in main-

tenance and repair at the owner-operator level.

231. Electronics Fundamentals (3)

Theory and operation of power supply, voltage

regulator, amplifier and oscillator circuits. The ap-

plication of semiconductor devices in these cir-

cuits and the use of test equipment will be

Basic principles of instrument usage and

freehand sketching as it relates to architectural

drafting. Basic lettering, floor plans, architectural

standards, practices, and techniques. (Lab 4

*321. Patternmaking and Casting

Theory and practice in the patternmaking,

coremaking and metalcasting processes, includ-

ing green sand molding, shell molding, invest-

ment casting, permanent mold casting and

The study of industrial materials to include wood

products, ploymeric materials, metallics,

ceramics, fabrics and industrial fluids. Investiga-

tion of processes to include casting, forming,

separating, condition, assembly and finishing

applicable related processes. (Lab included.)

327. Material Science and

methods. Course fee: \$20.00

Manufacturing Processes (3)

emphasized. (Lecture 2 hours, lab 2 hours.)

247. Architectural Drafting I (2)

hours.) (Lab fee required.)

Upper Division

Processes (3)

manufacturing. (Laboratory included.)

161. Automotive I (2)

(Laboratory included.)

Emeritus Faculty: David C. Church,

George Genevro, Floyd M. Grainge,

Ryan, Milton Schmidt, Earl M. Smith,

John C. Patcha:

Ross D. Martin:

Courses (TED)

Lower Division

NO STUDENTS ADMITTED DURING THE 1994-95 YEAR

Survey of industrial production technology. Topics include: production technology, careers, materials and processing methods, role of computers in industry, industrial management, marketing and quality assurance. Theory/practicum application. (Lecture 2 hours, laboratory 2 hours.)

*332. Semiconductor Devices (3)

Prerequisites: TED 231 or equivalent. Theory and operation of discrete and integrated semiconductor devices. Circuit analysis, design, measurement and test equipment will be emphasized. (Lecture 2 hours, laboratory 2 hours.)

*333. Electronic Communicatio (3)

Prerequisites: TED 332 or equivalent. Theory and operation of receivers, transmitters, modulators, antennas and related circuits. Specific applications for AM, FM, video, microwave, radar and optical data links will be presented. (Lecture 2 hours, laboratory 2 hours.)

*342. Technical Sketching (2)

The principles and practice of freehand and mechanically assisted sketching to produce a drawing of three-dimensional objects. (Lab included.)

*343. Creative Problem Solving (3)

Course deals with the elements of two and three dimensional design, stressing the understanding and application of creative problem solving and design principles to the technology education program. (Technical activity and lab: 6 hours)

348. Perspective in Architecture and Interiors (2)

Prerequisites: Art 100 or 181, or H EC 142. Per spective drawing of architectural interiors and exteriors. Includes various perspective approaches; shades, shadows, pen and pencil techniques. (Laboratory included.)

349.Communications Technology (3)

Analysis of the newer communication technologies employed in the gathering, storing, transforming, and retrieving of information. An emphasis will be placed on the integration of communication and computing, i.e., information management, electronic mail, on-line data bases, telecommunications, and the myriad new information services. (Lecture 2 hours, lab 2 hours.)

*351. Composition Methods in Graphic Arts (3)

Prerequisite: TED 151. Advanced typographic design and layout. Discussions and activities emphasize newspaper and magazine layout, multiple run in position methods, copyfitting, hot and cold composition methods and the composition of printing papers and inks. New techniques and developments in graphic arts included. (Laboratory included.)

*352 Graphic Arts Photography (3)

Photographic theory and operations related to graphic arts. Study of process camera in making line, halftone negatives and stats. Use of the vacuum frame and point light source for contacting and various proofing processes. Basic stripping operations presented. (Laboratory included.)

*353. Design and Layout of Printing Forms (2)

Principles of printing layout, type estimating and typographical specifications. Experience offered in designing typical display and commercial printing forms. (Laboratory included.)

*363. Chassis Technology (2)

Prerequisite: TED 161 or equivalent. Theories of design and operation of chassis components affecting stopping stability, power flow, suspension, steering. Includes testing, trouble diagnosis and modern methods of servicing. (Lab included.)

368. Transportation Technology(3)

Study of the development of transportation systems and mechanism, and their interrelationship with other technological, sociological, economical, cultural, and ecological systems. Lab experience and demonstrations are focused on the physical laws and theories of motive systems.

369. Energy and Power Technology (3)

Study of energy and power production systems with emphasis on basic energy conversion processes for electric power production including relevant topics on conservation, alternatives, user distribution, economics, social and environmental effects, and energy policies. Traditional grading only. (Discussion-laboratory 4 hours.)

*370. Advanced Plastics Processing (3)

Prerequisite: TED 170 or consent of instructor. Primary plastics processing techniques; principles. Operation of thermoforming, rotational molding, injection molding, compression molding, extrusion and blowmolding equipment. Product and process evaluation. (Lab included.)

*373. Plastics Application to Design (3)

Prerequisite: TED 170 or consent of instructor. Interpretation of plastic design data in their capabilities and limitations as a class of materials. Provide an understanding of the principles underlying the properties of plastics and design problems associated with plastics through the laboratory application of plastic processes and their effects on design. (Lab included.)

384. Computers for Technology (3)

A course covering computer operations in technology . This course stresses the use of micro computers and software appropriate for teaching technology. Topics include system components, programming and standard software packages.

Software covered in this course includes: word processing, data bases, spread sheets, graphics, networking, and classroom management.

*385. Organization and Management of Technical Education Facilities (3)

Area planning problems with emphasis on general architectural specifications, auxiliary spaces and selection of tools, equipment and supplies. Plans and specifications for an instructional area are presented and evaluated. Includes safety considerations as applied to the planning, operation and utilization of laboratory facilities. Not open to students with credit in TED 492.

386. Principals of Technology (3)

Prerequisites: Math 103 or equivalent. The study of mechanial, electrical, fluid and thermal energy systems as they apply to the technological world. Laboratory experiences are focused on the principles of physical scientific laws and theories as they apply to technology.

388I. Technological Literacy (3)

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. (Discussion 3 hours.)

*391. Internship in Technology Education (2)

Prerequisite: Consent of coordinator. Planned, coordinated and supervised work experience in an industry allied with the students' technical areas of concentration. Course may be repeated for a maximum of 6 units. Field trips into industrial complexes are scheduled according to technical areas of interest.

*408. Corporate Presentations (3)

Planning and producing slide-tape presentations. Scripting, photography, sound recording and synchronization of color slides and tape. (Lab included.) Traditional grading only. (Activity)

*411. Furniture (3)

Analysis of characteristics and principles of furniture design. Emphasis is on selection and construction of furniture, employing advanced hand and machine tool operations. (Lab included.)

*412. Carpentry (2)

Planning and techniques of estimating building construction costs, with the study of techniques involved in the laying out and framing on a structure. (Laboratory included.)

*415, Industrial Wood (2)

Comprehensive study of modern industrial woodworking, its production and management, from skilled hand craftsmanship to numerical automation. Emphasis on the operational functions and technical procedures involved. (Lab included.)

*420. Welding Technology (3)

Study of oxy-acetylene and electric welding principles, practices, welding equipment and principles of welding metallurgy. Includes laboratory application in oxy-acetylene brazing, cutting and welding, metallic stick electrode and inert gas welding processes. (Leo 3 hrs, Lab 3 hrs)

*423. Machine Tools II (3)

Advanced machining EMD tooling operations including basic machine design, tool and cutter

maintenance, numerical control (N/C) and electrical discharge machining (EDM). (Lab included.)

433. Electronic Communication Circuits (3)

Prerequisites: TED 333 or equivalent. Theory and opera tion of electronic circuits used in communication. Topics in clude: Phase-locked loops, video amplifiers, AM, FM, PM modula tors and demodulators, active filters and FCC licensing require ments. (Lecture 2 hours, laboratory 2 hours.) Traditional grading only.

*435. Digital Electronics I (3)

Prerequisites: TED 331. The theory and operation of digital electronics logic circuits and devices. Both sequential and combinational logic circuits will be presented. (Discussion 2 hours-laboratory 2 hours.)

442./542. Architectural Planning and Presentation (3)

Prerequisite: TED 347. Study and planning of structures for specific functions. Development of presentation drawings including perspective drawing, shades and shadows, materials and colors. Review of architectural history. (Lecture, laboratory 6 hours.)

*446. Presentation Techniques: Architecture and Interiors (3)

Prerequisites: TED 348 or H EC 348 and consent of instructor. Techniques in preparing two and three dimensional architectural and interior renderings and presentations. (Technical Activity-Laboratory 6 hours.)

*447. Rapid Techniques: Architecture and Interiors Presentations (2)

Prerequisite: TED 446 or H EC 446 or consent of instructor. Methods of visual communication used in architecture and interior presentation with emphasis on development of professional formats using abstraction, fluidity and rapid techniques. (Laboratory included.)

*453. Graphic Arts Presswork (3)

Prerequisite: TED 151. Principles and techniques of both letterpress and photo-offset presswork. Discussions and activities emphasize the theory, practice and problems of letterpress and photo-offset presswork. Development of technical knowledge of materials and methods. Practice in running increasingly complex jobs including multicolor work. (Laboratory included.)

454. Color Separation Techniques

Prerequisite: TED 352. Advanced presentation of photographic theory and practices common to the graphic arts field. Laboratory techniques to encompass the basic kinds of color separations. These include indirect and direct methods utilizing the enlarger, process camera and contact frame. Masking techniques to include both silver and dye masks. Experimental processes to be included. (Laboratory included.)

*455. Graphic Arts Printing Production (3)

Prerequisites: TED 351, 352, 453 or consent of instructor. Principle of and experiences in printing production. Through lecture and laboratory experiences the course identifies and covers topics such as: production planning, cost estimating,

job order planning and control, quality control, maintenance, purchasing and material control. (Laboratory included.)

*461. Automotive Performance Diagnosis (3)

Theories of design and operation of fuel and emission control systems. Laboratory experiences focused on diagnosis and service using advanced analysis equipment. (Lab included.)

*462. Automatic Transmissions (2

Prerequisite: TED 161 or equivalent. Theories of design and operation of front wheel drive and rear wheel drive automatic transmissions. Latest methods of testing, servicing and repair are stressed. (Laboratory included.)

466./566. Automotive Computer Controls (2)

Prerequisites: TED 161 or equivalent. Theory and operation of automotive computerized combustion control systems including computer control subsystems, air conditioning and fuel injection. Laboratory experiences emphasize system diagnosis and servicing. (Lab included)

*470. Reinforced Plastics and Composites (3)

Prerequisite: TED 170 or consent of instructor. Mold preparation and production of reinforced plastics products. Standard specifications for reinforced materials and composite materials. (Laboratory included.)

474./574. Plastics Mold Construction (3)

Prerequisite: TED 170 or consent of instructor. Properties and characteristics of thermo-setting and thermoplastic materials. Analysis and construction of molds and dies for use with reinforced plastics, injection molding, thermoforming processes, extrusion and compression and transfer molding. (Laboratory included.)

*483. Research and Experiment — Technology Education (2)

Principles and techniques of research and experimentation in technology education utilizing the scientific method of problem solving. Introductory knowledge of mechanical technology recommended, (Laboratory included.) (Activity)

484. Technology Assisted Instruction (3)

Prerequisites. ED 384 and EDSS 450T or equivalent. The study of media delivery systems as they apply to the instruction of technology education in the classroom and as they apply to the presentation of information in a business/industry setting. Lab experiences focuses on concepts and activities as they apply to technology.

*485. Explorations In Technology For the Middle School (3)

Prerequisites: Application to a teaching credential program or a valid teaching credential or permission of instructor. Orientation, philosophy, objectives, strategies, materials and modules used to teach an exploratory technology program at the Middle School level. Students will experience self-directed learning in technology using a modular approach in a non-traditional facility environment. Curriculum evaluation and development will be emphasized. (Lab fee required.) (Lecture 2 hours, laboratory 2 hours.) Traditional grading only.

491. Special Problems in Technology Education (1-3)

Prerequisite: Consent of instructor. Advanced work within an area of specialization done on an experimental or research basis. The area designated by letter at the time of registration as: (a) woods, (b) metals, (c) electricity-electronics, (d) industrial drawing, (f) automotive, (g) industrial crafts-plastics, (h) professional, j) photography. May be repeated for a total of six units. (Nontechnical.)

*492. Advanced Technical Studies (1-6)

Prerequisites: Consent of instructor and area requisite courses. Advanced work done within an area of specialization designed for the present Industrial Arts teacher who wants upgrading in his field of concentration. Covers new industrial processes and materials that may be related to teaching in the secondary schools. May be repeated for a maximum of six units per area of concentration (automotive, drawing, electricity-electronics, graphic arts, industrial crafts, plastics, metals, photography, woods and special generalized 492 courses not specifically allied to an area of Technology Education. (Laboratory included.)

*493. Industrial Rehabilitation Therapy Clinical Practice (3-6)

Prerequisite: Consent of department. Supervised experiences in Industrial Rehabilitation therapy at various Veterans' Administration hospitals and rehabilitation centers. Students will acquire through observation and participation, clinical insight and experience in the procedures and practices in the field. 240 hours of experience required. (Field work.)

Graduate Division

542./442. Architectural Planning and Presentation (3)

Prerequisite: TED 347. Study and planning of structures for specific functions. Development of presentation drawings including perspective drawing, shades and shadows, materials and colors. Review of architectural history. (Lecture, laboratory 6 hours.)

566./466. Automotive Computer Controls (2)

Prerequisites: TED 161 or equivalent. Theory and operation of automotive computerized combustion control systems including computer control subsystems, air conditioning and fuel injection. Laboratory experiences emphasize system diagnosis and servicing. (Lab included.

574./474. Plastics Mold Construction (3)

Prerequisite: TED 170 or consent of instructor. Properties and characteristics of thermo-setting and thermoplastics materials. Analysis and construction of molds and dies for use with reinforced plastics, injection molding, thermoforming processes, extrusion and compression and transfer molding. (Laboratory included.)

590. Supervision and Administration in Technology Education (3)

The study of management and supervisory methods, systems and theories as applied to industry and to Technology Education programs.

591. Industrial Program Development (3)

The selection and organization of industrial training curricula and development of courses of study to be used in public and private Technology Education programs.

592. Evaluation In Technology Education (3)

Development of methods, techniques and devices for evaluating people, programs and other aspects in industry and in Technology Education. Evaluation of students, employees, facilities, safety and other areas of interest with emphasis on development of evaluation devices.

593. Teaching Industrial Subject (3)

Teaching techniques, philosophy, organization and planning in industrial training programs, public and private education.

594. Technology and Civilization (3)

The study of the creation and utilization of adaptive means, including tools, machines, materials, techniques, and technical systems, and the relation of the behavior of these elements and systems to human beings, society, and the civilization process.

599. Advanced Individual Studies (3)

Prerequisite: Consent of instructor and graduate advisor. Advanced individual projects with faculty supervision in en area of Technology Education specialization. Limited to three units per semester. May be repeated for a total of six units.

650. Seminar in Industrial Practices and Education (3)

Prerequisite: Consent of instructor. Study of selected topics in Technology 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 (3)

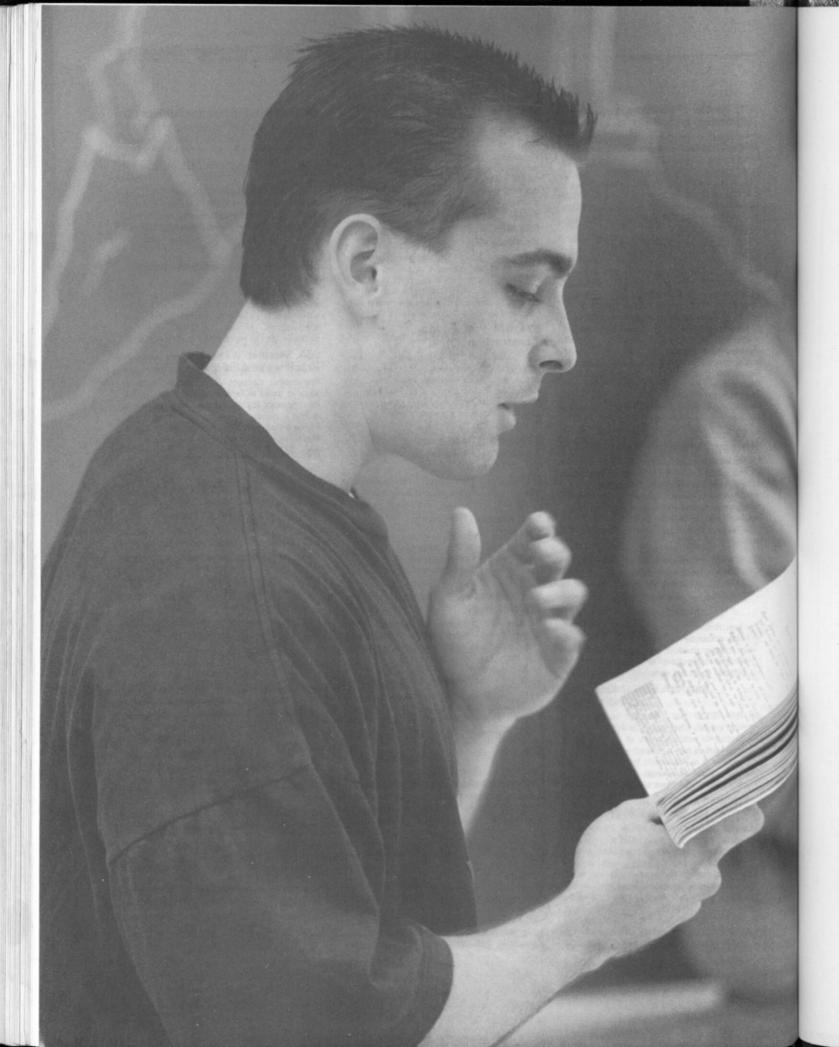
Selecting, defining and presenting methods applicable to the solution of problems in Technology Education with emphasis on experimental, descriptive, technical projects and library techniques. Required of all master's degree candidates in Industrial Arts.

697. Directed Research (2)

Prerequisites: TED 696, advancement to candidacy. The definition, presentation and discussion of selected problems in Technology Education.

698. Thesis (1-4)

Prerequisite: Advancement to candidacy. Planning, preparation and completion of a thesis related to this field. Limited to classified graduate students who have completed or are completing TED 697.



College of Liberal Arts

Dean: Dorothy Abrahamse
Associate Dean: David Dowell
Administrative Manager: Judy Swan
Directors, Student Life and
Development: Bron Pellisier,
Randy Zarn

Staff: Bobbi Moreland (Office Manager), Lorraine Holmes (Educational Policy), Barbara Rubens (Personnel Services), Dorothy Rypka (Fiscal Coordinator), Shirley Burgers (Assistnat). College Office: McIntosh Humanities Building, Room 208 Telephone: (310) 985-5381

The College

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 Social Work and Journalism. Through the Liberal Arts, students acquire a fundamental understanding of social and individual behavior in the past and present and of cultures and belief systems. 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 help to 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, 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, Social Work, 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 Science: Psychology
- Master of Social Work
- Certificate Programs:

American Indian Studies, Asian Studies, Asian American Studies, Black Studies, Computer Studies in the Liberal Arts, 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, 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), 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 organiza-

tions available to them or contact the College Coordinators for Student Relations and Activities, Bron Pellisier (985-7804) or Randy Zarn (985-8405).

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, 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)

College-Based Courses (C/LA) Lower Division

250. Elementary Statistics (4) F.S

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, C/ST 210, MATH 180, PSY 210 or SOC 255. (Discussion 3 hours, laboratory 2 hours.) Same course as HDEV 250 and SOC 250.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300. Student Life in London (2) F

Orientation to the culture and conditions of modern Britain, designed as preparation for the London Semester Program. Essentials of English history, literature, and contemporary life. Strongly recommended for all participants in the London Semester Program. One hour of in-class discussion and two hours of supervised activities. Credit/No Credit grading only.

310. Film and Culture (3) F,S

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. Same course as RTVF 310. Course fee: \$20.

314l. Introduction to Contemporary Europe (3) F

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.

315l. Contemporary European Society (3) F

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

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

An examination of the dynamics of the development of our multicultural society, emphasizing study of 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 AMST 319, AIS 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319, Lecture/Discussion.

350l. California Culture (3) F,S

Prerequisites: ENGL 100 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. Same course as AMST 3501.

400. Evaluating Literacy (3) F,S

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) S

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) F,S

Prerequisites: English 100 and upper division status. An interdisciplinary study of contemporary Europe (post-1945). The course combines the substance and the methods 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

450l. Consequences of the Encounter: The Americas, Europe, and Africa (3) F

In this interdisciplinary course we will investigate the consequences of the encounter between European and African peoples and the peoples and cultures of the Western Hemisphere. We will study the effects of the meeting of these cultures in the areas of art, literature, science and the social sciences. Our purpose in the course is to understand the developments that occurred as a result of the interaction between the three distinct peoples as they met in the New World. Traditional grading only.

485. Oral History Methods (1) F,S

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 prsonal use in family history or for class projects. Same course as HIST 402.

490. Special Topics (1-3) F,S

Topics of special interest in the social sciences for intensive study. Topics will be announced in the Schedule of Classes each semester. May be repeated with different topics. Course may be repeated for a maximum of 9 units.

492A. Internship in Liberal Arts (3) F,S

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 one unit of credit.) May be repeated to a maximum of six units. No more than six units total in 492A and B. Traditional grading only.

492B. Internship in Liberal Arts (3) F,S,

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.

493. Research in Action (1) F,S

A seminar in the comparative methodology and practices of Social Science research projects in community settings. Open to students concurrently enrolled in directed research projects (or coordinated courses) in participating departments. Credit/No Credit grading only.

495. Social Science for Teachers (3) F

Prerequisites: Students must have completed all coursework in the Social Science or History Waiver Program. A capstone course for students in the Social Science Credential Program, to be offered just prior to student teaching. Examination of issues in social science education with an emphasis on recent interpretations in United States history. Includes guest lectures from faculty in Liberal Arts. A grade of "B" or better is required for advancement to student teaching. Traditional grading only.

498. Directed Studies in Oral History (1-6) F,S

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 4980.)

American Indian Studies College of Liberal Arts

Director: Mary Ann Jacobs
Telephone: 985-5293 or 985-4644
Professors: C.B. Clark,
Mary Ann Jacobs
Academic Advisor:
Mary Ann Jacobs
Department Secretary:

Olga Alvarez The Department

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, F03-310 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 for the Certificate in American Indian Studies

- 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;

Upper Division AIS Electives (3 units from): AIS 420, 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 56/598S, 457/598T; EDSE 435; HIST 372, 471; HDEV 401; CHLS 380, 420.

Minor in American Indian Studies (code 0-8420)

Requirements for the Minor In American Indian Studies:

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;

Upper Division AIS Elective Courses (select 6 units from): AIS 420, 490, 497, 499;

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.) (Select 3 units from): ANTH 321. 322, 347, 349; ART 456/598S. 457/598T; EDSE 435; HIST 372, 471; HDEV 401; CHLS 380, 420.

Courses (AIS)

Lower Division

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

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) S

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) F

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.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

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

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 C/LA 319, AMST 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319. Lecture/Discussions

320. American Indian Art (3) S

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) F,S

Prerequisites: AIS 100, 101, 200, or permission of instructor. A detailed examination of Iroquois, Navajo, Lakotal/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) F,S

An analysis of the written and oral literary traditions developed by American Indians.

361. American Indian Education (3) F

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) F,S

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) S

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.

490. Special Topics in American Indian Studies (1-3) F,S

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) F,S

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) F,S

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

NO NEW STUDENTS ADMITTED DURING THE 1994-95 YEAR.

Directors: David R. Peck/
David Fine
Telephone: (310) 985-4262
Faculty Advisors: Robert Brophy
(English), David Fine (English), Joe
Krause (Art), Ronald Schmidt
(Political Science), David Peck
(English), Federico Sanchez
(Chicano and Latino Studies),
Sharyn Blumenthal (Radio,
Television and Film).

Department Office: F03-310

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 abovenamed faculty advisors early in their academic careers for general education and preparatory course recommendations and for teaching credential information.

Requirements for the Bachelor of Arts in American Studies

A minimum of 33 units distributed as follows:

Six core courses: AMST 300, 477A,B, 490, 498, 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 (300, 477A,B, and 498) and 6 or more chosen from at least two of the following categories: (A) AMST 490; (B) ENGL 370A,B, 474, 475, 476, 477A,B; (C) ART 413A, 413B, MUS 393; (D) GEOG 306, POSC 308, SOC 445.

Courses (AMST)

Lower Division

100. Popular Culture in America (3) F,S

Examines popular culture as a sensitive and accurate reflector of the attitudes and concerns of the society for which it is produced; alerts students to the profound impact popular culture exerts on our society and develops the critical and analytical skills needed to meet these influences with conscious rational responses.

190. Topics in American Studies (1-4) F,S

Exploration of a significant topic, theme, issue or problem in American culture, using interdisciplinary materials and methods. Topics shall be listed in the Schedule of Classes. May be repeated for credit with a different topic to a maximum of six units.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300. Introduction to American Studies (3) F,S

Interdisciplinary approaches to the study of American civilization. Significant issues and problems in American life will be examined from the perspectives of several disciplines.

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

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 C/LA 319, AIS 319, ASAM 319, B/ST 319, CHLS 319, W/ST 319. Lecture/Discussion.

350I. California Culture (3) F.S

Prerequisites: ENGL 100 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. Students take three four-week intensive modules and a final three-week synthesizing module. (Same course as C/LA 3501.)

477A,B. American Cultural History (3,3) F,S

Development of a distinctive American way of life treated in terms of values, behavior, and institutions. Themes of individualism, community, ethnic diversity, and social reform seen within the changing complex of national character. (Same course as HIST 477A,B.)

485A. History of Women in the U.S. - Early Period (3) F, S

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. Same course as HIST 485A and W/ST 485A.

485B. History of Women in the U.S. - Since 1850 (3) S

Changing roles and status of women in economic and social change; suffrage movement; women in union movement and WW II; the decade of the sixtles and the 'second wave' of feminism. Same course as HIST 485B and W/ST 485B.

490. Special Topics in American Civilization (1-4) F,S

Prerequisite: AMST 300. Intensive study of a selected major theme in American civilization using materials drawn from a variety of disciplines. May be repeated with a different topic for elective credit toward the major requirements if appropriate to the student's area of specialization. Topics to be announced in the Schedule of

498. Senior Colloquium in American Studies (3) S

Prerequisite: AMST 300. Investigation of significant problems in American civilization using interdisciplinary methods and materials and culminating in an original research paper or project related to the student's area of specialization. This course is designed as the capstone to the degree program and is open to seniors only.

499. Directed Studies (1-3) F,S

Prerequisite: Consent of instructor. Independent study of American culture taken under the supervision of a faculty member.

Department Chair: Pamela Bunte Telephone: (310) 985-5171 Faculty: Professors: Pamela Bunte, James R. Gregory, Robert C.Harman, Eugene E. Ruyle; Associate Professors: Daniel O. Larson, Geroge Scott; Assistant Professor: Marcus Young Owl. Department Secretary:

Parentines ANTH 110, Biological vertaining

Jane E. Docherty The Department

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor: Bunte: Graduate Advisor: Bunte.

Anthropology is the systematic study of our own species in our biological, social, and cultural aspects. Anthropologists study the full range of the human experience in both the past and the present. The breadth of anthropological studies gives students a unique perspective to understand both 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. 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, such as teaching, international business and engineering, foreign service, and public and social services within our own multicultural society.

Such students will find that Anthropology provides a useful

perspective that has many applications in daily social interaction.

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, or 2) preparing for further advanced degrees, such as the Ph.D. Graduate students are responsible for observing the general requirements for the M.A. degree as stated in this Bulletin. Prospective graduate students should consult the Handbook for the Master's Degree in Anthropology which is available from the Department office upon request. It is also recommended that prospective students consult with the Graduate Advisor at their earliest opportunity

Bachelor of Arts (code 2-8505)

Lower Division Requirements: ANTH 110, 120, 140, 170, 202. Recommended: PSY 100, SOC 100, GEOL 102, BIOL 200.

Upper Division Requirements: A minimum of 25 units in a program approved by the Undergraduate Major Advisor, to include:

Required Core Courses (6 units): ANTH 301 and either ANTH 313, 314.

Comparative Cultures (3 units): One of the following: ANTH 321, 322, 323, 324, 331, 332, 333, 335, 336, 345, 347, 349,

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

Sociocultural Anthropology (3 units) One of the following: ANTH 329, 351 352, 353, 416, 417, 419, 421, 436.

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

Senior Requirement: (1 unit) ANTH 400.

An additional 6 units of course work, selected from any upper division courses offered by the Department of Anthropology.

In consultation with the advisor, 6 additional upper division units must also be taken from any Department(s) in the social sciences outside of Anthropology.

Anthropology College of Liberal Arts

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 110

Upper Division: Required Core courses: ANTH 313 and 314; Electives: nine additional units in Anthropology selected in consultation with the advisor to meet the specific needs of the

Master of Arts in Anthropology (code 5-8505)

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:
- (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 for the Master of Arts:

(1) A minimum of 33 units of upper division and graduate courses, including 21 units 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.

Courses (ANTH)

Lower Division

100. General Anthropology (3) F,S

General introduction to anthropology including biological and cultural aspects. Recommended for non-majors.

110. Introduction to Physical Anthropology (3) F,S

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)

120. Introduction to Cultural Anthropology (3) F,S

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) F,S

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) F,S

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) F,S

Nature of language; its relation to culture; language structure and processes of change; language universals, contrasts and relationships.

202. Quantitative Methods in Anthropology (4) F,S

This course is designed to help students strengthen their quantitative skills. A broad range of topics will be covered with emphasis being placed on the analysis of large datasets, computer graphics, research design, and application of several statistical methods and software programs. Datasets used in this class have a

multicultural base and are derived from a variety of fields including anthropology and history. The course experience will assist students in their efforts to develop research designs for independent research in upper division classes under their major.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

301. Foundations of Anthropology (3) F,S

Required of all anthropology majors early in their upper division work. Introduction to the development of anthropological ideas with particular emphasis on current issues within anthropology. Practice in use of anthropological tools for data collection, analysis, and interpretation. How anthropology fits in to modern life and the future careers of students. This is a "hands-on" course, designed to develop student skills in research, writing, interpretation, and analysis. Traditional grading only.

305I. Radical Social Analysis (3)F

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.

307l. Modernization in Global Perspective (3) F,S

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 nonfiction). Same course as HIST 307I and GEOG

311I. Human Adventure (3) S

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 primitive communism to perestroika.

313. Peoples of the World: Prehistory (3) F,S

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 worldwide prehistory from the Old Stone Age to the Iron Age.

314. Peoples of the World: Ethnography (3) F,S

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) F,S

Prerequisite: ANTH 110. Biological variation and differences in modern humans. The biological concepts of biospecies and subspecies will be examined. Racism and genocide will be discussed in relation to ethnic groups. A detailed survey of the history of the study of race in physical anthropology will be examined. Differences in modern humans will be approached from an adaptationist perspective and the course will conclude with a general survey of variation in modern humans. Traditional grading only.

*318. Human Genetics (3) F

Prerequisites: ANTH 110 or equivalent Biology course, ANTH 202 or an equivalent 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) F

Prerequisites: Anatomy/Physiology 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) F

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) S

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) S

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) F

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) F,S

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.

Anthropology provides a useful

*331. Soviet Culture and Society (3) S

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

*332. Chinese Culture and Society (3) S

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) S

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) F

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

*336. Peoples of Africa (3) F

Survey of the peoples of Africa; social and cultural organization in 19th and 20th centuries; problems of colonialism and development.

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

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

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

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) F

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) S Interaction of biological, cultural and historical factors on male/female roles and status in tradi-

tional and contemporary cultures and societies.

*352. Culture and Aging (3) F,S
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. 353. Health and Healing (3) F,S

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) F

Prerequisites: ANTH 110. Relationship of primates to other mammals; adaptation of ar-

boreal mammals; functional and evolutionary aspects of primate anatomy and physiology; effects of size; primate ecology; survey of the Order Primates: Prosimii, Tarsoidea, New World and Old World Monkeys, Hominoids.

400. Senior Seminar (1) F,S

Prerequisites: Anthropology major senior standing. Students attend workshops to increase job success and present a research paper (originally written for an upper-division anthropology course and assigned a grade of 'B' or better) to anthropology faculty and fellow students at a mini-conference on topics of practical relevance to the local community. Credit/No Credit grading only.

412l. Culture and Communication (3) F,S

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) S

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.

416./516. Urban Anthropology (3) F,S

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 multinational world.

417./517. Applied Anthropology (3) S

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 crosscultural problems.

419./519. Concepts and Theories of Ethnic Identity (3) F,S

Prerequisites: ANTH 120 and upperdivision/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.

*421. Education Across Cultures (3) F

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

*435. Human Evolution (3) S

Prerequisites: ANTH 110. 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) S

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) S

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) S

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.

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

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 WST 475.

*480A. Osteology I (3) F

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

*480B. Osteology II (3) S

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) F,S

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

495. International Perspectives: Education in Cultural Continuity and Change (3) S

Explores varying interpretations of the role of education in society: as a transmitter of culture and/or as an agent of political, economic and social change in economically developing countries.

499. Guided Studies in Anthropology (1-3) F,S

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) F

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) F

Prerequisites: Graduate Standing. History of practical contributions by anthropologists employed in nonacademic settings, with emphasis on ethnic minority groups in the United States. Coverage of research techniques, interdisciplinary linkages, communication skills and action strategies in the field. Traditional grading only.

510. Proseminar (3) S

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.

516./416. Urban Anthropology (3) F,S

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 multinational world.

517./417. Applied Anthropology (3) F

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) F,S

Prerequisites: ANTH 120 and upperdivision/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.

522. Community Research Practicum (3) S

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) F,S

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.

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

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) F

Prerequisites: Graduate standing or consent of instructor. Techniques of qualitative research in anthropology; research methodology, research methodos (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) S

Prerequisite: ANTH 560 or permission of instructor. Both basic qualitative and quantitative methods in computer programs. The former will include the DTSEARCH (Ethnographic Data Analysis Software), and the latter will include basic statistical techniques in the SPSS-PC+program. These various methods will be related to applied anthropology and archaeology research, and presentation of results in reports and various research problems will also be covered.

562. Advanced Computer Research Applications in Anthropology (3) F

Prerequisites: ANTH 561 and graduate standing. Both advanced qualitative and quantitative methods in computer programs. The former will include the ANTHROPAC 4.0 (Cultural Domain Analysis Software) and the UCINET IV (Social Network Analysis Software). The latter will include advanced statistical techniques in the SPSS-PC+ program. These various methods will be related to applied anthropology and archaeology research, and presentation of results in reports and various research problems will also be covered. Traditional grading only.

570. Linguistic Field Methods (4) F.S

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. (Lecture-activity 5 hours.)

597. Directed Readings in Anthropology (1-3) F,S

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) F

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

620. Seminar in Archaeology (3) F.S

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) F,S

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.

640. Seminar in Physical Anthropology (3) S

Prerequisite: 6 units of upper division physical anthropology or other upper division work in the biological sciences. Materials and methods of research in human evolution. May be repeated for a maximum of six units.

675. Internship in Applied Anthropology (3-6) F

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) F,S

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

698. Thesis (1-6) F,S

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

699. Thesis Seminar (2) F

Presentation and critique of student writing with emphases on content and style. Must be taken concurrently with ANTH 698. May be repeated twice for credit. Traditional grading only. Course may be repeated for a maximum of 4 units.

*363, Natural History of Primates

bringles to other manufally adaption of a

Asian and Asian American Studies

revolve around international/area Department Chair: studies, ethnic studies and language Arnold P. Kaminsky studies. Asian Studies enables stu-Vice-Chair: Yoko Pusavat dents to explore Asian civilizations Department Office: Faculty Offices from an interdisciplinary perspective; (FO3) Room 340 Asian American Studies investigate Telephone: (310) 985-4645 the nature of Asian immigration and FAX: (310) 985-1535 the Asian American experience in the Faculty: Professors: Henry United States; and Chinese and Johnson, Arnold P. Kaminsky, Japanese language studies provide San-pao Li: Associate Professors: linguistic and cultural training in Asian Hsin-sheng C. Kao, Akira Miyazaki, languages and language related Yoko Pusavat: Assistant Professor: areas. Asian language courses are Gloria Chun, Kaoru Ohta; also appropriate electives to support Associate Faculty: Ingrid Aall (Art), several of the majors offered by the Xiolan Bao (History), Jeffrey University. Broughton (Religious Studies), Students in all programs are en-Pamela Bunte (Anthropology), couraged to integrate the study of Sudershan Chawla (Political Asian cultures and societies across Science), Molly Debysingh the Pacific with that of Asian American (Geography), Frank Gossette communities in the United States and (Geography), Sarath Gunatilake to support the study of culture and

(Health Science), Jack W. Hou

Alain Marsot (Political Science),

(Economics), Tomotaka Ishimine

(Economics), Paulino Lim (English),

William Mulligan (Journalism), Alan

T. Nishio (Public Policy), Eugene

(Anthropology), Sharon Sievers

Psychology); Emeritus Faculty:

Charlotte Furth, Lloyd Inui, John

Students desiring information

for referral to one of the faculty ad-

should contact the department office

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;

facilities a greater understanding of

Asians in America to enhance multi-

ethnic diversity in California and the

language education program to

intercultural understanding.

In the broad context, the

United States; and pursues an active

promote cross-cultural awareness and

department's major responsibilities

cultural education and appreciation of

Kimura, Dorothy Libby, Alexander

Terrence Wiley (Educational

Lipski, Gail Shoup.

Lisa Behrendt

The Department

Department Secretary:

(History), Paul Tang (Philosophy),

Ruyle (Anthropology), George Scott

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.

society with appropriate language

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, 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 Bulletin.) 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)

Students choosing an Asian Studies major select one of two tracks for the degree. The student may concentrate

in an area study — a social science and humanities based study of 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 for the Bachelor of Arts in Asian Studies:

Required of all students:

- (1) ASAM 220 or ASAM 380;
- (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, 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, Southeast Asia.

Minor in Asian American Studies

Requirements for the Minor in Asian American Studies (code 0-8430):

A minimum of 22 units which must include: (a) Asian American Studies 200 or 319, 220, 310, 345; (b) nine units selected from among the following: ASAM 330, 340, 350, 370, 371, 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 for the Certificate in Asian Studies:

- (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 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 Department Chair.

Requirements for the Certificate in Asian American Studies:

- A bachelor's degree with a major other than Asian Studies. May be completed concurrently;
- A minimum of 30 units distributed as follows:

- (a) ASAM 200 or 319, 220, 345, 370 (required), plus
- (b) additional courses selected from: ASAM 310, 330, 340, 350, 371, 380, 381, 490, 499.
- (See approved list of courses below).

Interested students should apply to the Department Office.

Bachelors of Arts Degree in Japanese (code 2-8507)

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 selfsufficiency 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 uniquely 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 for the Bachelor of Arts in Japanese:

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):

8 units Core Courses: JAPN 201,

Upper Division Required Courses (36 units)

- A. 15 units Core Courses: JAPN 301, 302, 311, 312, 451
- B. 21 units Electives selected from the following three areas:
- 1. 12 units selected from JAPN 321, 350, 370, 421, 422, 461, 462, 471, 481, 490, 492, 497.

spartment's major responsibilities

2. 6 units selected from ANTH 335, A/ST 393I, ART 470, HIST 383A, 383B, 384, 407, R/ST 344.

- 3. 3 units selected from ANTH 307I, 412I, 413, 490*, ASAM 330, 345, A/ST 300I, 301I, 310, 320, 406, 424, 490*, 492, 495I, C/LT 326, 403, ECON 370, 471, EDSS 450F, GEOG 307I, 312I, H/SC 420I, HIST 307I, 382B, 406, 478, 495*, JOUR 312, PHIL 306, POSC 362, 371, 378, 480, 485, 489, 497*, PSY 439, RTVF 392, R/ST 341I, I/ST 317I, 318I, 319I, SOC 350, SPCH 309, 451, THEA 326, W/ST 401I, 406.
- * Special topics courses in departments which regularly offer topical courses pertinent to the program.

Core Courses and Electives:

A. Core Courses (23 units): JAPN 201 (former JAPN 331A), 202 (former JAPN 331B), 301 (former JAPN 441A), 302 (former JAPN

441B), 311 (former JAPN 405A), 312 (former JAPN 405B), 451 (in Japanese),

B. Electives (21 units):

Language and Language Related Courses - 12 units selected from:

JAPN 321 (former JAPN 300), 350, 370, 421 (former JAPN 460), 422, 461, 462, 471, 481, 490, 492, 497 (former JAPN 499);

2. Japanese Civilization (taught in English):

6 units selected from:

ANTH 335, A/ST 393I, ART 470, HIST 383A, 383B, 384, 407, POSC 363 (3), R/ST 344 (3);

3. 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), C/LT 326, 403, ECON 370, 471, EDSS 450F, GEOG 307I, 312I, H/SC 420I, HIST 307I, 382B, 406, 478, 495*, JOUR 312, PHIL 306, POSC 362, 371, 378, 480, 483, 485, 489, 497*, PSY 439, RTVF 392, 341I, I/ST 317I, 318I, 319I, SOC 350, SPCH 309, 451, THEA 326, 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 necessary, and also for students who intend to pursue a graduate program in which such knowledge and competency are required.

Requirements for the Certificate in Japanese:

- 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 300I, 301I, 310, 320, 406, 424, 490, 492, 4951, 499; ANTH 331, 332, 333, 335, *416, *417, *419, *470. *490: ART 113A-B, 466, 467, 468, 469, 470, *497; ASAM 190, 200, 220, 310, 330, 340, 345, 350, 370, 371, 380, 381, 490, 499; C/LT 234, 235. 325, 326, 403, *450, *499; CHIN 101, 102, 201, 202, 370, 301, 302, 490, 499: ECON 370, *490; GEOG 312I, *326, *494, *497; HIST 381, 382A-B, 383A-B. 384, 385, 386, 4011, 406, 407, 488, *498; H/SC 424; JAPN 101, 102, 321, 201, 202, 370, 311, 312, 301, 302, 421, 422, 451, 461, 462, 471, 481, 490, 497; LING 329, PHIL 306, 307, *499; POSC 362, 363, 364, 366 *489 *497 *499: PSY *439: R/ST 152, 3311, 3411, 343, 344, 351 *490: THEA 325, 326, *498; W/ST 381, 4011, 406, *490, *499. (*) on an approved Asia-related topic.

Master of Arts in Asian Studies

The master of arts degree in Asian studies is an interdisciplinary degree offered by the Asian Studies faculty of the cooperating departments. It is especially aimed at those intending to go into teaching, foreign service, or foreign trade.

Prerequisites:

 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 Asiarelated 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:

- 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
- (3) Approval of proposed program of study;
- (4) Satisfactory completion of the Writing Proficiency Examination.

Requirements for the Master of Arts in Asian Studies (code 5-8508):

- (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 Research or Thesis. Seminars can be repeated once, but no more than a total of six units of Directed Studies, Readings, or Research may be used to satisfy degree requirements. A maximum of 6 units will be given for A/ST 698 for those following 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 for the Master's Degree in Asian Studies

A/ST 320, 406, 424, 490, 492, 499;
ANTH 331, 332, 333, 335, *416, *417, 419, 490; *ART 330, 466, 467, 468, 469, 470, *497, *498; ASAM 330, 350, 381, 490, 499; C/LT 325, 326, 403, *499; CHIN 301, 302, 490, 499; ECON *471, *472; GEOG 326, *494, *497; HIST 381, 384, 385, 386, 406, 407, 488, *498; H/SC 424; JAPN 301, 302, 311, 312, 422, 451, 461, 462, 471, 481, 490, 497; *LING 329; *PHIL 499; POSC 362, 363, 364, 366, *489, *497, *499; *PSY 439; THEA 325, 326; *W/ST 381, 406, 490, *499.

course must be on an approved Asia-related topic.

Asian Studies (A/ST) Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300l. Traditional Asia (3) F

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.

301l. Modern Asia (3) S

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) F,S

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) F,S

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) S

Prerequisites: English 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) S

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) F,S

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 424/524.)

*490. Special Topics in Asian Studies (1-3) F,S

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 upite.

- A. Modern Chinese Literature
- B. China in Transition
- C. Modern Vietnam
- D. Filipino Language, Literature and Culture

492./592. Proseminar in Asian Studies (3) F,S

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.

4951. China Heritage (3) S

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) F,S

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; C/LT 522, 550; ECON 571, 572, 690; GEOG 650, 697; HIST 510, 682; H/SC 524; PHIL 697; POSC 600, 610; PSY 539.

524./424. Principles of Asian Health Sciences (3) F,S

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) F,S

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 P/ST 343.

544. Religions of Japan (3) F,S

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) F,S

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) F,S

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) F,S

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) F,S

Prerequisites: Consent of Graduate Advisor. Readings in Asian Studies on an individual basis. 697. Directed Research (1-3) F,S Prerequisites: Consent of Graduate Advisor. Research in Asian Studies on an individual basis.

698. Thesis (2-6) F,S

Prerequisite: Consent of the Graduate Advisor. Planning, preparation, and completion of a thesis in Asian studies.

Asian American Studies (ASAM)

Lower Division

001. Language Skills (3) F,S

Not open to students with credit in L/SK 170. 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) F,S

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.

190. The Tao Primer of Basic Reasoning (3) F,S

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.

200. Asian American Inter-Ethnic Relations (3) F,S

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)F,S

History of arrival, settlement and experiences of Asians in America from the 1840's to the present.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

310. Education and the Asian American (3) F,S

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) F,S

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 C/LA 319, AMST 319, AIS 319, B/ST 319, CHLS 319. W/ST 319, Lecture/Discussion.

330. Japanese Americans and World War II (3) F,S

Background to and impact of evacuation and incarceration of Japanese Americans during World War II. Consideration of constitutional, economic, social and literary issues.

340. Asian American Family (3) F,S

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) F

Socioeconomic, political and cultural profile of Asian American communities; role and function of community organizations. Training in community surveys and service. (Lecture, activity)

350. Indochinese in America (3) F,S

Introduction to the languages, culture, sociopsychological and educational orientations that Vietnamese, Cambodian and Laotian peoples bring to the United States, and the problems and issues related to establishing themselves in their new homeland.

370. Asian Man and Woman in America (3) F,S

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.

371. Holistic Health and Asian Americans (3) F,S

Focuses on the Asian and Western holistic physical, social and mental-health principles are presented to facilitate the student's understanding of such issues as sexuality, stress, nutrition, pain control, relaxation, and exercise that may be incorporated into the individual's daily life-style plan.

380. Asian Philosophies and Religions in America (3) F,S

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) F,S

Will explore the largely unwritten history of Asian American women. Using an inter-disciplinary 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) F,S

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.

A. Filipino American Experience
B. Asian Americans and the Law

499. Directed Studies (1-3) F,S

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.

Chinese (CHIN)

Lower Division

101. Fundamentals of Chinese (4) F,S

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) F,S

Prerequisites: CHIN 101 or 221A. Introduction to pronunciation, reading, writing, conversation, and grammar. Students with previous training or native speakers of Chinese may not enroll.

201. Intermediate Chinese (4) F,S

Prerequisites: CHIN 102 or 221B. 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) F,S

Prerequisites: CHIN 201 or 331A. 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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

301. Advanced Chinese (3) F

Prerequisites: CHIN 202 or CHIN 331B, or consent of the instructor. Study of modern spoken and written Chinese involving advanced patterns and expressions. Emphasis on reading, com-

prehension, vocabulary building and idiomatic

302. Advanced Chinese (3) F,S

Prerequisites: CHIN 301 or CHIN 441A, 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) S

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) F,S

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) F,S

Prerequisite: Consent of instructor, Independent study under supervision of a faculty member. May be repeated for a maximum of 6 units.

Japanese (JAPN)

Lower Division

101. Fundamentals of Japanese(4) F,S,SS

Introduction to pronunciation, reading, writing, conversation, and structure of the language. Native speakers of Japanese may not enroll.

102. Fundamentals of Japanese (4) F.S.SS

Prerequisites: JAPN 101 or JAPN 221A. Introduction to pronunciation, reading, writing, conversation, and structure of the language. Native speakers of Japanese may not enroll. Introduction to pronunciation, reading, writing, conversation, and structure of the language. Native speakers of Japanese may not enroll.

201. Intermediate Japanese (4) F,S

Prerequisites: JAPN 102 or JAPN 221B. 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 enroil.

202. Intermediate Japanese (4) F,S

Prerequisites: JAPN 201 or JAPN 331A. 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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

301. Advanced Japanese (3) F,S

Prerequisites: JAPN 202 or JAPN 331B, 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) F,S

Prerequisites: JAPN 301 or JAPN 441A, 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) F,S

Prerequisites: JAPN 202 or JAPN 331B, or its equivalent as determined by the instructor. Advanced study in modern spoken Japanese and Japanese communication.

312. Advanced Spoken Japanese (3) F,S

Prerequisites: JAPN 311 or its equivalent as determined by the instructor. Advanced study in modern spoken Japanese and Japanese communication.

321. Calligraphy (3) S

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) S

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) F,S

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) F,S

Prerequisites: JAPN 302 or 441B, 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) F.S

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 authenthic 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) F

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) F,S

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) F,S

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) F,S

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. Principles and Practice of Teaching Japanese (3) F,S

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 linguistical, pedagogical, sociocultural issues relevant to teaching Japanese. Traditional grading only.

490. Special Topics in Japanese (1-3) F,S

Prerequisite: Consent of instructor. Select topics related to advanced Japanese study.

492./592. Japanese Internship (3-6) F,S

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. May be repeated to a maximum of 6 units. Credit/No Credit grading only.

497. Directed Studies (1-6) F,S

Prerequisite: Consent of instructor. Independent study under supervision of a faculty member. May be repeated for a maximum of 6 units.

521./421. Selected Readings/Writing in Japanese (3) F.S

Prerequisites: JAPN 302 or JAPN 441B, or consent of instructor. Undergraduates register in JAPN 421; graduates register in JAPN 521.

522./422. Technical Japanese (3) F,S

Prerequisites: JAPN 421 or equivalent. Undergraduates register in JAPN 422; graduates register in JAPN 522. Traditional grading only.

551./451. Japanese Civilization (3) F

Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 451; graduates register in JAPN 551.

561./461. The Structure of the Japanese Language (3) F.S

Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 461; graduates register in JAPN 561. Traditional grading only.

562./462. Contrastive Analysis of English and Japanese (3) F,S

Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 462; graduates register in JAPN 562. Traditional grading only.

571./471. Readings in Modern and Contemporary Japanese Literature (3) F,S

Prerequisites: JAPN 302 or equivalent. Undergraduates register in JAPN 471; graduates register in JAPN 571. Traditional grading only.

JAPN 592./492. Japanese Internship (3-6) F,S

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) F,S Prerequisites: Consent of Graduate Advisor. Readings in Japanese on an individual basis. Traditional grading only.

697. Directed Research (1-3) F,S Prerequisites: Consent of Graduate Advisor. Research in Japanese on an individual basis. Traditional grading only.

Black Studies

College of Liberal Arts

Department Chair:
Maulana Karenga
Department Office: Psychology
Building (PSY), Room 306
Telephone: 985-4624
Faculty: Professors: Maulana
Karenga, Skyne Uku-Wertimer;
Associate Professors: Amen
Rahh, Jim C. Robinson, Bede M.
Ssensalo.
Emeritus Faculty:
Arnett Hartsfield, Jr.
Department Secretary:
Karen Tavares

The Department

Students desiring information should contact the department office for referral or the faculty advisor. The Black Studies 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

Requirements for the Bachelor of Arts Degree (code 2-8425):

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 other departments or programs of the College of Liberal Arts. 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 for the Certificate in Black Studies

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.

Requirements for the Minor in Black Studies (code 0-8425)

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) F,S

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) F,S

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) F,S

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) S

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) F

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) S

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) F,S

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) S

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) F

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) F,S

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) F

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) F

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) S

Concise review of alternate policies of exclusion, restriction, segregation and conscription of the African-American in armed services.

200. Ancient African Civilizations (3) S

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) F,S

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) F,S

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) S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

304. The African Colonial Experience (3) S

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) S

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) F,S

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 C/LA 319, AMST 319, AIS 319, ASAM 319, CHLS 319, W/ST 319. Lecture/Discussion.

325. Psychology of Minorities (3) F,S

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) F,S

Prerequisite: B/ST 210. Study of the perspectives, styles, problems and dynamics of political activity in the Black community.

331. Black Juvenile (3) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F

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) F,S

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) F

The nature and use of religion in Africa and their manifestations in historical and contemporary African-American communities.

363. History of African Art (3) F,S

No Prerequisite. Survey of African art from antiquity to the present, with principal focus on sub-Saharan art.

370. Black Images in the Mass Media (3) F,S

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) S

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) S

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 or-

ganizations. Material and discussion on independent Black political party efforts will also be included.

400. Afro-American Social Thought (3) S

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) F,S

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) F

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) F,S

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) F,S

Theories, concepts and principles relating to the intellectual growth, development and learning of Black children.

423. Problems in Psychological Assessment of African Americans (3) F

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) S

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) S

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) F,S

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.

451. Black Legal Remedies (3)

Prerequisite: B/ST 331 or 332. A review of current or recent laws and court decisions which directly affect the African American. Issues of redress, judicial procedure and obtaining assistance from law enforcement agencies will be covered in considerable detail.

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) F

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) F,S

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 (1-3) F,S

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) F,S

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) F,S

A critical study of ancient Egypt 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 Judeo-christian tradition. Discussion of parallels with Confucian ethics in terms of philosophical anthropology. normative paradigm and cardinal virtues will also be conducted.

499. Directed Studies (1-3) F,S

Prerequisite: Consent of instructor. Permits individual students to pursue topics of special research interest. May be repeated to a maximum of six units.

Chicano and Latino Studies

Department Chair:
Adela de la Torre
Department Office: FO3-310

Telephone: 985-4644
Faculty: Professors: Jose Lopez,
Federico A. Sanchez, Adela de la
Torre; Associate Professor:
Rodolfo D. Torres; Assistant
Professor: Laura Perez.
Department Secretary:
Olga Alvarez
Students desiring information should contact the department office for referral to one of the faculty advisors:

Academic Advisor: Adela de la Torre

The Department

Chicano and Latino Studies courses are designed to provide a general knowledge of the history and culture of the Latinos 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

Requirements for the Bachelor of Arts in Chicano and Latino Studies (code 2-8817):

Lower Division: A minimum of 15 units distributed as follows: Core Courses (15 units, required): CHLS 100, 101, 105, 205, 230; Cultural Studies (electives): 001, 103A,B, 104, 203, 205; Social Inquiry (electives): 100, 101, 105, 230.

Upper Division: A minimum of 24 units distributed as follows: Core Courses (12 units, required): CHLS 300, 310, 350, 498.

Upper Division (continued): 12 units selected from Cultural Studies and Social Inquiry: Cultural Studies (electives): CHLS 390I, 395, 402, 405, 420, 490, 498, 499; Social Inquiry (electives): CHLS 300, 310, 319, 340, 350, 352, 380, 400, 415, 443, 470, 490, 498, 499.

Liberal Arts Requirement: The student will select six units of coursework in the Liberal Arts from the options listed below, according to the area of concentration selected within the major. These courses shall be in addition to courses selected to fulfill the requirements of any General Education Category. Group I (Humanities): AIS 340, ASAM 380, B/ST 340, SOC 4851, W/ST 410; Group II (Social Sciences): AIS 200, ANTH 345, ASAM 345, B/ST 400. HIST 364, GEOG 470, POSC 359, SOC 445, W/ST 4011. Group III (Education): AIS 361, ASAM 310, ANTH 421, B/ST 420.

Departmental Requirement: Two years of college Spanish, or a grade of "C" or better in CHLS 203, or the successful completion of Spanish proficiency examination are required of all majors. (If student is proficient in Spanish the two year's 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 for the Minor:

Upper Division: a minimum of 24 units distributed as follows: 12 units of core requirements: CHLS 300, 310, 350, 498; 9 units selected for the following Cultural Studies 390, 395, 402, 405, 420, 490, 498, 499; and Social Inquiry 300, 310, 319, 340, 350, 352, 380, 400, 415, 443, 470, 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. Re-

quirements for the Certificate in Chicano and Latino Studies:

(1) A bachelor's degree with a major in a traditional discipline;

(2) A minimum of 24 units distributed as follows: 12 units of core requirements: CHLS 300, 310, 350, 498; 9 units selected for the following Cultural Studies 390, 395, 402, 405, 420, 490, 498, 499; and Social Inquiry 300, 310, 319, 340, 350, 352, 380, 400, 415, 443, 490, 498, 499.

Bilingual Concentration — Spanish and English:

A 24-unit minimum, 15 of which must be upper division, 12 of which may also count as part of Liberal Studies Core. (These courses should be designated as applicable to the appropriate categories.)

Lower Division: SPAN 201A or CHLS 203, SPAN 201B.

Upper Division: SPAN 312, 313, ENGL 420, CHLS 402 or SPAN 427 and 425, SPAN 322.

Note: ENGL 420 should precede CHLS 402. SPAN 313 is prerequisite for SPAN 322.

Courses (CHLS)

Lower Division

001. Bilingual Communication Skills-English (3) F,S

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) F,S

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 ideas in relationship to their historic relevance to contemporary and future Chicano society. Traditional grading only.

101. Introduction to Chicano Life (3) F,S

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.

Spreits/Anglytent Professorés -----

103A. Bilingual Communication Skills-Spanish (4) F

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) S

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. Students completing this course may enroll in 203,

104. Bilingual Communication Skills-English (3) F,S

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 intructor. Advanced fundamentals of English communication for students of bilingual background. (Fulfills ENGL 100 requirements.)

105. Identity and Assimilation in Chicano Life (3) F,S

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.

203. Spanish for the Native Speaker (3) S

Meets the needs of bilingual students whose cultural background has prepared them for special forms of accelerated Spanish instruction. The successful completion of this lower division course will enable the student to enter upper division classes in Spanish.

205. Introduction to Chicano Literary Studies (3) F,S

Introductory survey course in Mexican and Chicano literature covering traditional and contemporary literary styles and forms from selected translated Mexican and Chicano readings.

230. Chicano Community Organization (3) F,S

Analysis of Chicano, community groups; emphasis on development of community organizational techniques.

250. U.S. Spanish-Language Media: The Evolution From Regional to Global Audiences (3) F.S

Prerequisites: CHLS 103A Bilingual Communication Skills-Spanish, 4 units, taught Fall semester, satisfaction of CHLS's Spanish Proficiency Requirement, or consent of the instructor. Ability to read and understand spoken Spanish are critical to this course for three reasons: (1) students will be expected to observe, comprehend and analyze contemporary Spanish-language print, radio and television media, (2) comprehend selected course readings in Spanish, and (3) this survey course will serve as the introduction and prerequisite to a CHLS Bilingual Media Concentration currently in development. Traditional grading only.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300. Chicano History (3) F,S

Chicano's role in the settlement and development of the Southwest and in contemporary U.S. minority group; emerging civil rights movement of La Raza, Same course as HIST 470.

310. Chicano Thought (3) F

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) F,S

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 C/LA 319, AMST 319, AIS 319, ASAM 319, B/ST 319, W/ST 319. Lecture/Discus-

340. Latino Education in the U.S. (3) F

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) F

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 at SOC 340.

352. Central American and Caribbean Peoples in California (3) S

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.

380. History of Pre-Columbian Mexico (3) F

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.

390l. The "Hispanic" Southwest: Historical and Literary Images (3) F.S

Prerequisite: Junior standing. 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) F

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) S

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) F

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) S

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. La Chicana (3) F,S

This course is designed to survey the historical and sociological impact of the Chicana feminist movement on the Chicano community. Class work will include the analysis of the unique factors of Chicana Feminism as compared to the National and International Women's Movement. Same course as W/ST 320.

420. Chicano Heritage in the Arts of Mexico and the Southwest (3) F

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) Sandalada and

This course addresses the contemporary issue of street gangs within the Chicano/Latino community. It analyzes the relationships across the Chicano gangs with African American gangs, the South East Asian gangs and the White (PUNKERS, Heavy Metalists and Skinheads)—street gangs. Structural forces of the urban societies, such as proletariate socialization, patriarchy traditions and problems revolving around gender identity are examined. Through theory and a historical analysis, the basis for ad-

dressing 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.

443. Psychology of the Chicano (3) F,S

Prerequisite: CHLS 100 or consent of instructor. Significance of the "psi" phenomena and its related variables on the cognitive and conative development of the Mexican American in the segregated barrio and integrated suburban environments. Will deal with basic physiological and psychological theories, principles and practices relative to the individual's personality dynamics. Included will be a comparison of Mexican and Western methodology in educational and psychological research endeavors. Traditional grading only.

470. Latinas/Latinos: Health Status and Health Care Access (3) S

This course will present an overview of major health status problems facing Latino subgroups and address institutional barriers to access for care. The course will provide students with a critical analysis of the problems facing the delivery of health services to Latinas/os. Traditional grading only.

490. Special Topics in Chicano Studies (1-3) F,S

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) F,S

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) F,S

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.

Comparative Literature and Classics

College of Liberal Arts

Department Chair: Frank Fata
Department Office: McIntosh
Humanities Building (MHB), Rm 517
Telephone: (310) 985-4239
Faculty: Professors: Roland E.
Bush, Frank Fata, J. Charles
Jernigan, Roberta H. Markman;
Associate Professor: Conrad
Barrett; Assistant Professors:
Alwin Baum, Douglas
Domingo-Foraste
Department Secretary: Kate Gillon
The Department

Students desiring information should contact the Department office for referral to one of the faculty.

Comparative Literature is the study of foreign literatures in translation and the relationships between those literatures and between literature and other fields such as art, music, history, and theatre. At CSULB, Comparative Literature also offers a strong focus in folklore studies and mythology as bases for understanding literature and for the way we see ourselves in a multicultural environment. Suggested Preparation: course work in world literature, 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)

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: 346, 401, 440, 453;
- (2) Author: 430 or 449;
- (3) Non-Western or Mythology: 403, 440, 452;

- (4) Theory: 361 or 461
- (5) Movement or Comparative Study: 349, 404, 410, 450;
- (6) Period: 428, 431, 432, 437,

Note: C/LT 440 may be used in both groups 1 and 3 only with different appropriate topics. The following courses may also be applied to the stated group, with the approval of the course instructor and the department chair, by completing supplementary work: C/LT 310I (5), 320I (1), 342 (3), 411I (5), 412I (5), 413I (5), 414I (5), 421I (1), 422I (1), 451I (1), 454I (3); CLSC 310I (5).

Emphasis I:

This emphasis is designed primarily to prepare the student for graduate studies in Comparative Literature or related fields; it is a 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 offering a limited number of courses, the equivalent of four semesters of college study will suffice. If a foreign language has been chosen for the primary concentration, the student may elect the secondary concentration in English, English/ creative writing, another foreign language, philosophy, religious studies, music history, art history, history, or theatre arts.

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.

This emphasis is designed 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. (If the concentration is English/creative writing, 12 units of creative writing will be permitted, with the remainder 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.)

Foreign Language Examination:
A basic reading examination in a foreign language will be administered to test a student's reading proficiency. Four semesters of college study of a foreign language or equivalent may be used in lieu of an examination.

Emphasis III: Interdisciplinary

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 fulltime 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:
A basic reading examination in a
foreign language will be administered to test a student's reading proficiency. 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 for the Minor in Comparative Literature:

A minimum of 18 units in comparative literature, of which at least 12 are selected from any of the department's upper division offerings excluding C/LT 499.

Courses (C/LT)

Lower Division 124. Introduction to World

Theatre and Drama (3) F,S

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.)

230. Introduction to World Literature (3) F,S

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) F.S

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) F,S

A comprehensive introduction to Asian culture by reading representative selections from the literature of China, Japan, and India. The Near East may also be studied.

235. Middle Eastern and South Asian Literature (3) S

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 orginally written in Arabic, Persian, Turkish, Sanskrit, Hindi, Urdu, and Tamil.

250. European Literature and the Other Arts I (3) F

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) S

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) F.S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

310l. Greek World (3) F,S

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 3101. Not open to students with credit in C/LT 4201.

312l. Roman World (3) W,SS

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.

3201. Comic Spirit (3) F,S

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.

324l. Western Theatre Today (3) F,S

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.

325. Theatre and Drama of India and Southeast Asia (3) F

Prerequisites: ENGL 100 and upper division status. History and social background of the classical genres, as well as contemporary forms, of dance and theatrical production, including puppetry and masked ritual. Representative selections, in translation, from the great Indian epics and Sanskrit drama. (Same course as THEA 325.)

326. Theatre and Drama of China, Korea and Japan (3) S

Prerequisites: ENGL 100 and upper division status. History and social background of selected genres, both classical and modern, of dance, folk plays, musical and theatrical production, including puppetry and masked ritual. Readings, in translation, of dramatic, comedic and lyrical works comparing cultures. Same course as THEA 326.

330A,B. Masterpieces of European Literature (3,3) F(330A), S(330B)

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) F

Prerequisite: One course in literature or consent of instructor. Reading of representative Biblical selections evaluated by literary criteria.

346. Readings in World Poetry (3) F,S

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) F,S

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) S

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.

401./511. The Modern Confessional Novel (3) F,S

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.

403. Studies in Asian Literature (3) F,S

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 9 units.

404. Women in World Literature (3) F,S

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.

410. Literature and Music (3) F

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.

411I. 20th Century Dimensions (3) S

Prerequisites: ENGL 100, upper division status, and one course in literature or consent of instructor. An interdisciplinary study of the 20th century through Western literature, art, music and film with an emphasis on the assumptions, aesthetics, methodologies, and expression of major movements such as Fauvism/Primitivism, Expressionism/Existentialism, Cubism, Abstract Expressionism, Surrealism, Constructivism, and Neo-Realism and the major influences on them such as Darwin, Nietzsche, Freud, Bergson, Einstein and Jung.

412l. Art and Literature (3) F,S

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 though 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.

413l. Romantic Spirit (3) F

Prerequisites: English 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.

414l. Medieval World (3) F,S

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 catherdrals, and late medieval problems. Same course as HIST 4141. Not open to students with credit in C/LT 3491.

415. Ethnic Literature and Culture in America (3) F,S

Prerequisites: English 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.

4211. Classical Drama (3) F,S

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, Terrence, and Seneca. Considers also the debt of modern drama and dramatic literature to the theatre of the ancients. Same course as THEA 4211.

422l. Renaissance Theatre and Drama (3) F,S

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. Same course as THEA 4221.

428. Selected Periods in Theatre and Drama (3) S

Prerequisite: One course in literature or theatre arts. Study of special movements and periods in the history of drama and theatre, to be selected each semester.

430./513. Dante (3) F,S

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./514. 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./515. Continental Renaissance Literature (3) S

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) S

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./516. 20th Century Continental Literature (3) F,S

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./520. Latin American Literary Studies (3) F,S

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) F,S

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.

449./521. Critical Studies in Major Continental Writers (3) F,S

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.

450./522. Comparative Studies (3) F,S

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 max of 9 units with different topics.

451I. The Novel and the Motion Picture in Contemporary Society (3) S

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./523. Studies in Mythology (3) F,S

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 max of 9 units.

453./517. Fairy Tales (3) F,S

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.

454l. Mythic Visions into Mythology (3) F

Prerequisites: ENGL 100 and upper division status. Thematic polarities in mythology will be examined. Chaos and Cosmos; Microcosm and Macrocosm; Life and Death; Sacred and Profane in relation to expression of the same in art. (For IC credit, must be taken concurrently with ART 3601.) Not open to students with credit in C/LT 4521.

461. Topics in Contemporary Literary Criticism (3) S

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 max of 9 units with different topics.

499. Directed Studies (1-4) F,S

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) F

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.

511./401. The Modern Confessional Novel (3) F,S

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.

513./430. Dante (3) F,S

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.

514./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.

515./432. Continental Renaissance Literature (3) S

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.

516./438. 20th Century Continental Literature (3) F,S

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.

517./453. Fairy Tales (3) F,S

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.

520./440. Latin American Literary Studies (3) F,S

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.

521./449. Critical Studies in Major Continental Writers (3) F,S

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.

522./450. Comparative Studies (3) F,S

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.

523./452. Studies in Mythology (3) F,S

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.

550. Topics in Comparative Literature (3) S

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.

CLASSICS

Students may pursue several aspects of ancient Greek and Roman civilization by taking classes in the Classics Program and in related areas: Anthropology, Art, Comparative Literature, English, History, Philosophy, Political Science, and Religion. 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 words derived from the ancient languages, and to ap-

preciate the Greek and Roman views 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 follow-

(A) Two courses in Latin or Greek, both in the same language.

(B) A minimum of two courses from: CLSC 200, 291, and 3101; C/LT 421I, 450, and 452 (with an appriopriate topic); or additional courses in Latin or Greek, not necessarily in the same language as selected in

(C) A minimum of two courses from the following: C/LT 310I or HIST 310I: HIST 313 and 314: PHIL 421 and 422; ART 416 and 417; ENGL 426 and 431: ANTH 140 and 450: and 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 200, 291, 310l, and other courses touching on the ancient world.

Minor in Latin (code 0-6815)

A minumum of 20 units which must include four upper division courses. Prospective teachers are strongly urged to take, in addition, HIST 314, CLSC 200, 291, and 3101, and other courses touching on the ancient world.

Classics Courses (CLSC)

Lower Division

200. Greek and Latin Roots in English (3) F,S

Survey of the makeup and use of English words of Greek and Latin origin, including common as well as specialized vocabulary. Analysis of words and their component parts both in isolation and in context

201. Biomedical Terminology (3) F,S

Study of Greek and Latin roots and word elements basic in the modern technical vocabularies of medical science. No knowledge of Greek or Latin required.

291. Introduction to Greek Mythology (3) F,S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

310l. Pagan Culture (3) F,S

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 philosophic thinkers.

Greek Courses (GK)

Lower Division

101A-B. Elementary Greek (4-4) F (101A), S (101B)

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. Not open to students with credit in GK 221A.

101B. Prerequisite: GK 101A or 221A or equivalent. Not open to students with credit in GK 221B.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

301A-B. Intermediate Greek (3-3) F(301A), S(301B)

Continued study of the language and culture. Reading and translating of adapted or original selections of classical writers.

301A. Prerequisite: GK 101B or GK 221B or equivalent. Not open to students with credit in GK 331A.

301B. Prerequisite: GK 301A or GK 331A or equivalent. Not open to students with credit in GK 331B.

351. Plato (3) F, Even Years

Prerequisite: GK 331B or its equivalent. Translation and literary study of one or more dialogues of Plato. Prose composition.

352. Homer (3) S, Odd Years

Prerequisite: GK 351 or equivalent or consent of instructor. Translation and literary study of selected books of the Iliad or Odyssey. Prose

490. Special Topics (1-3) F,S

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). May be repeated for credit up to nine units with different topics.

499. Directed Studies (1-3) F,S

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.

Latin Courses (LAT)

Lower Division

101A-B. Elementary Latin (4-4) F(101A), S(101B)

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. Not open to students with credit in LAT 221A.

101B. Prerequisite: LAT 101A or 221A or equivalent. Not open to students with credit in LAT 221B.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

301A-B. Intermediate Latin (3-3) F(301A), S(301B)

Continued study of the language and culture. Reading and translating adapted and original selections of classical writers.

301A. Prerequisite: LAT 101B or LAT 221B or equivalent, or two vears of high school Latin. Not open to students with credit in LAT 331A.

301B. Prerequisite: LAT 301A or LAT 331A or equivalent, or more than two years of high school Latin. Not open to students with credit in LAT 331B.

321. Intensive Latin (4) F

One semester course in Latin grammar. 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 301.

451. Latin Poetry (3) F

Prerequisite: LAT 331B or its equivalent. Study of Latin poets such as Virgil, Catullus, Horace, and Ovid. Discussion of themes, techniques. and setting of the works. May be repeated with different content for a maximum of 9 units. Topics will be announced in the Schedule of Classes.

452. Latin Prose (3) S

Prerequisite: LAT 331B or equivalent. Reading of Latin prose writers such as Cicero, Caesar, Seneca, Tacitus. Discussion of thought, literary art and historical setting. May be repeated with different content for a maximum of 9 units. Topics will be announced in the Schedule of Classes

490. Special Topics (1-3) F,S

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) F,S

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.

Computer Studies

College of Liberal Arts

Director: Kathleen M. Maher Department Office: Social Science /Public Affairs, Room 206 Telephone: (310) 985-5029

The Department

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:

- 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: C/ST 210, or 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).

Courses (C/ST)

(TAI) destrico (FAT)

200. Introduction to Data Analysis (3) F,S

A course for beginners in computer-aided data analysis and computer programming. Topics covered include principles of scientific research, data coding, entry, editing, and analysis, plus programming techniques. Students will use the Statistical Package for the Social Sciences to analyze research data and will learn to program in BASIC or Pascal. Same course as SOC 200.

210. Computer Statistics (3) F,S

Prerequisite: Knowledge of mathematical procedures covered in elementary high school algebra. Use of on-line SPSS (Statistical Package for the Social Sciences) with statistical applications. Descriptive statistics; probability distributions; tests of hypotheses and estimation; contingency tables and their analysis; correlation and regression; nonparametric techniques.

212. Microcomputer Applications (3) F,S

Prerequisite: C/ST 200 or equivalent. Social Science applications of the major microcomputer software including word processing, electronic spread sheet, data base and file management, and others. Applications include writing of research papers, analyzing statistical data, preparing graphical presentations of data, managing and manipulating nonnumeric data, utilizing computer simulation methods, and the integration of these and other applications on the microcomputer.

275. Programming in C (3) F,S

Fundamentals of computer programming in the language C. Examples and assignments covering applications to a wide variety of fields. Prior programming experience or knowledge of other languages is helpful but not necessary.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

490. Special Topics in Computer Studies (3) F,S

Topics of special or current interest in computer studies selected for intensive study. (Lecture-discussion 3 hours.) May be repeated to a total of six (6) units.

303. Consumer Formorpios. (3) Find Concurred Advances of Consumer Concurred Consumer Considers of Consumer Cons

location devices also Missign ted only option

Department Chair:
Joseph P. Magaddino
Department Office: Social
Science/Public Affairs (SS/PA),
Room 361A

Telephone: 985-5061
Faculty: Professors: Roy C.
Anderson, Marion S. Beaumont,
Charles L. Cole, Simeon J. Crowther,
Michael J. Farrell, Constantine
Glezakos, Darwin C. Hall, Tomotaka
Ishimine, Joseph P. Magaddino,
Marshall H. Medoff, Dennis D.
Muraoka, Robert F. Rooney, Gene R.
Simonson, Davinder Singh, Iva Lee
Skov, Andrew Stern; Associate
Professors: Alejandra C. Edwards,
Lisa M. Grobar, Jack W. Hou, Judith
A. Roberts; Assistant Professor:

A. Hoberts; Assistant Professor:
Peter B. Griffin,
Emeritus Faculty: Eldon J. Dvorak,
J. Richard Powell, Elbert W.
Segelhorst, Robert E. Strain
Department Secretary:
Connie Wilburn

The Department

Students desiring Information should contact the department office for referral to one of the faculty advisors: Credential Advisor: Crowther; Undergraduate and Graduate Advisor: 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)

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.

Economics College of Liberal Arts

Requirements for the Bachelor of Arts in Economics:

Lower Division: ECON 201, 202, ACCT 201, C/ST 200, and MATH 115. Student declaring Economics as a major in upper-division status may substitute ECON 300 for ECON 201 and 202 with departmental consent.

Upper Division: ECON 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, 303, 308, 309l, 495, and 499.

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.

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:

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, 430, 432, 434, 450, 451, and 455.

General Economics: Students interested in obtaining a general back-

ground 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, 3601, 3611, 368.

Group II: International Trade and Development: ECON 465, 471, 472. Group III: Human Resource Economics: ECON 441, 445. Group IV: Public Economics: ECON 437, 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 an advisor or the Chairman early in their senior year.

*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.

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: MATH 115, ECON 201 and 202, Students declaring the minor upperdivision status 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, 303, 308. 309l, 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-busi-

ness 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: ACCT 201 or MATH 115 or a departmentally approved computer science course; ECON 201, 202. (Student declaring Business Economics as a minor in upperdivision status may substitute ECON 300 for ECON 201 and 202 with departmental consent.)

Upper Division: ECON 310 or 333, 311 or 320, and any three of the following: ECON 380, 420, 430, 432, 434

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 *Bulletin* 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:

(1) Satisfy the general requirements of the University for advancement to candidacy.

Requirements for the Master of Arts:

(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);

(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) F,S,SS

Business organization, price theory, allocation of resources, distribution of income, public economy. (CAN ECON 4)

202. Principles of Macroeconomics (3) F,S,SS

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300. Fundamentals of Economics(3) F,S,SS

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.

303. Current Economic Thought (3) S

Covers ideas and philosophies of famous economists and leading present-day schools of economic thought. Includes study of main ideas of such important economic philosophers as Galbraith, Myrdal, Samuelson, Friedman, Sweezy, Mises, Hayek, Rothbard and several others. Emphasis on modern institutionalist school, post-Keynesian school, Chicago

monetarist school, neo-Marxist radical school and libertarian school.

308. Consumer Economics (3) F

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 is-

309l. Consumer Survival in the Legal and Economic Environment: Selected Topics (3) F,S

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 H EC 309I.

310. Microeconomic Theory (3) F,S,SS

Prerequisites: ECON 201, 202, and MATH 115. 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) F.S.SS

Prerequisites: ECON 201, 202, and MATH 115. Determinants of levels 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) F,S

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) F,S,SS

Prerequisites: ECON 201, 202 and MATH 115. Nature and functions of 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) F,S,SS

Prerequisites: ECON 201, 202 and MATH 115 (core requirement for business students); Applications of microeconomic and macroeconomic theory to managerial decisions and planning. Analysis of the firms' resource and product markets. Production functions; cost and output decisions. Pricing strategies under various market constraints. Investment in fixed assets. Business forecasting. Emphasis upon the calculation of solutions to operational problems of the business firm.

355. Law and Economics (3) S

Prerequisites: ECON 201 and 202, or 300, or consent of instructor. 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.

360l. American Economic History (3) F,S

Prerequisites: ECON 201 and 202, or 300. 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.

361l. European Economic History (3) S

Prerequisites: ECON 201 and 202, or 300. 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.

363. Latin America and Industrialization (3) S

Prerequisites: ECON 201 and 202, or 300. Economic, political and historical analysis of process of economic development and industrialization of Latin America. Analyzes different approaches to economic development; the relationship between economic growth and international trade; the import substitution policies of industrialization and the markets liberalization efforts of the late 70's. Case study of one country.

365. Economics of Modern China (3) F

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 socialistic 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) S

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) F

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) F

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.

380. Economic Statistics (4) F,S

Prerequisites: MATH 115 and C/ST 200. 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) SS

Prerequisites: ECON 310, 311 and consent of instructor. (Undergraduates register in ECON 403; graduates register in ECON 503.) 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.)

410./510. Advanced Microeconomics (3) F

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.

411./511. Advanced Macroeconomics and Forecasting (3) S

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) F,S

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. Macroeconomics for Management (4) F

Prerequisites: ECON 311 and C/ST 200. 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. (Lecture 3 hours, laboratory 2 hours.)

*430. Industrial Organization (3)F,S

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 GNP 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)F,S

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) S

Prerequisites: ECON 310 or 333. Capital budgeting under conditions of certainty and uncertainty, investment criteria, risk analysis, optimal capital structure, mergers and consolidations, inventory theory, macroeconomic influences on managerial economics.

*434. Economics of Regulation (3) S

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.

437./537. Urban and Regional Economics (3) S

Prerequisites: ECON 310, 311 and consent of instructor. Examines location, spatial organization, economic adjustment and development of urban and metropolitan regions. Application of analytical tools to problems of the Los Angeles region.

*441. Labor Economics (3) F

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) F

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.

from ENGL SEC or Section Street Section 3

*450. Public Sector Economics (3) F

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) S

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) F

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) S

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) F

Prerequisite: ECON 310. Microeconomic and capital theory applied to problems of conserving and managing natural resources. Analysis of public policies affecting renewable and non-renewable resources including price controls, taxation and leasing. Representative topics include: forestry, fishery, energy, water, and mineral economics.

465./565. Economic Development

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.

471./571. International Economics (3) F

Prerequisites: ECON 310, 311, and consent of the instructor. International trade and exchange rate theory. Types of trade control: tariffs, quotas, exchange manipulation, monopolies. Basic U.S. and European commercial policies since 1930.

472./572. International Trade and Finance (3) S

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 (4) F

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./586. Introduction to Econometrics (4) F,S

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) F,S

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.

*491. Senior Seminar in Economics (3) F,S

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) F,S

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) F,S

Prerequisite: Consent of instructor. Independent study under the supervision of a faculty member. May be repeated for a max. of 6 units of credit.

Graduate Division

500. Business Economics (3) F,S

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) SS

Prerequisites: ECON 310 and 311, or consent of instructor. (Undergraduates register in ECON 403 graduates register in ECON 503.) 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./410. Advanced Microeconomics (3) F

Prerequisites: ECON 310, 311 and 503, or consent of 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.

511./411. Advanced Macroeconomics and Forecasting (3) S

Prerequisites: ECON 310, 311 and 503, or consent of instructor. Applications of macroeconomics, monetary and forecasting theory to operational management and planning decisions of government and business.

537./437. Urban and Regional Economics (3) S

Prerequisites: ECON 310 and 311, or consent of instructor. Examines the location, spatial organization, economic adjustment and development of urban and metropolitan regions. Application of analytical tools to the problems of the Los Angeles region.

565./465. Economic Development (3) F

Prerequisites: ECON 310 and 311, or 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.

571./471. International Economics (3) F

Prerequisites: ECON 310 and 311, or consent of the instructor. International trade and exchange rate theory. Types of trade control: tariffs, quotas, exchange manipulation, monopolies. Basic U.S., and European commercial policies since 1930.

572./472. International Trade and Finance (3) S

Prerequisites: ECON 310 and 311, or consent of instructor. 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 (4) F

Prerequisites: ECON 310, 311 and 380; or 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.)

586./486. Introduction to Econometrics (3) S

Prerequisites: ECON 310, 311, and 380; or consent of instructor. 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) F,S

Prerequisite: Consent of instructor. Intensive reading and/or practical research in economics.

636. Seminar in Urban and Regional Economics (3) S

Prerequisites: ECON 437 or consent of instructor. Applications of analytical tools to selected topics and problems in urban and regional economics and finance.

650. Seminar in Public Sector Economics (3) F

Prerequisites: ECON 450, 451, or consent of instructor. Selected topics in the theory of public finance: theories of budgetary policy, tax justice, shifting and incidence, other effects of taxation, fiscal policy.

670. Seminar in International Trade and Development (3) S

Prerequisite: ECON 471, 465 or consent of instructor. Selected topics dealing with current problems and solutions in international trade, finance, and development.

686. Seminar in Econometrics (3) F

Prerequisites: ECON 486, 503, or consent of instructor. 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.

690. Seminar in Economics (3) F.S

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) F,S

Prerequisite: Consent of instructor. Independent research under the guidance of a faculty member

698. Thesis (2-6) F,S

Prerequisite: Consent of graduate advisor. Planning, preparation and completion of a thesis related to a field in economics.

English College of Liberal Arts

Interim Department Chair: Gene Dinielli Department Office: McIntosh Humanities Bldg. (MHB), Rm. 419 Telephone: 985-4223 Faculty: Professors: Arthur M. Axelrad, A. Robert Bell, Robert H. Berdan, Edward J. Borowiec, Gene L. Dinielli, David M. Fine, Elliot Fried, Helen C. Gilde, Robert M. Hertz, Robert A. Hipkiss, Stephen R. Knafel, Paulino M. Lim, Jr., Gerald I. Locklin, Charles E. May, Leslie B. Mittleman, David R. Peck, Dora B. Polk, Stephen B. Ross, David N. Samuelson, Charles E. Stetler, Ronald J. Strahl, Jerry L. Sullivan, Charles H. Webb, Donald J. Weinstock, Rafael J. Zepeda; Associate Professors: Elyse M. Blankley, Eileen S. Klink, Lorraine E. Kumpf, Beth Lau, F. J. Plourde, Charles W. Pomeroy, Richard D. Spiese, Diane Vipond; Assistant Professors: Roy C. Garrott, Wilhelmina Hotchkiss, Elizabeth V. Young

Emeritus Faculty: Charles A. Allen, Ralph K. Allen, Kenneth J. Ames, Harold Aspiz, Abraham A. Avni, George V. Betar, Albert B. Black, Blaze O. Bonazza, Alice M. Brekke, Charles B. Brooks, Robert J. Brophy, Walter B. Crawford, Richard H. Darbee, James E. Day, John Hermann, Alvin H. Lawson, Richard E. Lee, Eileen E. Lothamer, Louise C. Lubbe, Richard E. Lyon, Gloria G. McCullough, Frederic J. Masback, Doris Nelson, Douglas H. Orgill, Audrey C. Peterson, Mary Purcell, Delmer J. Rodabaugh, Aillee Wilford Rose, Janet B. Sawyer, Arnold T. Schwab, A. Keith Skarsten, George Stephens, John B. Williams, Luster J. Williams, R. Ora Williams, Suzanne M. Wilson, Robert C. Wylder. **Administrative Aide:**

Patricia Aleman

The Department

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate, Graduate, Teacher Education, Composition, Technical and Professional Writing,

and the American Language Program.

In the discipline of English, throughout the student's study of language and literature and in his or her own writing, the teaching emphasis is on the development of the student's own critical reasoning, imagination, and expressive clarity and meaningfulness. One's experience of life is broadened and deepened through literature, and thinking is sharpened and clarified through the study and practice of language and writing. One learns to see and to seek out the possibilities of language and to use the essay, fiction, drama, and poetry to add dimension and meaning to the life within and around the self.

The courses of study for the undergraduate English major are designed to enlarge the literary background of students and to prepare them for graduate study, teaching, other professions, or business careers.

Study of a foreign language is required for one of the options and recommended for the others, preferably to begin (if not continued from high school) in the lower division and to continue in the upper division. Because at least one language is usually required to obtain an advanced degree, students aiming at such degrees should include language study in their undergraduate program.

Bachelor of Arts in English

In planning a program of courses for the major in English, the student is advised to keep in mind the opportunities and limitations of the different options explained below. A program planner for each option is available in the English Department office, but each student is also expected to regularly consult a department faculty member for advisement.

The major in English, for all options, consists of 41 units. This total may not include English 100 (which, however, satisfies general education requirements), but, upon petition to the English Department, may include courses taken in other departments.

Because some courses are required in several options, a student desiring to change options can do so without any great loss of unit credit toward the 41-unit total.

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 be waived or substituted for under certain circumstances. Consult an English Department advisor for the option concerned.

Requirements for the Bachelor of Arts:

 Option in Literature (code 2-6830)

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. Because a reading knowledge of at least one foreign language is usually required to obtain an advanced degree, such students should also include language study in their undergraduate programs.

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 author 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. Either ENGL 481 or 482 may be elected in satisfying this requirement.

 Option in Language and Composition (code 2-6829)

The language and composition option is designed to emphasize lin-

guistic studies in preparation for either graduate study in language or teaching. Four college semesters, or the equivalent, of a language other than English are also required.

This option consists of 41 units, 29 of which must be upper division, including the following:

Lower Division: ENGL 184, 250A.B.

Upper Division: Two courses in American literature: 370A,B; five courses in language: 325, 420, 421, 428, and either 423 or 426; one course in composition: either 300 or 310; electives to make up a total of 41 units. Recommended: additional courses in literature and language, 405, 406, 407, 499. Either ENGL 481 or 482 may be elected in satisfying this requirement.

Option in Creative Writing (code 2-6831)

The creative writing option is designed for students who wish to write, as well as to study, fiction, poetry, or plays.

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; THEA 380, 480; RTVF 404. Three classes in recent literature, literary genres, and/or literary criticism chosen from the following courses: 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 with Special Emphasis (code 2-6827)

The opportunity to pursue individually designed 41-unit programs of study is provided for students who wish a major in English but who have special interests or career objectives so different from those for which the other options are designed that their personal educational needs would be better served by some other pattern of courses. Students desiring to take the special option should present a detailed program proposal as early in their college career as possible. Such programs will be recognized only if planned in consultation with an English Department faculty advisor,

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 option program after it has been officially approved. The only specific course requirements and limitations are as follows:

ENGL 184, Composition and Literature (four units); ENGL 384, Principles of Literary Study (three units).

Electives in English and related fields to make up a total of 41 units. These electives may not include ENGL 100 or 101.

 Option in English Education (code 2-6803)

American Studies Emphasis: Students are required to complete the following core of thirty-one (31) units and fifteen (15) units to provide breadth and perspective. Core Courses (31 units): ENGL

Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (15 units): AMST 300, 490, 498, HIST 477A.B.

Comparative Literature Emphasis:

Students are required to complete the following core of thirty-one (31) units and twenty-one (21) units to provide breadth and perspective. Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (21 units): C/LT 234, 330A, 330B; Select one course from C/LT 349. 431, 432, 438; Select one course from C/LT 403, 404, 430, 440, 449, 451; Select one course from C/LT 342, 445, 452, 453; Select at least three units of electives from the courses listed for this emphasis.

Creative Writing Emphasis:
Students are required to
complete the following core of
thirty (30) units and eighteen (18)
units to provide breadth and
perspective.
Core Courses (30 units): ENGL
184, 310, 375, 482; one course

from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (18 units): Select nine units from ENGL 405, 406, 407 (may repeat any of these three courses for a maximum of 6 units). Select three courses from ENGL 385, 386, 459, 467A-B, 474, 475, 476, 477A-B, 478.

Dance Emphasis: Students are required to complete the following core of thirty-one (31) units and twenty-five (25) units to provide breadth and perspective. Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325: Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (25 units): DANC 114B, 212B, 220, 331, 380, 442B, 470, 485, 488. Journalism Emphasis: Students are required to complete the following core of thirty-one (31) units and twenty-four (24) units to provide breadth and perspective. Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (24 units minimum, at least 12 of which must be upper division): JOUR 110, 120, 331, 320, 430; Select one course from JOUR 319, 323; Select 6 units minimum from JOUR 370, 280, 312, 422, 431, 490, 499.

Language and Composition Emphasis:

Students are required to complete the following core of thirty-one (31) units and eighteen (18) units to provide breadth and perspective. Core Courses (31 units): ENGL 184, 310, 325, 363, 482; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (18 units): ENGL 420, 421, 428, 429; Select 6 units from ENGL 423, 426, 499. Twelve units or equivalent of a foreign language. Literature Emphasis: Students are required to

complete the following core of

thirty (30) units and sixteen (16)

units to provide breadth and perspective.

Core Courses (30 units): ENGL 184, 310, 375, 482; one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B.

Breadth and Perspective (16 units): ENGL 363, 384; C/LT 230; Select one course from ENGL 451, 452, 453, 455, 456, 458, 459; Select one course from ENGL 474, 475, 476, 477A-B, 478, 479.

Radio, Television, and Film Emphasis:

Students are required to complete the following core of thirty-one (31) units and eighteen (18) units to provide breadth and perspective.

Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (18 units): RTVF 150, 204, 220, 230, 240, 316.

Speech Communication Emphasis:

Students are required to complete the following core of thirty-one (31) units and twenty-one (21) units to provide breadth and perspective.

Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B.

Breadth and Perspective (21 units): Select one course from SPCH 210, 271; Select three courses from SPCH 309, 333, 335; SPCH 300, 450.

Theatre Arts Emphasis: Students are required to complete the following core of thirty-one (31) units and twenty-five (25) units to provide breadth and perspective. Core Courses (31 units): ENGL 184, 310, 363, 482; Select one course from ENGL 320 or 325; Select three courses from ENGL 250A, 250B, 370A, 370B. Breadth and Perspective (25 units): THEA 101, 114A, 142, 148, 346, 374, 375, 476; Select one course from THEA 310A or 340A.

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 completion of 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.

Minor in English

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 to complete at least 21 units from ENGL 363, 385, 386, 390, 398 and/ or any courses from the 450, 460, or 470 series.

 Language and Composition (code 0-6829)

The minor in English (Language and Composition) requires a minimum of 20 units and must include: ENGL 310, 325, 420, 421, 428, and 497. Also recommended are three units from ENGL 423 or 426.

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

Teaching Emphasis (code 0-6803)

six units by consent of instructor.)

The minor in English (Teaching Preparation) requires a minimum of 21 units and includes the following: eight units from ENGL 250A,B, 370A,B; ENGL 310; four units from ENGL 320 or 325; ENGL 482; three units of approved electives.

Special Emphasis (code 0-6828)

The minor in English (Special Option) requires a minimum of 21 units in a program developed, approved, and supervised in the same manner as the Special Option major. ENGL 184 is required of all students, with the rest of the program constructed in consultation with a faculty advisor. Students may take courses which center on technical writing, for example, or other writing goals; they may focus on American or English literature, literature in a particular genre, a particular historical period, or a particular

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 Program faculty. Please refer to the Linguistics sections of this catalog, following.

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 English Department Office.

Prerequisites for the Certificate Program in Technical and Professional Writing:

- (1) Formal consultation with a faculty advisor in the Technical and Professional Writing Certificate Program:
- (2) Submission of an application, supported by transcripts;
- (3) Upper division or post-baccalaureate standing at CSULB with a GPA 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 for the Certificate in Technical and Professional Writing:

(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, which the student is expected to complete 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 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 both the Director of the Program and the Associate Dean for Instructional Policy of the College of Liberal Arts;
- (5) Demonstrations of competence in the use of computers and graphic media, in or outside the program of courses;
- (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 also possible, especially of more advanced courses, with the approval of 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; EIT 300; ENGL 303, 419; IS 301, 305.

Area II: Language Studies (4 units): ENGL 320 or 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, NSCI 376I;

Business/Professional Skills: ACCT 201; EDST 301; FIN 222; JOUR 370; MKTG 300, 330; SPCH 334, 335, 344; TED 408;

Computer Applications: C/ST 200; EDST 451, 452; MGMT 426; IS 240; NSCI 200; TED 283, 349;

Creative Writing: ENGL 405, 406, 407; RTVF 204, 404; THEA 380;

Intercultural Communication: ANTH 412I, 413; SPCH 451;

Visual Communication: EDST 300; EIT 170; GEOG 200; ME 172; TED 141, 151, 247, 341, 342.

Area IV: Practical Writing (3 units): ENGL 491 (1 or more units), 492A or B (2 or more units). No grade in English 492 will be assigned without an approved portfolio, as indicated in Paragraph 6, General Requirements.

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 *Bulletin* 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.

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 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 3.0 GPA in upper division English courses.

After Admission to Program:

(1) During the first semester following admission to the graduate program, the student will take a diagnostic exercise for purposes of advisement administered by the Graduate Studies Committee and reviewed by a faculty mentor.

(2) Students must be formally admitted to the program before they can enroll in English 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 graduate advisor, the 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) on the M.A. program. Advancement to candidacy must take place no later than the semester preceding the awarding of the degree.

Requirements for the Master of Arts

- (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 two seminars in the 600 series in English literature before 1900:

(4) The foreign language requirement 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 English 550 or English 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.
Application information may be obtained from the Department office, 985-4223.

Courses (ENGL)

Lower Division

Please check the section on 'Application Procedures and Admissions Requirements' of this *Bulletin* for CSU system-wide writing proficiency requirements.

001. Writing Skills (3) F,S

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.

100. Composition (3) F,S

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 re-

quirement for one course in English composition. (CAN ENGL 2)

101. Composition (3) F,S

Prerequisite: ENGL 100. Writing expository prose, with emphasis on the research paper. For students not majoring in English.

180. Appreciation of Literature (3) F,S

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.)

181. Developmental Reading (2) F,S

Rigorous practice, using all levels of mature reading materials, in the techniques of more efficient comprehension at faster rates. Study of expository devices and structures. Extensive vocabulary training.. Three hours per weeks.

184. Composition and Literature (4) F,S

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.

198. Topics in English (1-4) F,S

Prerequisite: ENGL 100. Topics in language and literature, considered in a small class format. Specific topics will be announced in the Schedule of Classes. May be repeated with different topics for a maximum of eight units.

200. Critical Reading and Writing (3) F,S

Prerequisite: ENGL 100. Analytical reading and persuasive writing with emphasis on logic and argumentation.

205. Introduction to Creative Writing: Fiction (3) F,S

Prerequisite: ENGL 100. Practice in the basic elements of fiction writing: character sketch, plot development, description, dialog.

206. Introduction to Creative Writing: Poetry (3) F,S

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) F,S

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) S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

An asterisk (*) indicates that the course is acceptable for the M.A.

ENGL 100 or its equivalent is a prerequisite for all upper division

300. Advanced Composition (3) F.S

Writing expository prose, with emphasis upon organization, style and diction.

303. Communication for Accounting and Finance (3) F,S

Prerequisite: Upper division standing. Open only to accounting and finance majors.

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) F,S

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) F,S

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.

318l. Theory of Fiction and Film (3) F,S,SS,W

Prerequisites: 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 RTVF 318I.

*320. English Grammar (4) F,S

Advanced study of the principles of English grammar.

*325. Models of English Grammar (4) F,S

Introduction to structural and transformational models of American English, with reference to traditional grammar.

337. Technology in the English Classroom (3) F,S,SS

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 computerbased 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) F,S

Principal plays of Shakespeare. Not open to students with credit in ENGL 464 or 464A.

370A,B. Survey of American Literature (4,4) F,S

Representative selections from American writers to and since about 1865.

372l. Wit and Humor in America (3) F,S

Prerequisite; Upper division status. A study of the history of American humor from beginnings to thepresent. 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) F,S

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) F

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) F,S

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) F,S

The short story as a literary genre, with emphasis on analysis of individual stories.

386. Poetry (3) F,S

Poetry as a literary genre, with emphasis on analysis of individual poems.

*390. Studies in Contemporary Literature (3) F,S

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) F,S

Continental, English, and American drama from lbsen to the present.

*405. Creative Writing: Short Story (3) F,S

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) F,S

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) F,S

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) S

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) F,S

Intensive writing of proposals in their various forms as letter, memo, and grant application. Main focus will be on the formal proposal as a marketing strategy.

418. Manual Writing (3) F,S

Writing of original manuals of various types in technical and professional fields based on the study of company publications as models.

419. Writing in Science and Technology (3) F,S

Intensive practice in writing on topics in science and literature based on a study of traditional and contemporary models.

420./520. English Phonology (3) F.S

Prerequisite: ENGL 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 321A.

421./522. English Syntax (3) F,S

Prerequisite: ENGL 325 or consent of instructor. Study of the morphology and syntax of American English, using structural and early and recent transformational models. Not open to students with credit in ENGL 321B.

423./523. Semantics (3) F,S

Study of meaning in language.

426./526. History of the English Language (3) F,S

Development of the English language from its beginnings to the present day. Not open to students with credit in ENGL 323.

428./524. Applied Linguistics (3) F.S

Prerequisites: ENGL 420 and 421. Linguistic research applied to the study and teaching of the English language.

429./529. Language Strategies for Bilingual/TESL Classrooms (3) F,S

Prerequisite: ENGL 325 (may be taken concurrently) or consent of instructor. Linguistic strategies for teaching the native speaker and the second language learner. To gain practical experience, students will work a minimum of 12 hours a semester in off-campus or on-campus bilingual and ESL classrooms.

*431. Classical Background of English Literature (3) F

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./535. Teaching Composition (3) F,S

Prerequisite: Consent of instructor. Intensive examination and study of composition teaching practices, research and evaluation in public schools, including community colleges.

451./554. Medieval Literature of the British Isles (3) F,S

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

452./552. Literature of the Renaissance (1500-1603) (3) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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 FNGL 457.

459./559. English Literature of the Twentieth Century (1900-Present) (3) F,S

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) F,S

The Old English and Middle English languages and dialects are studied through the exploration of representative literature.

462./562. Chaucer (3) F,S

Works of Geoffrey Chaucer in Middle English.

*463. Shakespeare II (3) F.S

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) F,S

History and development of long prose fiction in the British Isles to and since 1832.

468./568. English Drama (3) F,S

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) F,S

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) Aphra Behn, b) Dickens, c) Donne, d) Eliot, e) Hardy, f) Joyce, g) Keats, j) Lawrence, k) Milton, l) Shaw, m) Spencer, n) Virginia Woolf, o) Wordsworth/Coleridge, p) Yeats, q) Yeats/Joyce.

474./574. Twentieth Century American Literature (3) F,S

American literature from about 1914 to the present.

475./575. The American Short Story (3) F

History and development of the short story and its criticism in the United States.

476./576. American Poetry (3) F

History and development of poetry and its criticism in the United States.

477A,B./577A,B. The American Novel (3,3) F,S

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) F

History and development of drama and its criticism in the United States.

*479. Critical Studies in Major American Writers (4) F,S

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/Hermingway, e) Fitzgerald/West, f) Hawthorne, g) Hawthorne/Nelville, j) Hemingway, k) James, l) Jeffers, m) MacLeish/Sandburg, n) Melville, o) O'Neill, p) T.S. Eliot, q) Twain, r) Whitman, s) Wm. C. Williams.

481. Children's Literature (3) F,S

Survey of literature suitable for children.

482 Literature for Adolescents

482. Literature for Adolescents (3) F,S

Prerequisite: One college course in literature. Survey of literature suitable for adolescents.

483. Women in the Early Modern Era (3) S

Prerequisites: ENGL 100 and 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. Same course as W/ST 490.

484./584. Contemporary Literary Theory (3) F,S

Study of the principal theories of literature including Structuralism, Hermeneutics, theory of genre, and theory of criticism.

491. Applied Technical Writing (1-3) F,S

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) F,S

Prerequisite: Admission to Certificate Program in Technical and Professional Writing. At least 90 hours writing and editing with cooperating 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.

497. Directed Studies in Composition (3) F,S

Prerequisites: Graduate standing, or consent of the instructor, or one upper division writing course in English. Theory and practice of tutorial instruction in English composition. Recommended for single subject credential candidates and those preparing for collegelevel teaching. (One hour per week in seminar; four hours per week in Writing Center or composition classes.)

*498. Topics in English (1-4) F,S

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, E) Detective Fiction, 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) F,S

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.

Also see Comparative Literature Department for course offerings.

Graduate Division:

510./410. Theories of Writing and Literacy (3) S

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.

520./420. English Phonology (3) F.S

Prerequisite: ENGL 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 321A.

522./421. English Syntax (3) F,S

Prerequisite: ENGL 325 or consent of instructor. Study of the morphology and syntax of American English, using structural and early and recent transformational models. Not open to students with credit in ENGL 321B.

523./423. Semantics (3) F,S Study of meaning in language.

524./428. Applied Linguistics (3) F.S

Prerequisites: ENGL 420 and 421. Linguistic research applied to the study and teaching of the English language.

526./426. History of the English Language (3) F,S

Development of the English language from its beginnings to the present day. Not open to students with credit in FNGL 323.

529./429. Language Strategies for Bilingual/TESL Classrooms (3) F,S

Prerequisite: ENGL 325 (may be taken concurrently) or consent of instructor. Linguistic strategies for teaching the native speaker and the second language learner. To gain practical experience, students will work a minimum of 12 hours a semester in off-campus or on-campus bilingual and ESL classrooms.

535./435. Teaching Composition (3) F,S

Prerequisite: Bachelor's degree or consent of instructor. Intensive examination and study of composition teaching practices, research and evaluation in public schools, including community colleges.

537. Special Topics (3) F,S

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) F

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F.S

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) F,S

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) F,S

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) F,S

Novel (3,3) F,S

Works of Geoffrey Chaucer in Middle English. 567A,B./467A,B. The English

History and development of long prose fiction in the British Isles to and since 1832.

568./468. English Drama (3) F,S
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) F,S

American literature from about 1914 to the present.

575./475. The American Short Story (3) F

History and development of the short story and its criticism in the United States.

576./476. American Poetry (3) F History and development of poetry and its

criticism in the United States.

577A,B./477A,B. The American
Novel (3,3) F,S

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) F

History and development of drama and its criticism in the United States.

583. Special Topics in Literature (3-4) F,S

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) F,S

Study of the principal theories of literature including Structuralism, Hermeneutics, theory of genre, and theory of criticism.

598. Directed Studies (1-3) F,S

Prerequisites: Baccalaureate degree, consent of instructor. Independent creative writing activity under the supervision of a creative writing faculty member.

652. Seminar in the English Renaissance (4) S

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) F

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) S

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Restoration and eighteenth century.

656. Seminar in Romantic Literature (4) F

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Romantic period.

657. Seminar in Victorian Literature (4) F

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Victorian period.

659. Seminar in Twentieth Century English Literature (4) F,S

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) F

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in American literature from about 1820 to about 1865.

673. Seminar in American Realism (4) F

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) S

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies of 20th century American writers, with attention to social forces conditioning their points of view.

681. Seminar in Major Authors (4) F,S

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) William B. Yeats, D) Melville, E) James Joyce.

683. Seminar in Special Topics in Literature (4) F,S

Prerequisites: ENGL 696 (may be taken concurrently). Intensive studies in specific themes, genres, periods, topics, or theory. May be repeated for credit, on different topics, for a maximum of eight units. Traditional grading only. Topics include: A) Feminism/Modernism, B) Autobiography.

696. Seminar in Literary Criticism and Research (4) F,S

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) F,S

Prerequisites: ENGL 696 and consent of instructor, Individual research or intensive study under the guidance of a faculty member.

698. Thesis (1-6) F,S

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, Department Chair: Richard Outwater Department Office: Liberal Arts 4 (LA4), Room 106
Telephone: 985-4977
Faculty: Professors: Molly Debysingh, Edward Karabenick, Richard Outwater, Gary Peters, Joel Splansky, Judith Tyner; Associate Professors: Frank Gossette, Jean Wheeler; Emeritus Faculty: Sheldon Ericksen, John Kimura, Frederick

Scantling, Rodney Steiner, James

Wilson

Department Secretary:
Robin Ikemi

The Department

Students desiring information should contact the department office for referral to one of the faculty advisors. Credential Advisor: Wheeler; Undergraduate Advisor: Tyner; Graduate Advisor: Tyner.

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; 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, for those seeking teaching credentials where the master's degree is required and as preparation for further study elsewhere. Candidates are responsible for

observing the general requirements stated in this *Bulletin* as well as the specific departmental requirements contained in the Geography Master of Arts Handbook.

Bachelor of Arts in Geography

Requirements for the Bachelor of Arts in Geography (code 2-8515):

Lower Division: 9 units required: GEOG 140, 160, and 200 (or other approved statistics course)

Upper Division: 33 units total required: 1) Regional courses: 6 units required, only one course marked * may be used for the regional requirement: 304*, 306*, 316, 326, 308l, 309l, 312l, 318, 320l; 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: GEOG 380, 400, 482, 484, 485, 486, 488.

Electives: any Geography course numbered 300 or higher.

Social Science Requirement: 6 units chosen from the College of Liberal Arts outside Geography and in addition to work credited toward general education requirements from the fields of Anthropology, Economics, History, Human Development, Political Science, Psychology, or Sociology, or in any discipline deemed more appropriate to the student's area of concentration, as approved in writing by the Geography Department.

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 Geography 380 and 18 units chosen in consultation with an advisor. At least 12 units must be in upper division. Geography College of Liberal Arts

Certificate in Cartography
Director: Dr. Judith Tyner
(Geography)
Advisory Committee: Dr. Robert

Advisory Committee: Dr. Hobert Alexander (Civil Engineering). Dr. Franklin Gossette (Geography), Dr. Robert Kunst (Industrial Education), Greg Armento (Library).

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 for the Certificate in Cartography (code 1-8040):

- (1) A Bachelor's Degree, which may be earned concurrently;
- (2) Consultation with the Director of the Program;
- (3) An overall GPA of 2.5;
- (4) 32-33 units distributed as follows:
- (A) Core: 18 units (of which 9 must be taken at CSULB): GEOG 380, 482, 483, 484, 485, and IA 352.
- (B) Areas: 14-15 units from the following groups:

Group A: Mathematics and Computers — 9 units: GEOG 400; C/ST 200; EIT 315, 315L; MATH 101, 119A, 119B, 120.

Group B: Graphic Techniques and Reproduction — One course: IA 141, 341, or 454.

Group C: Fieldwork — 3 units: CE 225, GEOG 486.

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 uban 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 for the Certificate in Urban and Regional Studies (code 1-8120)

- (1) A bachelor's degree;
- (2) Consultation with the Chair of the Department;
- (3) Twenty-four units distributed as follows:
- Core requirements: U/ST 4011, 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 303, 452; HIST 468, 469, 4741; HEC 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), 4101; U/ST 446; W/ST 432.

Master of Arts in Geography

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 Geography 200 at CSULB.;
- (5) An undergraduate GPA of 3.0 (B) or better in geography, or alterna-

tive 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 for the Master of Arts in Geography (code 5-8515):

- (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).

Courses (GEOG)

Lower Division

100. World Regional Geography (3) F,S

An introductory regional geography of the world, treating the major countries in terms of their population, resources, economic development, physical environment and geographic problems. Especially recommended for elementary teaching majors.

140. Introduction to Physical Geography (3) F,S

Systematic study of the physical environment with an emphasis on human-environmental interaction and perceptions of environmental hazards and resources. (CAN GEOG 2)

152. Introduction to Economic Geography (3) F,S

Location and organization of the world's major types of production, including agriculture, mining, forest products, fisheries, manufacturing and associated service industries.

160. Introduction to Human Geography (3) F,S

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) F

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

Regional

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.

302. The World of Wines and Vines (3) F

Not applicable to the geography major. Prerequisite: Students must be at least 21 years old. Provides students with overview of world's major grape-growing and wine-producing regions, from California to France, from Argentina and Chile to Australia. Focus is on the requirements, both natural and cultural, that must be met in order to develop wine regions. Furthermore, the course will consider world patterns of trade in wine, as it flows between and among producing and consuming areas. Course activities will include at least two organized wine tastings.

303. Southern California (3) S

Spatial features, issues and problems that characterize the Southern California urban environment. Attention is focused on the Greater Los Angeles area embracing Ventura, Los Angeles, Orange and adjacent urbanized portions of Riverside and San Bernardino counties.

304. California (3) S

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) F,S

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.

307l. Modernization in Global Perspective (3) F,S

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. Ex-

ploration of all facets of modernization utilizing films, discussions and readings (fiction and nonfiction). Same course as HIST 307I and ANTH 307I

308l. Africa South of the Sahara (3) S

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) F

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.

312l. Eastern and Southern Asia (3) F

Prerequisites: ENGL 100 and upper division status. Characteristics and problems of population, cultural patterns, resource utilization, and economic development in eastern and southern Asia from Japan to Pakistan and China to Viet Nam.

316. Europe (3) S

The human and physical patterns of Europe, Current cultural conditions and environmental problems.

318. Russia & Its Neighbors (3) F,S

Systematic and regional study of the physical, economic and cultural geography of the Soviet Union.

320I. Latin America (3) S

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) F,S

Regional synthesis of the physical and cultural geography of Australia, New Zealand and the island groups of Oceania.

Systematic Geography

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 (3) F

Spatial characteristics of recreational and tourist activity. Factors of tourism, travel patterns, environmental and economic impacts, and analysis of regional tourism patterns.

440./540. Land and Water Environments (3) S

Prerequisites: GEOG 140 and 380 or consent of instructor, Landforms and related soil and water

resources as physical components of the human environment. (Lecture-problems and field experience.)

*442. Biogeography (3) F

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) F

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) F

Prerequisite: GEOG 152 or 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) F

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) F,S

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) F

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) S

Prerequisite: GEOG 466 or consent of instructor. 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) F,S

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.)

Methods and Techniques

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 (3) F,S

Interpretation and understanding of maps as graphic communication, with particular emphasis on symbolization, scale, and projection. Information retrieval skills applicable to general, thematic, and topographic maps are developed. (Lecture, problems 3 hours.)

400. Geographical Analysis (3) S

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.

*482. Elements of Cartography (3) F.S

Prerequisites: GEOG 380, consent of instructor. Theory and techniques in the design and construction of thematic maps, including experience in the use of basic cartographic tools. (Seminar 2 hours, laboratory 3 hours.)

*483. Aerial Photo Interpretation and Remote Sensing (3) F

Prerequisite: Consent of instructor. Introduction to the interpretation of air photos and other remotely sensed imagery. Includes determination of scale and height, acquisition of imagery and the electromagnetic spectrum. Special emphasis is placed on the recognition of physical and cultural features. (Lecture 2 hour, lab activities 2 hours.)

484./584. Advanced Cartography (3) S

Prerequisite: GEOG 482. Advanced theory and techniques in cartographic communication, including map perception, terrain representation, history of cartography, computer mapping and color. (Lecture-discussion 2 hours, lab 3 hours.)

485./585. Computer Cartography (3) S

Prerequisites: GEOG 380. Theory and methods of mapping geographic data with a computer. Includes problems of acquiring and processing machine-readable map data and creation of maps by line printer, plotter and CRT. (Seminar 2 hrs, laboratory 3 hrs) 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) F

Prerequisites: GEOG 200 or Math 180; GEOG 380; and GEOG 485 or permission of instructor. Fundamental concepts and techniques of GIS are introduced and their applications in geography are explored. Experience in the use of both microcomputer and minicomputer-based programs for the analysis and display of geographic information will be gained. Traditional grading only. (Lecture 2 hours, Laboratory 3 hours).

General

*494. Special Topics (1-3) F,S

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) F,S

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) F,S

Prerequisites: GEOG 140 and 380 or consent of instructor. 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) S

Prerequisite: GEOG 466 or consent of instructor. 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 Cartography (3) S

Prerequisite: GEOG 482. Advanced theory and techniques in cartographic communication, including map perception, terrain representation, history of cartography, computer mapping and color. (Lec-discussion 2 hrs, lab 3 hrs)

585./485. Computer Cartography (3) F

Prerequisites: GEOG 380. Theory and methods of mapping geographic data with a computer. Includes problems of acquiring and processing machine-readable map data and creation of maps by line printer, plotter and CRT. (Lec-discussion-lab) Traditional grading only.

588./488. Geographic Information Systems (3) S

Prerequisites: GEOG 200 or Math 180; GEOG 380; and GEOG 485 or permission of instructor. Fundamental concepts and techniques of GIS are introduced and their applications in geography are explored. Experience in the use of both microcomputer and mini-computer-based programs for the analysis and display of geographic information will be gained. Traditional grading only. (Lecture 2 hours, Laboratory 3 hours).

596. Literature and Methods in Geography (3) F

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) S

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) S

Prerequisite: Consent of instructor. Advanced study of areal variations in the physical landscape. Research methods and resources. Individual investigation of selected local area. May be repeated once with consent of department advisor.

650. Seminar in Cultural Geography (3) F

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.

652. Seminar in Economic Geography (3) F

Prerequisite: Consent of instructor. Fundamental resources and basic industries of the modern world. May be repeated once with consent of department advisor.

666. Seminar in Urban Geography (3) S

Prerequisite: Consent of instructor. Geographic concepts and techniques of research applied to specific urban areas. May be repeated once with consent of department advisor.

697. Directed Research (1-3) F,S

Prerequisite: Consent of instructor. Research in geography supervised on an individual basis.

698. Thesis (1-6) F,S

Prerequisite: Consent of instructor. Planning, preparation and completion of thesis for the master's degree.

Urban Studies Courses (U/ST)

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

401I. 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 or urban life spaces; examination of the views of landmark urbanists; and future trends.

446. Land Use Planning (3) F,S

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) F,S

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) F,S Prerequisite: Consent of instructor. Independent

study under the supervision of a faculty member.

The study of history is intended to serve as a cultural background, as a preparation for graduate work in history and the other social sciences, or

History

lated fields.

History majors who are contemplating graduate work in history are advised that many master's degree programs and most doctoral programs require competency in foreign language(s). Interested undergraduates should begin such language study as early as possible.

Department Chair: Sharon L. Sievers

Department Office: Faculty Offices

Telephone: 985-4431

Faculty: Professor: Rifaat A.

Abrahamse, Stephen E. Berk, David

A. Bernstein, Paul V. Black, Donna L.

Cerillo, Jr., Keith E. Collins, David A.

Cressy, Edward A. Gosselin, Albert

F. Gunns, David C. Hood, Arnold P.

Kaminsky, Keith I. Polakoff, William

F. Sater, Donald Schwartz, Sharon L.

Sievers, Arnold R. Springer, Jack M.

Stuart, William A. Weber; Assistant

Professor: Xiaolan Bao, Patricia A.

Emeritus Faculty: Irving F. Ahlquist,

Robert W. Frazer, John E. Higgins,

Raymond E. Lindgren, Alexander

Lipski, John M. McFaul, Halvor G.

W. Peters, James F. Ragland,

Department Secretary:

The Department

Melom, Theodore E. Nichols, Donald

Richard H. Wilde, David A. Williams.

Carolyn Dersch

General students desiring informa-

tion should contact the department of-

advisors: Undergraduate Coordinator:

Cleary: Graduate Coordinator: Cres-

(C/LA): Coordinator, Social Science

Certificate Program: Schwartz (C/LA).

as a foundation for those planning to

government, foreign service, and re-

enter teaching, law, librarianship,

sy; Credential Advisor: Schwartz

fice for referral to one of the faculty

Cleary, Kenneth R. Curtis.

Boutelle, Albie Burke, Augustus

Abou-El-Haj, Dorothy deF.

2 (FO2), Room 106

The History Department awards scholarships and prizes to outstanding undergraduate and graduate students. Applications are usually available at the beginning of the

spring semester. Contact the department office for more information.

The Department of History offers graduate study leading to the master of arts degree. The candidate is responsible for the observation of the general requirements stated in this *Bulletin* as well as the specific departmental requirements stated here and, more fully, in the Master of Arts Brochure, available from the History Department office upon request.

Graduate assistantships and departmental reading positions are sometimes available for qualified persons. The graduate assistant works closely with a member of the graduate faculty, but is not responsible for instruction.

General Education Requirement in United States History:

Baccalaureate students may satisfy the requirement as follows: Lower Division Students — HIST 162A and 162B, or 172, or 173. Upper Division Students — HIST 300.

Bachelor of Arts in History

Requirements for the Bachelor of Arts in History (code 2-8525):

Lower Division: A minimum of 12 units, except that History majors may not take 162A and 172 or 162B and 173.

Upper Division: (1) HIST 301; HIST 302; HIST 495, or, with approved petition, 501. (2) three units focused on ethnicity, race, and gender, selected from approved department offerings. (3) 21 additional units, which must include either nine units in each of two of the following areas, or six units in each of three of the following areas: (a) Africa and the Middle East, (b) Ancient and Medieval Europe, (c) Asia, (d) Britain, (e) Latin America, (f) Modern Europe, (g) Russia and Eastern Europe, and (h) United States.

Breadth Requirement: The total 45 units required for the major must include six units of upper division work in a field (or fields) outside the student's chosen areas of concentration.

Social Science Requirement: Six upper-division units from other departments or programs of the College of Liberal Arts. These units are in addiHistory College of Liberal Arts

tion to those used to fulfill the requirements of General Education.

Note: History majors are strongly encouraged to include the study of a foreign language in their program. Students working for a single-subject credential in secondary education must consult with the school'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 (I);
- (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 Scholar's 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 and 110 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

Prerequisites

- 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 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 for the Master of Arts (code 5-8525):

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, 510F, 510G, 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: Ancient/Medieval Europe; Asia; Britain; 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 (such as Latin America) 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, unless permission is given by the History Department to substitute a thesis for this requirement.

Courses (HIST)

Lower Division

110. Historical Beginnings: World History in Antiquity (3) F

An introduction to the earliest stages of human culture and civilization from paleolithic times down through the establishment of the classical high civilizations of the Eurasian continent.

111. History of World Civilization, 500-1700 A.D. (3) F,S

The development of world civilization from the end of the ancient world to 1700, with emphasis on the interactions of major cultures. Topics will include migration and settlement patterns, the role of universal religions, major medieval civiliza-

tions, technology and the global effects of exploration and colonization movements.

112. The World since 1700 (3) F,S

A look at the old regimes in major world civilizations at the start of European expansion. Main trends in modern European history (world conquest and colonization; science, technology and industrialization; the nation state; classical liberal and the capitalist world systems; challenges to these ideas and systems) and the impact of these upon the non-European world.

131. Early Western Civilization (3) F.S

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) F,S

European society from the 17th 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) F,S

English society from earliest times to the Glorious Revolution. Anglo-Saxons; Norman rule; medieval ideas, institutions and life; Tudor and Stuart England; Anglican Church origins and Puritan revolt; overseas exploration and relations with Wales, Scotland, Ireland and the continent. Emphasis on evolution of values and of legal and governmental institutions inherited by U.S.

152. Britain in Modern Times (3)F,S
Britain from 1688 to the present. The ideas and
way of life of the Georgian, Victorian, Edwardian
and 20th-century peoples of the British Isles.
Political parties and the evolution of parliamentary (cabinet) government, its dissemination to
colonies; mercantilist duels for empire; first industrial nation; urbanization, democratization,
free trade, imperialism and the development of
the welfare state; two world wars and Britain's
changing political position; recent events.

162A,B. Comparative History of the United States and Latin America (3,3) F,S

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) F,S

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 or 171A. (CAN HIST 8)

173. Recent United States History (3) F,S

Survey of the political, social, economic and cultural development of the United States from reconstruction to the present. Attention to the rise of industrial America, the United States as a world power, welfare democracy and the Cold War era. Material may be covered chronologically or topically. Fulfills the general education requirement for US history. Not open to students with credit in HIST 162B or 171B. (CAN HIST 10)

201. Facts, Evidence and Explanation (3) F,S

Critical examination of evidence supportive of inference drawing; differences between direct, circumstantial, physical and statistical evidence; the determination of relevancy of facts; whether facts are objective, whether they exist independently of the interpreter, or whether they are theory laden. (This course may not be taken to fulfill the 45-unit requirement in the History major.)

290. Special Topics in History (1-3) F,S

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

GENERAL

301. Methodology of History (3) F,S

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) F,S,SS

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.

309l. Men and Masculinity (3) F,S

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. Genderoriented social and political movements. Traditional grading only.

408./508. The History of the Family (3) S

History of the family from medieval period to 20thcentury. 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.

484. Topics in Women's Oral History (3) F,S

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.)

490. Special Topics in History (1-3) F,S

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.

492./592. Proseminar in World History (3) F,S

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 max of 6 units.

*495. Colloquium (3) F,S

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.

497H. Honors Colloquium (3) F

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) F,S

Prerequisite: consent of instructor. Independent study under the supervision of a faculty member. May be repeated up to six units.

498H. Honors Research (3) F,S Research for and writing of a senior thesis under

the direction of a departmental advisor.
499H. Honors Thesis (3) F,S

45511. Hollors Hiesis (b) 1,5

Prerequisite: HIST 498H. Research, writing, and presentation of a senior honors thesis under the direction of departmental faculty advisor.

INTERDISCIPLINARY COURSES

303l. Rebels and Renegades (3) F.S

Prerequisites: ENGL 100 and upper division status. The young rebels of the depression decade grew up to become the parents of the dissidents of the affluent sixties. The course will examine the generational conflict of those turbulent years as a clash of values, exploring the

nature of those values, the cultural and social influences that shaped them, and some key ways they were manifested. Will concentrate on four areas: Social Change, Life-styles, Popular Culture, and High Culture with emphasis on literature and theater. (This course may not be taken to fulfill the 45-unit requirement in the History major.)

306l. Legal Responsibility (3) F,S

Prerequisites: ENGL 100; 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) F,S

Prerequisites: ENGL 100 and upper division status. Exploration of tways 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 nonfiction). (This course may not be taken to fulfill the 45-unit requirement in the History major.) Same course as ANTH 307I and GEOG 307I.

308l. Law and Civilization (3) F,S

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, (This course may not be taken to fulfill the 45-unit requirement in the History major.)

310l. The Greek World (3) F,S

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 Peloponesian War, Hellenistic culture and contributions of the Greeks to the modern world. Same course as C/LT 3101.

323I. The Renaissance World (3) S

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. (This course may not be taken to fulfill the 45-unit requirement in the History major.) Same course as MUS 365I.

404l. Social History of Musical Life (3) F

Prerequisites: ENGL 100 and upper division status. Social evolution of musical life — publics, institutions, professions, and taste — in Europe

and the U.S. (This course may not be taken to fulfill the 45-unit requirement in the History major.)

414l. Medieval World (3) F,S

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. (This course may not be taken to fulfill the 45-unit requirement in the History major.) Same course as C/LT 349I.

Upper Division - Areas

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

AFRICA AND THE MIDDLE EAST

391. The Making of Modern Africa, 1800-1939 (3) F, S

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) F, S

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) F

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) F,S

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.

ANCIENT AND MEDIEVAL

312l. Roman World (3) W,SS

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 3121.

313. Ancient Greece (3) F,S

History of the Greeks and the Greek world from the earliest times to the Roman conquest.

314. Roman History (3) F,S

History of Rome and the Roman world from the Eighth Century B.C. to the Fifth Century A.D.

*316. Early Middle Ages (3) F

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) S

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) S

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.

*351. Medieval England (3) F

Analysis of English political institutions, society, religion and economy in the Anglo-Saxon, Norman, Plantaganet and late medieval eras.

411l. Early Christianity and Society (3) F

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 R/ST 4711.

ASIAN

381. Asian American Women (3)

This course will explore the largely unwritten history of Asian American women. Using an interdisciplinary 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 <u>triple</u> 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.

382A. Imperial China (3) F

Introduction to the classical civilization stressing the evolution of imperial institutions, the Chinese world order and China's traditional cultural heritage. Not open to students with credit in HIST 482A.

382B. Modern China (3) S

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. Traditional Japanese Civilization (3) F

Japanese civilization from its origins to the 19th Century. Emphasis of intellectual and cultural developments on the selective adoption and modification of Chinese culture. Not open to students with credit in HIST 483A.

383B. Modern Japan (3) S

Japan from 1850 to 1945; collapse of Tokugawa bakufu and rise of the Meiji state; industrialization; social change and protest; "Talsho democracy," the Pacific War.

*384. Contemporary Japan (3) S

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) F

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) F

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, Phillippines) will be surveyed.

*406. Asian Women (3) S

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 406.

407. Japan and the United States in the 20th Century (3) S

Examination of relationships between Japan and the United States, emphasizing cultural, economic and political conflict and cooperation.

*488. The Chinese Revolution (3) F. Odd Years

Prerequisite: HIST 181B or 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.

BRITISH

353. Tudor and Stuart England (3) F,S

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) F,S

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) F,S

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) S

Topics in British Empire and Commonwealth history in two basic formats. (1) comparative studies of major Commonwealth nations, e.g., 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.

A. British Empire and Commonwealth

LATIN AMERICAN

362. Colonial Latin America (3) F

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) S

Political, economic, social and intellectual evolution of Latin America in the 19th and 20th centuries.

366. Latin American History and Literature (3) S

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) F

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) F

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) F

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) F,S

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 and groups 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.

MODERN EUROPEAN

*332. The Italian Renaissance (3)

Examination and analysis of intellectual, cultural, political, and economic features of 14th- and 15th-century Italian civilization. Particular emphasis on interplay between new configurations and notions of power and their unique Italian cultural manifestations.

*333. Reformation Europe (3) S

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) F

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 philosophes (e.g., Voltaire), and the crisis of traditional society.

*336. The French Revolution and Napoleon (3) S

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) F

Apogee of European power, influence and confidence. Recovery from French Revolutionary and Napoleonic disturbances, reaction and revolution, nationalism, unification of Germany and Italy, triumph of liberalism, challenge of socialism, outburst of imperialism, alliances and alignments leading to World War I.

339. Europe Since 1914 (3) F,S

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.

400l. 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 course as PHYS 400I.

*433. Spain and Portugal (3) F

Rise of Portugal, Castile and Aragon, the Catholic kings, Imperial Spain, Portugal and its empire, Portugal and Spain in transition, the republics, Salazar and Franco.

*437. History of Germany 1871 to Present (3) F

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) F

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 Europe and America, 1500-1800 (3) F,S

Prerequisites: ENGL 100 and upper-division status. Study of representations and realities of women's lives, 1500-1800, 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.

ORAL HISTORY PROGRAM

402. Oral History Methods (1) F,S

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. (Same course as C/LA 485.)

4980. Directed Studies in Oral History (1-6) F,S

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.)

RUSSIAN

341A. Foundations of Russia (3) F

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) S

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) F

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.

UNITED STATES

300. The United States — Past and Present (3) F,S

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.)

*372. United States: Colonial Period (3) F

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) S

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. Perceptions of Deviance and Poverty in U.S. History (3) F,S

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 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 examinined in depth.

*375. The United States Emerges as a Nation (3) F,S

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) F,S

Sectional rivalry, manifest destiny, mid-century divisive forces, Civil War and reconstruction.

*378. United States History: 1877-1920 (3) S

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) F

The prosperous 1920s; the Depression years and the beginnings of welfare democracy; the United States in World War II.

*380. United States Since 1945 (3) F,S

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, and after.

468./568. Local History: Communities (3) F,S

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 American: A Historical Examination (3) F,S

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.

470. Chicano History (3) F,S

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.

*471. History of the Westward Movement (3) F,S

Analysis of the frontier experience of the American people, expansion across the American continent and its influences on American ideas and institutions, special attention given to explorations, movement of populations, effects of sectionalism and the geographical bases for American development.

*472. History of the South (3) F

Survey of economic, social, intellectual and political development of the South from colonial times. Emphasis on the period from 1820 to the present.

473. California History (3) F,S

Survey of California history from the arrival of Europeans to the present. Emphasis on significant social, political and economic developments.

474l. The Urbanization of Modern America (3) S

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. Not open to students with credit in HIST 474A,B.

475. History of Business in the United States (3) S

Prerequisites: ENGL 100 and upper division status. Institutional development of the American business firm and changing role of entrepreneurs and managers in American society.

477A./577A. American Cultural History (3) F

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) S

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) F,S

Foreign relations from the American Revolution to the present. Special attention given to isolationism and the Monroe Doctrine, expansionism and manifest destiny, the Open Door and the Far East, the war with Spain, the two world wars, the Cold War, and after.

*479. U.S. Constitution: Origins and Early Development (3) F

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) S

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.

482I. The American Religious Experience (3) F,S

Prerequisites: ENGL 100 and upper division status. Survey of major themes in the unique American religious experience. Topics of significance will include the adaption of European Christianity to novel American circumstances, the proliferation of denominations and the varied religious response to a dynamic American society. Same course as R/ST 4821.

485A. History of Women in the U.S. — Early Period (3) F

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 AMST 490 and W/ST 485A.

485B. History of Women in the U.S. — Since 1850 (3) S

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 ferninism. Only 3 units of 485A,B may be applied to a field of concentration in U.S. history for the major. Same course as AMST 490 and W/ST 485B.

*486. History of the Afro-American in the United States (3) F,S

Survey of the role of the Afro-American in American history from colonial times to the present, including the African heritage, nature of the American slave system, emancipation and the struggle for equal rights.

*489. Topics in Legal History of the United States (3) F

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.

Graduate Division

501. Theories and Methodologies of History (3) F

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.

508./408. The History of the Family (3) S

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, 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.

510. The Literature of History (3) F,S

Reading and discussion of major works and intensive study of bibliography and bibliographical aids. May be repeated for a maximum of six units in (a) Ancient and Medieval, (b) Modern European (including Britain and Russia), (f) United States, (g) Asian.

568./468. Local History: Communities (3) F,S

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) F

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) S

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) F,S

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) F

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) F,S

Special preparation for the M.A. examinations under faculty direction. May be repeated for a maximum of 6 units. Cannot be applied to requirement of graduate courses. Permission of Graduate Advisor required.

611. Seminars in Ancient and Medieval History (3) S

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) F.S

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) F,S

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) F

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) F,S Prerequisite: Consent of instructor. Readings on an individual basis.

697. Directed Research (1-3) F,S
Prerequisite: Consent of instructor. Research on
an individual basis.

698. Thesis (1-4) F,S

Planning, preparation and completion of non-curricular work in history for the master's degree.

Human Development

College of Liberal Arts

Department Chair:
Katherine Van Giffen
Department Office: FO2-229
Telephone: 985-4344
Faculty:
Associate Professors: Katherine
Van Giffen, Pamela Roberts.
Department Secretary:
Carol Craven-Garwood
The Program

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 psychological, sociocultural 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 enables 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. Courses should be 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.) 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. Graduate programs may be developed under the auspices of the Special Major Program.

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

Requirements for the Bachelor of Arts in Human Development (code 2-8014):

Lower Division: ANTH 120 or SOC 100, A/P 107 or 207, PSY 100.

Core Courses (27-28 units):

(1) HDEV 250, 307l, 320, 357l, 401, 402, 434 and 470;

(2) Three units from each foundation area (9 units total):

Biological: ANTH 318, 319, A/P 308l, 400, 401; W/ST 440; Psychological: C/D 361, ED P

Psychological: C/D 361, ED P 302, 305, GERN 400I, HEC 311, 314, 411, HDEV 380, PSY 331, 332, 333, 336, 337, 341, 345, 351, 356, 370, 438, 463;

Sociocultural: ANTH 352, ASAM 340, B/ST 410, HEC 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)

250. Elementary Statistics in the Social and Behavioral Sciences (4) F,S

Prerequisites: Knowledge of mathematical procedure usually covered in elementary high school algebra. 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 and SOC 250.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

307l. Human Development: Childhood Through Adolescence (3) F,S

Prerequisities: 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) F,S

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) F,S

Prerequisities: 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.

*380. Human Development Issues in the World of Work (3) F,S

The underlying processes and structures of human development and their relationships to the job world. Socialization across the life-span and subsequent work experiences. Aspects of mental and physical well-being and sociocultural factors related to employment.

400l. Death and Dying (3) F

Prerequisites: English 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) F,S

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. (Lecture-discussion 3 hours.)

402. Development of Thought: Structure, Process and Cultural Influences Across the Life Span (3) F,S

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, moral development 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) F,S

Prerequisites: HDEV 3071 and 3571. 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) F, S

Prerequisites/Corequisites: HDEV 250, 3071, 320, 3571, 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 one hour each week. (Seminar 2 hr, practicum 4 hrs). Traditional grading only.

490. Special Topics in Human Development (3) F,S

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) F,S

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.

International Studies Program

College of Liberal Arts

Director: Molly Debysingh Program Office: LA4-206C Telephone: (310) 985-4453 Program Secretary: Robin Ikemi Telephone: (310) 985-4977 Fax: (310) 985-5431 Faculty: Professors: Jutta Birmele (Foreign Languages), Sudershan Chawla (Political Science), Norma Chinchilla (Sociology), Molly Debysingh (Geography), Clorinda Donato (Foreign Languages), Arnold Kaminsky (Asian and Asian-American Studies), Alain G. Marsot (Political Science), Gary Peters (Geography), Harold K. Schefski (Foreign Languages). Donald Schwartz (EDSS), Christian Soe (Political Science), Joel Splansky (Geography), Barry H. Steiner (Political Science), Cher Thomas (Psychology). Associate Professors: Alejandra C. Edwards (Economics), Larry N. George (Political Science), Jack Hou (Economics), Claire Martin (Foreign Lauguages), Yoko S. Pusavat (Asian and Asian-American Studies), Assistant Professors: Kenneth R. Curtis (History), Larry Martinez (Political Science), George M. Scott (Anthropology).

Bachelor of Arts in International Studies (code 2-8545)

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 postgraduate study.

Requirements for the Bachelor of Arts in International Studies

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.

2390, Human Development

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 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 4611 (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); SOC 350 (International Population Problems); W/ST 4011 (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).

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

495l (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 3081 (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 (Is-

lamic Religion and Culture); R/ST 315l (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:

(3 units) An internship or foreign study program related to the course of study selected, as approved by major advisor.

Senior Research Seminar:

As approved by the director of the International Studies program.

Courses (I/ST)

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

317l. Problems in International Social Conflict (3) F

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.

318l. Cases in International Social Conflict (3) F,S

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) S

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.

Journalism

College of Liberal Arts

Department Chair: William A. Mulligan Office: Social Science and Public Affairs (SSPA), Room 024 Telephone: (310) 985-4981 Faculty: Professors: Daniel E. Garvey, Wayne F. Kelly, William A. Mulligan: Associate Professor: Whitney Mandel; Emeritus Faculty: James H. Bliss, Ben Cunningham, Dixon L. Gayer, Jack Heeger, Larry Meyer, Robert A. Steffes, M.L. Stein, Robert G. Wells, Frank Wylie. Department Secretary: Melissa Hawkins-Taluban

The Department

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, Magazine, Newspaper, Photojournalism, and Public Relations.

The department is accredited by the Accrediting Council for Education in Journalism and Mass Communication (ACEJMC). ACEJMC philosophy requires a solid education in the liberal arts and sciences. As an accredited unit, the Journalism Department adheres to those standards. (See details below under Advising.)

The department's Newspaper Option prepares students to work as writers, reporters and editors on newspapers. The Magazine Option 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 freelance 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 relations writing and publications, government and community af-

fairs, and for 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.

AEJMC 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 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.

Magazine Option students also produce <u>University Magazine</u>, a slick, four-color publication.

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 University Television to produce a monthly cable 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.

Admission Under Impaction

The number of applicants to the major in Journalism exceeds the number that can be accommodated by the Department's facilities and resources. As a result, the Journalism Department has been designated as impacted by the California State University. Applicants for admission to the University with a major in Journalism will be designated as pre-majors and assigned a premajor code. Acceptance into the pre-major category does not imply or assure subsequent acceptance into any of the major's options. Similarly, acceptance into the premajor is not prerequisite for admission into the major.

Admission into the Journalism major (pre-major code 2-6459) is determined solely on the basis of meeting all of the following supplemental criteria:

- Completion of a minimum of 56 semester units of college-level course work with a GPA of 2.75 or higher;
- Successful completion of the CSULB Writing Proficiency Examination;
- Completion of General Education-Breadth (GE) or Intersegmental General Education Transfer Curriculum (IGETC) requirements;
- Completion of ENGL 101 or 200, JOUR 110 and 120, NSCI 200, and PSY 210 (or equivalents) with a minimum grade of "C" in each.

To apply for admission to the Journalism 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 official transcripts of all previous college work at CSULB or elsewhere. The deadline for applications to the University for the Fall semester is November 30 of the preceding calendar year, and for the Spring semester August 31 of the preceding calendar year. Admission to the major is competitive, and only those

applicants judged by the Department faculty to be the most qualified will be accepted.

The Journalism Department recommends the following General Education courses as the ones that are most likely to prepare students for careers in journalism: at least one semester of a foreign language, AMST 319, C/LT 230, ECON 300, ENGL 100, GEOG 140, HIST 173, POSC 100 or 391, POSC 220, and W/ST 102.

The Department also recommends the following non-General Education courses: ENGL 101 and 320 (prerequisites to some Journalism courses), NSCI 200, POSC 326, and PSY 210.

Requirements for the Bachelor of Arts in Journalism

Students may obtain a bachelor's degree in any of the department's six options: Newspaper, Magazine, Broadcast Journalism, Photojournalism, Public Relations and Journalism Education.

Prerequisites to entering Journalism Classes:

Computer skills: All students entering production class must know the WordPerfect word-processing program and be able to word-process at no less than 40 words a minute. Magazine class students also must know Microsoft Word. 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 FNGL 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 312, 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 Newspaper 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.

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 communication courses. Communication courses include all JOUR and RTVF 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: American-Indian Studies, American Studies, Anthropology, Asian and Asian-American Studies, Black Studies, Chicano and Latino Studies, Classics, Comparative Literature, Economics, English, French, Geography, German, History, Italian, Latin-American Studies, Linguistics, Mathematics, Medieval Renaissance Studies, Philosophy, Political Science, Psychology, Religious Studies,

Women's Studies.

If Journalism majors have at least 68 units of Liberal Arts outside communications, they may include up to 6 units of the following JOUR courses under Liberal Arts, according to AEJMC: JOUR 312, 315, 350, & 431.

Russian, Sociology, Speech, and

Classes in Art, Dance, Music and Theater Arts may be counted so long as they deal with history or appreciation instead of actual performance by the student.

No more than 22 units of the noncommunication courses may be outside the area of liberal arts and sciences. Examples are courses from the 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 (310) 985-4981. Majors must obtain the approval of a journalism faculty advisor each semester before making out a class schedule.

ACEJMC divides courses into three basic categories: liberal arts and sciences, journalism and communication, and "other." All classes not specified as liberal arts and science (Anthropology, etc.) or journalism and 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 P.E. 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.

Specific Requirements for the Bachelor of Arts in Journalism

Please note requirements differ for each option

Option in Broadcast Journalism (code 2-6460)

A minimum of 33 communication units (27 journalism units of which 21

units must be upper division and 6 RTVF units) to a maximum of 34 communication units. The required RTVF courses are RTVF 220 and 230. The required journalism and RTVF 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 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, RTVF 220, 230, SPCH 271.

Upper Division: ENGL 320, JOUR 319, 321, 325, 382A, and B, 430, and one or more of the following: JOUR 312, 315, 412, 431, 494, or 498.

Recommended additional courses: JOUR 320, 420 and 490.

Option in Journalism Education (code 2-6836)

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, 312, 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 the following core of 31 units of English courses: ENGL 184, 310, 363, 482; either ENGL 320 or 325; and three courses from ENGL 250A, 250B, 370A or 370B.

Option in Magazine Journalism (code 2-6465)

A minimum of 29 journalism and a maximum of 34 communication units, of which at least 18 must be

upper division. Students will be advised 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 objectives. 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 Communications categories.

Lower Division: JOUR 110, 120, 237, and 262.

Upper Division: JOUR 355, 362, 430 and two or more of the following: JOUR 315, 350, 412, 431, 455, 490, or 498.

Recommended additional courses: JOUR 180, 280 and 499.

Option in Newspaper Journalism (code 2-6461)

A minimum of 29 journalism and a maximum of 34 communication units of which at least 21 must be upper division. Students will also be counseled into 15 units of study outside of journalism designed to aid in reaching their professional objectives. The department requires Newspaper Option majors take ENGL 320, English Grammar, prior to taking JOUR 331, Advanced Copy Editing and Make-up. A foreign language is also recommended for majors in the Newspaper option. Student 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 categories.

Lower Division: JOUR 110, 120. Upper Division: JOUR 316, 319, 320, 323, 331, 420, 430, and one or more of the following: JOUR 312, 315, 412, 422, 431, 494, 498, or

Recommended additional courses: JOUR 180, 280, 380, and 490.

Option in Photojournalism (code 2-6462)

A minimum of 29 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, 120 and 280.

Upper Division: JOUR 319, 324A, 324B, 331, 380, 430, and 480.

Option in Public Relations (code 2-6837)

A minimum of 30 journalism and a maximum of 34 journalism/communication units of which at least 27 must be upper division. Students will also be counseled into 15 units of study outside of journalism designed to aid in reaching their academic and professional objectives. The preferred minor is Marketing. 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 22 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 concentra-

Broadcast: JOUR 110, 120, 319, 321, 325, 430, and 431.

News-Editorial: JOUR 110, 120, 316, 319, 331, and six units from 305, 312, 320, 323, 412, 422, 430, and 431.

Photojournalism: JOUR 110, 120, 180, 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) F,S

Origins, development and contemporary role of newspapers, magazines, radio, television, books, and films, and such related fields as advertising and public relations. (Leo, discussion 3 hrs.) (CAN JOUR 4)

120. News Writing (3) F,S

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)

180. Introduction to Photojournalism (2) F,S

Photography for the photojournalist, writer or editor. Course covers operational techniques of cameras, films and fundamental approaches to producing pictures for newspapers and magazines. Skills are developed through practical exercises in news coverage with lab instruction. Materials fee. (Activity, 4 hours.)

237. Magazine Making and Editing (3) F,S

Prerequisite: JOUR 120 with grade of 'C' or better. Fundamental principles of periodical publication and methods of editing, manufacturing and distributing magazines of every type. The course includes practical training and instruction in editorial work, such as editing, writing, proofreading, design and copyfitting. Students produce a mock-up magazine as a semester project.

262. Magazine Production (2) F.S

Prerequisite: JOUR 120 with grade of "C" or better, JOUR 237 or 355. Practical experience in magazine planning, editing, writing, photography, art, layout, advertising and production. Supervised work on the *University Magazine*. May be repeated for a total of 4 units. (Lab 3 hrs)

280. Intermediate Photojournalism (2) F,S

Prerequisites: JOUR 120, with a grade of "C" or better, JOUR 180, ART 141 or consent of instructor. Techniques of photojournalism as used in newspapers, magazines and public relations with emphasis on the news and communication values in pictures. Experience with various types of photography equipment. Materials fee for those using university supplies. (Lectures, demonstrations, field trips and practical assignments, journalism activity 4 hours.)

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

305. Editorial Graphics (3) F,S

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 protypenewspaper and magazine pages. Traditional grading only for Majors/Minors.

312. World Press (3) F,S

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) F,S

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) F

Prerequisites: JOUR 120 and JOUR 316 for News-Editorial 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) F,S

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) F,S

Prerequisites: JOUR 120 with a grade of 'C' or better and R/TV 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) S

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) F,S

Prerequisites: JOUR 120, 180 or equivalency test and JOUR 280 (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. 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) F,S

Prerequisites: JOUR 120 with a grade of "C" or better and RTVF 220 or consent of instructor. Techniques of gathering, writing and editing radio news.

331. Publication Editing and Makeup (3) F,S

Prerequisites: ENGL 320 and JOUR 319 with a grade of "C" or better or with consent of instructor. JOUR 323 and JOUR 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, proofreading, 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) F,S

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) F,S

Techniques of writing non-fiction articles with a view toward potential sales to magazines, newspaper syndicates and Sunday supplements.

362. Advanced Magazine Production (3) F,S

Prerequisite: JOUR 237 and 262. Advanced magazine editing, writing, photography, design, and production. Participation in publishing the *University Magazine*. May be repeated for a maximum of 6 units. (Lab 6 hrs.)

370. Principles of Public Relations (3) F,S

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) F,S

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) F,S

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) F,S

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) S

Prerequisite: JOUR 280 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) F,S

Prerequisites: JOUR 120 and 325 and R/TV 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) F,S

Prerequisites: JOUR 382A and consent of instructor. Development of the radio 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) S

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) F,S

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 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) F,S

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.

428. Newspaper Management (3) S

Prerequisite: Nine units of journalism. Management side of newspaper publishing, including newspaper organization, budget, personnel, equipment, business accounting, advertising sales and production, labor relations, postal regulations, legal problems and newspaper management techniques.

430. Law of Mass Communications (3) F,S

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, fress press vs. fair trial, and other laws affecting the news media.

431. Ethical Problems of the News Media (3) F,S

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) F

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) F,S

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 two new business proposals 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 which 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) F

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) F,S

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. A. Print Advertising

494. Research Methods in Mass Communications (3) S

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) F,S

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) F,S

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.

Director: Norma Chil (Program in Woman Office: F02-256 - VI Priore: 985-9650

Latin American Studies

College of Liberal Arts

Director: Norma Chinchilla (Program in Women's Studies) Office: FO2-226 Phone: 985-5650

Affiliated Faculty: Professors: Roland E. Bush (Comparative Literature), Norma Chinchilla (Women's Studies Program), Molly Debysingh (Geography), Adela de la Torre (Chicano and Latino Studies), Beverly J. De Long-Tonelli (Spanish and Portuguese), Robert Delorme (Political Science), Shirley Mangini (Spanish & Portuguese); Associate Professors: Alejandra C. Edwards (Economics), Juan Hernandez (Spanish and Portuguese), Rudy Torres (Chicano and Latino Studies); Assistant Professors: Larry N. George (Political Science), Claire E. Martin (Spanish & Portuguese), Jose Sanchez (Radio TV & Film), Teny Topalian (Science Education)

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 requirement and the major and teaching minor requirements of the cooperating departments.

Students interested in pursuing a master's degree emphasizing Latin American studies should read the section in this *Bulletin* entitled Special Major (Interdisciplinary Studies) and consult the Director of Latin American Studies.

Requirements for the Certificate in Latin American Studies:

- (1) The following are the requirements for the Latin American Studies 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; or the successful completion of a college intermediate level proficiency exam in the language of the student's area of concentration (with the approval of the Director of Latin American Studies). The language requirement with the certificate;
- (C) Students must consult with and receive approval of their programs from the director. (2) The instruction program is
- (2) The instruction program is comprised of 24 may be completed concurrently units, distributed as follows:

- (A) Core (required of all students)
 12 units: Anthropology: 3 units —
 ANTH 323 or 324; Geography: 3
 units GEOG 320IC; History: 3
 units HIST 362 or 364; Political
 Science: 3 units POSC 358 or
 359:
- (B) Electives: 12 units from fields other than the student's major, selected in consultation with the Director of Latin American Studies (cannot duplicate courses taken in the Core): ANTH 323, 324, 345, 490*, 499*; C/LT 440, 499*; ECON 363, 490*, 499*; HIST 162A, 162B, 362, 364, 433, 462, 463, 466, 490*, 498*: CHLS 305, 312, 380, 400, 420, 425, 352, 490*, 499*; POSC 358, 359, 481, 497*, 499*; SOC 341, 490*, 499*; SPAN 331, 445, 461, 490*, 499*, and appropriate literature courses from the student's area of concentration.
- (*) The course work of these Special Topics and Directed Studies classes must be in an area of Latin American Studies see Latin American Studies director for approval.

Legal Studies in the Liberal Arts College of Liberal Arts

Director: Albie Burke (History)
Telephone: 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 for the Certificate in Legal Studies:

- 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; POSC 311, 312, 318, 376, 412, 414, 415, 419; S W 350; W/ST 308.

Persons interested in the Program for Legal Studies should contact Dr. Albie Burke, Director, Department of History.

Linguistics College of Liberal Arts

Director: Sara Smith Department Office: PSY 325 Telephone: 985-5792 Faculty: Professors: Robert H. Berdan (Educational Psychology), Pamela Bunte (Anthropology), Robert M. Hertz (English), Consuelo Nieto (Teacher Education, Stephen B. Ross (English), Sara Smith (Psychology), Lynn Snyder (Communicative Disorders), Carolyn Wardrip-Fruin (Communicative Disorders); Associate Professors: Lorraine Kumpf (English), Terrence Wiley (Educational Psychology); Assistant Professors: Kadru Ohta (Asian and Asian American Studies).

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

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 Director of the Interdisciplinary Program in Linguistics.

Requirements:

Select one course from each category:

Category I — Introduction: ANTH 170, ENGL 325, LING 363IC, CHLS 402:

Category II — Phonology: C D 330, ENGL 420, FREN 414, GERM 303, SPAN 425;

Category III — Syntax: ENGL 421, FREN 411, GERM 401, SPAN 426;

Category IV — Psycholinguistics and Neurolinguistics: C D 329, 361, 481B, ED P 454, LING 329, PSY 438;

Category V — Language, Culture, and Society: ANTH 412IC, 413, SOC 485IC, SPCH 451;

Electives to a program total of 21 units selected from: any course listed above, ANTH 470, C D 380, ENGL 423, 426, 428, 498, CHLS 403, PHIL 484, SPAN 412, 427, SPCH 448, 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.

Master of Arts in Linguistics (code 5-6833)

The program for the M. A. degree in linguistics is interdisciplinary in nature to accommodate a variety of needs of students within the program. The program is designed both for students who wish to pursue further graduate study and those seeking a terminal degree. It seeks to blend theoretical and applied aspects of linguistics, both in the overall curriculum and in most of the individual courses.

The M. A. in Linguistics offers four concentrations:

[1] General Linguistics;

[2] Language and Culture;

[3] Teaching English as a Second Language; and

[4] a Special Concentration, through which a student, in consultation with a designated faculty member, constructs a concentration which has not been formally listed here, using existing courses. For all four concentrations, there is a core of classes (15 units) which must be taken by each student; the remaining units for the degree are to contain the courses taken in the

Graduate assistantships and teaching assistantships are sometimes available to qualified students.

concentration.

Prerequisites:

 A bachelor's degree which includes 18 units of course work as follows:

a) Twelve (12) units in linguistics covering syntax, phonology, language acquisition, and historical linguistics.
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 Program Director, 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 for the Master of Arts:

(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 for 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 the requirements of one of the concentrations 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.
(6) A GPA of 3.00 on all courses

included in the program.

The Core:

(1) Two courses from the following three: LING 620, LING 625, LING 633:

(2) One course from the following: LING 540, LING 610, LING 650;

(3) One course from the following: PSY 539 or SPAN 524;

(4) One course from the following: ANTH 570, ED P 595, or LING 596.

The Concentrations:

General Linguistics Concentration (12-15 units), including all courses in the core except only one course from Category 3; and approved selections from: ANTH 475, ANTH 597, ANTH 630; CD 581B, CD 665; ED P 573, ED P 672; ENGL 523, ENGL 524, ENGL 526, ENGL 620, ENGL 623; FREN 414, FREN 490; LING 575, LING 697, LING 698; PHIL 584, PHIL 590G; PSY 538; SPAN 525; SPCH 551, SPCH 600.

Language and Culture Concentration (12-15 units). ANTH 630, and LING 540 and approved selections from ANTH 413, ANTH 475, ANTH 570, ANTH 597; ED P 578, ED P 672; ENGL 523, ENGL 524, ENGL 620, ENGL 623; LING 575, LING 697, LING 698; SPCH 309, SPCH 600.

Teaching English as a Second Language Concentration (12-15 units). LING 500, LING 561, and either LING 575 or ED P 578; and approved selections from ANTH 421; CD 560; CD 590; ED P 454, ED P 573; ED P 672; EDEL 558; ENGL 528, ENGL 529; ENGL 620; LING 460, LING 562; LING 570, LING 697, 698; PHIL 584; PSY 438/538; SPAN 527, SPCH 551.

Special Concentration (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 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) Passing of the CSULB Writing Proficiency Examination.

(3) 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 lev

(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) Eight courses, one each in eight different categories:

(a) One course in basic ESL.
Methodology, selected from ENGL 429 or ENGL 529;
(b) One course in cross-cultural communication, selected from 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 ENGL 420 or ENGL 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 475 or ED P 578, LING 570 or ED P 576:

(h) Three units of a practicum, either LING 592 or 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 412I, ANTH 413; CD 330, CD 361, CD 363, EDEL 430, ED P 454, EDSE 401, EDSE 402, EDSE 435, EDSE 436, ENGL 423/523, ENGL 428/528, LING 650, PSY 438/538, SOC 485I, SPCH 309, SPAN 427/527, VE 404, VE 405.

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 "!" suffix are not available for graduate credit, but may be used for the Certificate if they were taken while the student was an undergraduate.

Language Development Specialist Certificate Program (code 1-6051)

The Language Development Specialist certificate is designed for teachers of limited English proficient students working in California schools, grades K-12. Candidates who wish to earn this certificate from the Commission on Teacher Credentialing must complete the requirements listed here and pass a state-administered examination.

Prerequisites menon and mi bebut

- (1) A bachelor's degree.
- (2) A valid California Teaching Credential (K-12)
- (3) One year of college study of a single foreign language or equivalent.

Requirements

Eight courses, one from each of the following categories:

- Linguistics and the Structure of Language
- LING 435, LING 3631;
- 2. Language Acquisition
- C D 329, ED P 454, LING 329;
- 3. ESL Foundations
- ED P 485;
- 4. ESL Methods and Materials LING 486. LING 561:
- Language Assessment, Diagnosis and Evaluation
- C D 460/560. LING 562:
- Psycho-Social Context of Language Minority Instruction

ANTH 421, ED P 573;

7. History and Status of Linguistic Minorities in California

AIS 319, AMST 319, ASAM 310, ASAM 319, ASAM 350, B/ST 319, ED P 576, CHLS 300, CHLS 319, CHLS 340, C/LA 320, W/ST 319;

8. Practicum LING 593.

Courses (LING)

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

329. Introduction to Language Acquisition (3) S,F

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.

363I. Implications of Human Language (3) F

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.

433. Survey of Discourse Analysis (3) S

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.

*460. TESL Composition (3) S

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.

472. Language & Discrimination (3) F,S

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. Traditional grading only.

475./575. Literacy and Linguistics (3) F,S

Prerequisite: 6 units in linguistics or permission of instructor. General introduction to the field of literacy studies from linguistic and sociocultural perspective. Major topics presented are the relationship between oral and written language; acquisition of literacy; biliteracy; relationship between literacy and socio-economic/sociocultural factors; and impact of societal expectations regarding literacy. Pedagogical implications of these issues are explored. Traditional grading only for Majors/ Minors.

485. Theoretical Foundations of Language Minority Education (3) F,S

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) F,S

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) F

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.

540. Sociolinguistics (3) S

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) S

Prerequisite: ENGL 522 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) F

Prerequisite: ENGL 421/522. Testing and assessment of second language learners, including both standardized tests and teacher-developed modes of assessment. Traditional grading only.

570. VESL/ESP Program and Instruction (3) F

Prerequisites: Admission to the TESL Certificate Program or consent of instructor. Examination of the integral role of tailored language instruction to the success of non- and limited-English speaking trainees and workers. Deals with Vocational English as a Second Language, English for Specific Purposes, and English for Science and Technology. Key topics include language needs assessment, course design, instructional techniques, and testing in specified settings. (Seminar.) Traditional grading only. Same course as VE 506.

575./475. Literacy and Linguistics (3) F,S

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.

590. Advanced Special Topics in Linguistics (1-3) F,S

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) F,S

Prerequisite: ENGL 429/529. 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 inguistics, 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) F,S

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) S

Prerequisites: ENGL 520 and 522 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) S 1994, every third semester thereafter

Prerequisite: ENGL 421/522. 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) S 1995, every third semester thereafter

Prerequisite: ENGL 420/520 Theory and practice of selected views of phonetics and phonology in contemporary linguistics. (Seminar, 2 hours; Laboratory, 2 hours) Traditional grading only.

633. Discourse and Grammar (3) F 1994, every third semester thereafter

Prerequisite: ENGL 421/522 or consent of instructor. This graduate course situates discourse analysis in linguistic theory and method, and focusses on the relationship of discoure 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.

645. Seminar in Dialectology (3) F 1994, every third semester thereafter

Prerequisites: English 420, 421 or equivalent. History, development, and contemporary thought in the study of geographical and social dialects. Regional focus will vary by semester. Education and social implications of dialect differences. Traditional grading only.

650. Seminar in Bilingualism (3) F 1991, every third semester thereafter

Prerequisites: ENGL 520, 522 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) F,S

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) F,S

Prerequisite: Consent of graduate committee. Planning, preparation and completion of a thesis in linguistics.

Medieval and Renaissance Studies

College of Liberal Arts

Director: Anthony Battaglia (Religious Studies) 985-7982 Program Office: Education 1, Room 50, Sharon Olson, 985-4546 Faculty: Professors: Dorothy deF. Abrahamse (History), Arthur M. Axelrad (English), Anthony Battaglia (Religious Studies), A. Robert Bell (English), Donna Boutelle (History), David Cressy (History), Robert H. Eisenman (Religious Studies), Kristine K. Forney (Music), Helen C. Gilde (English), Edward A. Gosselin (History), J. Charles Jernigan (Comparative Literature), Stephen R. Knafel (English), Lawrence S. Lerner (Physics-Astronomy), Diane L. Martel (Art), Gail Shoup (Theatre Arts): Associate Professors: Conrad Barrett (Classics), Faya Causey (Art), Clorinda Donato (French/Italian), Frank Fata (Comparative Literature), Stanley Jones (Religious Studies), Julia Miller (Art).

The Program

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 or 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.

Requirements for the Certificate in Medieval and Renaissance Studies (code 1-6010):

- (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, 3311, 4711, 4721, 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 490, 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.

Peace Studies Program College of Liberal Arts

Director: Susan Rice Advisor: Susan Rice Telephone: (310) 985-4204 Advisor: Eugene E. Ruyle Telephone: (310) 985-5364

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 coniunction with any baccalaureate or graduate degree, and should be especially useful for students preparing for degrees in teaching, business, government, and social service.

Requirements for the Certificate in Peace Studies:

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;

<u>Group III</u>: 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 College of Liberal Arts

Department Chair: Paul C.L. Tang Department Office: McIntosh Humanities Building (MHB), Rm 917 Telephone: 985-4331 Faculty: Professors: Shane Andre, Daniel Guerriere, William H. McGowan, Edward Quest, G.A. Spangler, Paul C.L. Tang; Associate Professors: Cheryl Clark, Steven Davis, William M. Johnson, Roger Wertheimer; **Assistant Professors:** Julie Van Camp Undergraduate Advisor: Paul Tang Graduate Advisor: Steven Davis Emeritus Faculty: William Bonis, G. Eric Massey, J. B. Maue, Gerald B. Strickler. Department Secretary: Patricia Warren

Bachelor of Arts in Philosophy 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 Conflicts in Political Philosophy), and to extend their thinking with the philosophies of other cultures (such as those of China, Japan, and India).

Requirements for the Bachelor of Arts in Philosophy (code 2-6807)

A minimum of 36 units in philosophy divided as follows:

Lower Division: A minimum of 12 units in philosophy, including PHIL 100 or 160, 270, 203 and 204.

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; 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.

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 for the Minor:

A minimum of 21 units in philosophy, of which at least 15 are upper division and include: (a) at least three units chosen from PHIL 342, 363, 382; (b) at least three units chosen from PHIL 413, 414, 421, 422, 423, 424; (c) at least three units selected from the list given in (b), but in addition to the units required in (b), or selected from PHIL 416, 417, 418, 419.

Master of Arts in Philosophy (code 5-6807)

Requirements for entrance to the program:

- (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 condi-

tions 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. 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 min. 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) F,S

Scope, basic principles and a brief analysis of major problems of philosophy. (CAN PHIL 2)

160. Introductory Ethics (3) F,S

Concepts of right and wrong, good and bad, and the application of moral principles to problems of everyday life. (CAN PHIL 4)

170. Elementary Logic (3) F,S

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) F,S

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) F,S

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) F,S

Introduction to the formal techniques of evaluating arguments.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

NOTE: The philosophy upper division courses fall into several curricular sub-groups, as follows:

Early Philosophy

306. Philosophies of China and Japan

307. Philosophies of India

421./521. Plato

422./522. Aristotle

490./590. Special Topics — Early Philosophy

Modern Tradition

413./513. Continental Rationalism

414./514. British Empiricism

423./523. Kant

424./524. Hegel

491./591. Special Topics — The Modern Tradition

Twentieth Century Philosophy

416./516. Pragmatism

417./517. Phenomenology

418./518. Existentialism

419./519. Analytic Philosophy

492./592. Special Topics — Twentieth Century Philosophy

Metaphysical Studies

330. Philosophy of Religion

342. Metaphysics

483./583. Philosophical Psychology

493./593. Special Topics — Metaphysical Studies

Epistemological Studies

381. Philosophy of Science

382. Theory of Knowledge

494./594. Special Topics — Epistemological Studies

Studies in Logic and Semantics

470./570. Symbolic Logic II

484. Philosophy of Language

Studies in Value and Evaluation

302l. Molecular Biology and

305. Philosophy in Literature

351. Conflicts in Political Philosophy

352. Philosophy of Law

360. Ethics and Ecology

361. Philosophy of Art and Beauty

363. Ethical Theory

496./596. Special Topics — Value and Evaluation

302l. Molecular Biology and Bioethics (3) F,S

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 3021.

305. Philosophy in Literature (3) F.S

Intensive exploration of philosophical ideas in selected literature.

306. Philosophies of China and Japan (3) F,S

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) F,S

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. Conflicts in Political Philosophy (3) F,S

Intensive study of the philosophies underlying Communism, Socialism, Fascism, and Democracy; in particular, the origins of differing views of justice, freedom, individualism, and the State.

352. Philosophy of Law (3) F,S

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) F,S

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.

360. Ethics and Ecology (3) F,S

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) F,S

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.

363. Ethical Theory (3) F,S

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) F.S

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) F,S

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) F.S

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Locke, Berkeley, and

416./516. Pragmatism (3) F,S

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) F,S

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) F,S

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) F,S

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

421./521. Plato (3) F,S

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) F,S

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) F,S

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) S

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.

470./570. Symbolic Logic II (3) F.S

Prerequisite: PHIL 270 or MATH 330 or consent of instructor. Philosophical consideration of deductive systems.

483./583. Philosophical Psychology (3) F,S

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) F

Prerequisites: Six units of philosophy or consent of instructor. Philosophical thought about language and meaning.

490./590. Special Topics — Early Philosophy (3) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F.S

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) F,S

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) F,S

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) F,S

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) F,S

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) F

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) S

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.

570./470. Symbolic Logic II (3) F,S

Prerequisite: PHIL 270 or MATH 330 or consent of instructor. Philosophical consideration of deductive systems. Traditional grading only.

571. Problems in Logic (3) F,S

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) F,S

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) F,S

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) F

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) F,S

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-Socration 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) F,S

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) F,S

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 tild 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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

Prerequisite: Consent of the student's advisor. Traditional grading only.

698. Thesis (1-6) F,S

Prerequisite: Consent of graduate advisor. Preparation and completion of a thesis in philosophy and oral defense thereof. Department Chair: Robert Delorme Department Office: Social Science Public Affairs (SS/PA) Room 257 Telephone: 985-4704 Faculty: Professors: Sudershan

Faculty: Professors: Sudershan Chawla, Robert L. Delorme, Robert E. Hayes, Stephen Horn, William M. Leiter, Alain-Gerard Marsot, Charles Noble, Ronald J. Schmidt, Christian Soe, Barry H. Steiner, A. Jay Stevens; Associate Professors: Christopher Dennis, Larry George, Gerry Riposa, Paul C. Schmidt; Assistant Professors: Larry F. Martinez, Edwin Roberts; Emeritus Faculty: Ira S. Cohen, Leroy C. Hardy, George V. Kacewicz, J. C. Lien, Hans P. Ridder, Thomas P. Trombetas, A. Donald Urquhart. Department Secretary: Nancy St. Martin

The Department

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor: Schwartz (History); Undergraduate Advisor: Robert Delorme; Graduate Advisor: Charles Noble.

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 & Preparation

Admission to American Bar Association accredited law schools requires a well-designed baccalaureate degree. Undergraduate preparation for law school should involve broad exposure to governmental studies, other social sciences, as well as the liberal arts. Students should consult with the Prelaw advisor in the Political Science Department for the needed assistance both in planning a carefully thought-out undergraduate schedule

and in successfully preparing for admission to law school.

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 faculty before enrolling.

Bachelor of Arts in Political Science

Requirements for the Bachelor of Arts in Political Science (code 2-8536):

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

Political Theory
Public Law
Politics and Policy Formation

Public Policy and Administration Nine units of electives in Political Science courses, 6 of which may be in the lower division. Any upper division course may be used to fulfill this requirement including POSC 395l, 494l, 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 outside of Political Science taken in departments and programs in social and behavioral sciences, chosen in consultation with a Political Science Advisor. Total Units: 48

Political Science

Option in Public Administration (code 2-8540)

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

Politics and Policy Formation Nine units of electives in Political Science, six of which may be in the lower division

Concentration Requirement (15 units): POSC 300B or 431, POSC 430, POSC 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

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 *Bulletin*. 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 field of concentration respectively. The student should seek to have established her/his committee prior to the completion of the first semester or the first 12 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:

- 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 advisor. The program must then be submitted to the department graduate advisor.

Requirements for the Master of Arts (code 5-8536):

- (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 and an oral exam on the thesis. (Following completion of the thesis, the student's committee may waive the requirement for an oral examination);

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 he/she 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 for the Interdisciplinary Minor in Public Policy:

(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 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 pro-

gram 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) F,S

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) F,S

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) F,S

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) F,S

Intensive study of issues associated with selected foreign governments, modernization, revolution, political change and world ideological conflict.

220. Issues in Global Politics (3) F.S

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) F,S

The relationship between politics and economics in contemporary societies; theories of political economy; the development of economic and regulatory policies in advanced capitalist democracies.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

POLITICAL THEORY

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, Polybiuus, 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.

302. Medieval and Renaissance Political Theory (3) F

A critical examination of the origins of State and Church as institutions of governance in Western Europe from the 5th century to Niccolo Machiavelli's Renaissance Italy, Major themes will be the transition from Feudalism to the nation-state, the rise of urban culture and geographic exploration, the Crusades, and the articulation of civilian and canon legal systems.

*303. Modern Political Theory (3) F,S

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) F,S

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) F,S

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) S

Critical examination of theorists, concepts and forces which have shaped American political consciousness from the Puritans to the present.

*401. Women and the Feminine in Western Political Theory (3) F

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) F,S

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.

PUBLIC LAW

*311. Constitutional Law: Power (3) F,S

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) F,S

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) S

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) F

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.

412. Law and Social Change (3) F,S

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) S

Fundamental legal philosophies, sources and classifications of law. Relationship of law to other disciplines and societal institutions.

*419. Proseminar in Public Law (3) F,S

Prerequisites: Six units in public law courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in public law.

POLITICS AND POLICY FORMATION

322. Political Parties (3) F,S

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) F,S

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) F,S

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) F,S

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) S

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 colutions.

328. Introduction to Public Policy (3) S

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) F,S

Examination of the processes through which public policies are formulated, adopted and implemented, and the political and organizational contexts which condition these processes.

*420. Voting, Campaigns and Elections (3) F,S

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) F,S

Formation and development of public opinion; methods of measuring public opinion in the political system.

*423. The American Presidency (3) S

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) F

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 Politics and Policy Formation (3) F,S

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.

PUBLIC POLICY AND ADMINISTRATION

430. Fundamentals of Public Administration (3) F

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) F,S

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) F,S

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) F

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) S

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) F

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) F

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) F

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) F

Prerequisite: Consent of instructor. Internships in one of the various federal, state or local governmental units in the immediate area. Credit/No Credit grading only.

448. Public Administration Internship II (3) S

Prerequisite: Consent of instructor. Internships in one of the various federal, state or local governmental units in the immediate area. Credit/No Credit grading only.

*449. Proseminar in Public Policy and Administration (3) F,S

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.

COMPARATIVE POLITICS

353. Government and Politics of Western Europe (3) F,S

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) F,S

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) F,S

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) S

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) F

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) S

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) F

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) S

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) F

Developments in government, parties, process of elections and political ideology in India.

*366. Governments and Politics of Southeast Asia (3) S

Emergence and development of the contemporary political systems of Southeast Asia.

*367. Governments and Politics of the Middle East (3) F,S

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.

*455. Comparative Revolutionary Change (3) S, Odd Years

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.

4611. The Politics of Development (3) F,S

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) F,S

Prerequisites: Six units of comparative politics courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in comparative politics.

INTERNATIONAL RELATIONS

371. Introduction to International Politics (3) F,S

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) F

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) S

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

*481. Interamerican Relations (3) S

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) F.S

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) F

The evolution and determinants of foreign policy, with particular emphasis on the postwar period and events since 1985.

*485. International Political Economy (3) F,S

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, POSC 230, ECON 300 or the equivalent.

*486. National Security Policies (3) F.S

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) F,S

Prerequisites: Six units of international relations courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in international relations.

GENERAL

300A. Methodological Controversies in Political Science (3) F.S

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) F,S

Problems of data collection and analysis. Impact of research methods on findings. Not open to students with credit in POSC 320.

391. American Government (3) F,S

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) F

Students will explore normative political issues such as justice, alienation, and oppression through a close examination of political theory, films, and literature.

490H. Honors Seminar (3) F

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) F

Prerequisite: Admission to the Honors Program in Political Science. Research for twriting an Honors thesis under the direction of a faculty member. (Independent Study.) Traditional grading only.

492H. Honors Thesis (3) S

Prerequisites: POSC 491H. Research and writing of an Honors thesis under the direction of a department faculty advisor. (Independent Study.) Traditional grading only.

494I. Politics of the Future (3) S

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) F,S,SS

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) F,S

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) F,S

Prerequisite: Consent of instructor and department chair-person. 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. Not open to students with credit in POSC 447 and/or 448. Credit/No Credit grading only.

*499. Readings and Conference in Political Science (1-3) F,S

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) S

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) S

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.

590. Advanced Study (3) F, S

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.

600. Seminar in International Politics (3) F,S

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) F,S

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) F,S

Prerequisite: An upper division course in political theory. Analytical and critical examination of the major concepts of political theory. May be repeated for a max of six units.

640. Seminar in American Government and Public Law (3) F,S

Intensive study of topics and problems in American government including issues in constitutional law and the judicial process.

697. Directed Research (1-6) F,S

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) F,S

Planning, preparation and completion of thesis for the master's degree.

signed 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.

Department Chair: Keith R. Colman

Department Office: Psychology

Building (PSY), Room 100

Faculty: Professors: Patricia

Virginia L. Binder, Michael E.

Bachelor, Alexander L. Beckman,

Connor, Carl M. Danson, David A.

Dowell, Martin S. Fiebert, Roberto

Green, Gerard L. Hanley, Joellen T.

Jorgenson, John R. Jung, Robert W.

Lindner, Alan S. Lowenthal, J. Robert

Flores de Apodaca, Kenneth F.

Hartley, Ralph B. Hupka, Dale O.

Kapche, James I. Linden, Rhoda

Newman, Susan G. Nummedal,

Robert E. Thayer, Cherylynn M.

James H. Amirkhan, Keith R.

William M. Resch, Sara W. Smith,

Thomas: Associate Professors:

Colman, Kevin MacDonald, Daryl M.

Kathleen Maher, Mary Prieto-Bayard

Emeritus Faculty: Earl R. Carlson,

Lyle R. Creamer, Doris C. DeHardt,

Haralson, Raphael M. Hanson, Hilton

F. Jarrett, Charles F. Mason, John E.

Nygaard, Paul G. Petersen, Walter J.

The Psychology Department main-

tains an advising and admission office

dents. Advisors are available during

the Fall and Spring semesters to as-

sist students with admission, registra-

tion, and degree requirements, as well

as information about graduate study.

An undergraduate handbook is avail-

Students desiring graduate informa-

tion should contact the department of-

fice for referral to the Graduate

The number of applicants to the

ber that can be accommodated by

the Department's resources. For this

reason the undergraduate Psychology

major has been designated as im-

pacted by California State University.

Applicants for admission to the Univer-

sity with a major in Psychology will be

designated as pre-majors and as-

major in Psychology exceeds the num-

Admission Under Impaction

Coordinator: Bachelor

in Psy 340 for undergraduate stu-

Josephine B. Fiebiger, Sally J.

Raine, Leonard W. Towner.

Lou Houshar

able.

Department Administrator:

Rowe, Patricia Rozee, Thomas Z.

Strybel: Assistant Professors:

Telephone: 985-5001

Admission into the major 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 GPA of 2.50 or higher; (students with GPAs between 2.00 and 2.49 will be admitted on a space-available basis).

2. Completion of PSY 100, PSY 200, PSY 210 (or their equivalents) with a grade of "C" or higher.

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-340, 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.

Bachelor of Arts in Psychology

The psychology curriculum is designed to provide undergraduate students with a broad background in the principles of Psychology.

Requirements for the Bachelor of Arts in Psychology (code 2-8130):

Lower Division: (14 units) PSY 100, 200, 210, 241 or a comprehensive course in anatomy and physiology or human physiology alone.

Upper Division: (30 units in psychology plus 6 units chosen from other social and behavioral science departments in the College of Liberal Arts)

- A. 6 units two courses from PSY 331, 332, 333, 336 or 337, 341 or 342 or 345;
- B. 6 units two courses from PSY 351, 356, 361 or 365;
- C. 6 units two courses (not from same group) (1) PSY 352, 354, 366,

Psychology College of Liberal Arts

370; (2) PSY 310, 314, 315, 359; (3) PSY 339I, 346I, 375, 378, 381, 473;

D. 6 units - 400-level PSY courses. No more than 3 units from 405, 406A, or 406B may be counted in this category. PSY 473, and 499 cannot be counted to satisfy this requirement;

E. 6 units - any upper division psychology courses not used to satisfy the requirements of Sections A through D;

F. 6 units - upper division units in the social and behavioral sciences in departments (other than Psychology) of the College of Liberal Arts. 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 Department

Students are advised to consult with the Psychology Department 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 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 and (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 and the Master of Science programs prepare students for professional work; some graduates have entered doctoral programs. Admission to all three 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, computer labs and a clinic.

Admission to GraduatePrograms

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 April 25 for the fall semester for the Master of Arts Research option, and Master of Arts Industrial and Organizational option. Deadline for the Master of Science is March 1, 1996 for the fall 1996 semester; there will be no Fall 1995 semester admissions.

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 Aids Office one or two semesters prior to obtaining the assignment.

Master of Arts in Psychology, General Research Option

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; 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 two of the following: 331, 332, 333, 336, 337, 341, 342, 345; one of the following: 351, 356, or 361, 365, and one of the following: 433/533, 437/537, 441/541, 445/545,

451/551, 456/556, 461/561 and one of 411/511, 412/512.

(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:

Prerequisites for advancement to candidacy are:

- (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

(6) Application for Advancement to Candidacy must be done prior to or concurrent with enrollment in PSY 698, Thesis.

Requirements for the Master of Arts, General Research Option (code 5-8130):

The student must complete, as a graduate student, 30 units of upper division and graduate courses exclusive of PSY 499.

- (1) If not taken previously as an undergraduate student or to fulfill prerequisites the following undergraduate courses may count toward the graduate degree to a maximum of 6 units: 351, 356, 361, 365 or any other asterisked course. No other undergraduate course may be applied toward the M.A. degree.
- (2) A minimum of 24 units in graduate psychology (not including PSY 697 or including only three units of PSY 678) including 696C; one course chosen from 631, 632, 634 or 637; one course chosen from PSY 651, 656 or 661; and one additional course chosen from either group; PSY 698, (six units).
- (3) Completion of all requirements as established by the M.A. Committee.
- (4) A written comprehensive examination composed of three examinations taken in required seminars.
- (5) With the graduate coordinator's approval a maximum of six units from

related areas may be used for six of the 30 units.

(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 18 students each Fall. Students prepare for business and industrial positions including personnel and industrial relations, human factors (engineering psychology), 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;
- (2) A bachelor's degree with a major other than psychology and 24 units of upper division Psychology including PSY 310, 315, 351 or 453/553, 411/511 or 412/512, 418/518, 481/582, and two of the following: PSY 331, 332, 333, 336, 337, 345.

Advancement to Candidacy

Prerequisites for advancement to candidacy are:

- (1) Classified status.
- (2) An approved program of studies for 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 for the Master of Arts Option in Industrial and Organizational Psychology (code 5-8132)

The student must complete a minimum of 30 units of upper division and graduate courses, with a minimum of 24 units in psychology including:

(1) If not taken previously as an undergraduate student or to fulfill prerequisites: PSY 315, 511 or 512, 518, 351 or 553, 582 or equivalent, and two courses from PSY 331, 332, 333, 336, 337 and 345:

- (2) A minimum of 24 units in graduate level courses where students must take either the following three: PSY 527, 581 and 585 or take three of the following four: PSY 527, 581, 585, 590 (Special Topics, subject to Graduate Coordinator approval); plus 681, 688, 698 and 515 or 696L.
- (3) A preliminary oral examination on the thesis proposal and a final oral examination in defense of the completed thesis.
- (4) A maximum of six units from related areas may be substituted for six of the 30 units with a maximum of three of these applicable to the 24unit graduate-level course requirement, with the advisor's approval;
- (5) Substitutions for required courses are permitted if a petition to substitute is approved by the MAIO Program Committee prior to enrollment in the course.

Master of Science in Psychology

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:

- 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 upper division survey course; 370 Abnormal Psychology; a developmental psychology course; and 473 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.
- A personal interview conducted by a selection committee.

Advancement to Candidacy

Prerequisites for advancement to candidacy are:

- 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.
- Application for Advancement to Candidacy must be done prior to or concurrent with enrollment in PSY 698, Thesis.

Requirements for the Master of Science in Psychology (code 6-8134)

- 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) F,S

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) Demand

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) F,S

Prerequisite: PSY 100. 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) F.S

Prerequisites: PSY 100 and completion of a mathematics course suitable for General Educational credit. Calculation and meaning of statisti-

cal measures. Descriptive and inferential statistics: probability, normal curve, correlation, sampling, hypothesis testing. (Lecture 3 hours, laboratory 2 hours.)

230. Critical Thinking (3) F,S

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) F,S

Prerequisite: PSY 100. 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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300l. 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. Psychology as a Discipline and a Profession (1) F,S

Prerequisite: Psychology 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. Credit/No Credit grading only.

*310. Intermediate Statistics (4) F,S

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) F,S

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) F,S

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) F,S

Prerequisite: PSY 200. Basic phenomena of the senses, their physiological correlates and integration in complex perceptual judgments.

*332. Cognition (3) F,S

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) F,S

Prerequisite: PSY 200. Human and animal learning with special emphasis on experimental evidence and techniques.

*336. Psychology of Emotion (3) F,S

Prerequisite: PSY 200. Discussion of research, theories and coping mechanisms of human emo-

*337. Psychology of Motivation (3) F,S

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.

339l. Psychology of Sport Behavior and Athletic Performance, (3) F,S

Prerequisites: PSY 100, ENGL 100, and upper division standing. Psychological dimensions of attitudes, behaviors, and performance in sport and exercise environments. Same course as PED 339I.

*341. Neuropsychology (3) S

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) S

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) F

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; ENG 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.

350l. Psychology and Contemporary Social Issues (3) F,S

Prerequisites: PSY 100, ENGL 100, and upper division status. Application of social psychological principles toward understanding major contemporary social issues.

351. Social Psychology (3) F,S

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), antiand 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) F,S

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) Demand

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) F,S

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) F,S

Prerequisite: PSY 100. Discussion of theories, research and assessment in personality.

359. Self-Observation and Self-Development (3) F,S

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) F,S

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 develop-

365. Psychology of Adult Development and Aging (3) F,S

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) S

(This course is for both women and men.) Prerequisites: PSY 100, SOC 100 or H EC 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 H EC 358.

370. Abnormal Psychology (3) F,S

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.

375. Community Psychology (3) F,S

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) S

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) F,S

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) Demand

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.

A. Psychology and Alcohol B. Transpersonal Psychology

401./501. History of Psychology (3) F,S

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) F,S

Prerequisites: Psychology major, junior or senior standing (3.0 GPA), PSY 200, 210, 12 upper division units in psychology, letter 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. Offered Credit/No Credit grading only except to graduate students who must petition the psychology graduate coordinator. May be repeated to a total of six units.

406A,B. Applications of Psychology (3) F,S

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) F,S

Prerequisites: PSY 200, 473, 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) F,S

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) F,S

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) Demand

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) F,S

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 hours, laboratory 2 hours.)

433./533. Research in Cognition and Learning (3) Demand

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. Psychology of Mood (3) F,S

Prerequisites: PSY100, 200, 310, or permission of instructor. Analyses of normal mood states, including survey of existing literture. 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) Demand

Prerequisites: PSY 200, 310, and 336 or 337. Research methods in emotion and motivation. (Lecture 2 hours, laboratory 3 hours.)

438./538. Psycholinguistics (3) S

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) F

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) F

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) S

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)

450. The Psychology of Self-Management (3) F,S

Prerequisites: PSY 314. Not open to students with credit in Ed P 357. Introduction to theory, research, and application of self-management procedures. Topics include systematic self-observation, decision-making, time management, emotion management, and habit change and maintenance. Students design and implement one self-control program. (Discussion)

451,/551. Research in Social Psychology (3) S

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) S

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) F

Prerequisites: PSY 200, 310, 356, or consent or instructor. Research methods and problems in personality. (Lecture 2 hrs, laboratory 3 hrs.)

*457. Psychology of Sex (3) S

Prerequisites: PSY 351 or 356 or 370, consent of instructor. 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) F,S

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) Demand

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) F

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) S

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.

*473. Introduction to Clinical Psychology (3) F,S

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.

475./575. Clinical Interviewing (3) F.S

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) F,S

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) S

Prerequisites: PSY 200, 310, and 381. Research methods and problems in industrial psychology. Includes direct observational, psychophysical, regression, survey, experimental, and quasi-experimental methods. (Lecture 2 hrs, lab 3 hrs.)

486./587. Personnel Psychology (3) F

Prerequisite: PSY 381 or 481. Survey of existing knowledge and description of research techniques in personnel psychology.

*490. Advanced Topics in Psychology (3) Demand

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 max. of nine units. See Schedule of Classes for subjects being offered during a given semester.

A. Applied Social Psychology

495./595. Ethical and Legal Issues in Psychology (3) F or S

Prerequisites: Psychology 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) F,S

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) F,S

Prerequisite: Six upper division units in psychology. The historical background and development of psychology as a science. Contributions of major individuals and systems.

507./407. Introduction to Family Therapy (3) F,S

Prerequisites: PSY 200, 473, 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.)

511./411. Statistical Design and Analysis of Experiments (3) F,S

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.)

512./412. Multivariate Statistical Analysis (3) F,S

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.)

515. Test Construction Theory and Practice (3) S

Prerequisite: PSY 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.)

516. Program Evaluation (3) S

Prerequisites: PSY 310, 314. Methods of designing, implementing, analyzing, and reporting evaluations of programs in mental health, industry, criminal justice, education, and community settings.

518./418. Computer Applications in Psychology (3) F,S

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.)

527. Human Factors (3) F,S

Prerequisites: PSY 411 or 412, two courses from 331, 332, 333, 336, 337, 345 and one corresponding upper division research course or PSY 481/582, or consent of instructor and consent of Graduate Coordinator. Application of personnel, testing, organizational and engineering psychology to man-machine systems. Emphasis on a systems approach to the design, development and retrofitting man-machine systems for optimal human use. Special consideration of development and use of human factors handbooks.

533./433. Research in Cognition and Learning (3) Demand

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.)

537./437. Research in Emotion and Motivation (3) Demand

Prerequisites: PSY 200, 310, and 336 or 337. Research methods in emotion and motivation. (Lecture 2 hours, laboratory 3 hours.)

538./438. Psycholinguistics (3) S

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.)

539./439. Language Acquisition (3) F

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.)

541./441. Research in Physiological Psychology (3) F

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.)

542. Techniques of Physiological Psychology (3) S

Prerequisites: PSY 541,/441. Development of physiological methods and animal surgical procedures in the study of behavior. (Discussion 1 hour, laboratory 6 hours.)

545./445. Research in Psychophysiology (3) S

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)

551./451. Research in Social Psychology (3) S

Prerequisites: PSY 200, 310, 351, or consent of instructor. Research methods and problems in social psychology. (Lecture 2 hrs, laboratory 3 hrs.)

553./453. Principles of Group Dynamics (3) S

Prerequisites: PSY 200, 210, 351, or consent of instructor. Behavior in groups with attention to such factors as leadership, fellowship, interaction and influence including organization, management, morale, and efficiency. Problems, techniques and methods of investigation. (Lecture/Discussion.)

556./456. Research in Personality

Prerequisites: PSY 200, 310, 356, or consent of instructor. Research methods and problems in personality. (Lecture 2 hours, laboratory 3 hours.)

561./461. Research in Developmental Psychology (3) Demand

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.)

571. Behavior Disorders of Children (3) F,S

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.

572. Behavior in Communities (3) Demand

Prerequisite: Permission of instructor. The course addresses an understanding of social phenomena in communities, in terms of a behavioral perspective and associated methodology. A variety of real world phenomena such as energy conservation, pollution, mass transportation, population control, and community education will be selected for analysis.

573. Clinical Psychology (3) F,S

Prerequisite: PSY 473, consent of instructor. Consideration and evaluation of clinical assessment, psychotherapeutic processes and current trends in clinical psychology.

575./475. Clinical Interviewing (3) F.S.

Prerequisites: Permission of instructor, PSY 314. Study and development of the clinical techniques of observation and the interview.

576. Cross-Cultural Psychology: Approaches, Theories, and Issues about Minority-Americans (3) F

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.

577. Counseling Ethnically Diverse Populations (3) F,S

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) S

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.

581. Organizational Psychology (3) F,S

Prerequisites: PSY 351, 453 recommended or consent of instructor and consent of Graduate Coordinator. 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.

582./481. Research in Industrial and Organizational Psychology (3) S

Prerequisites: PSY 200, 310, and 381. Research methods and problems in industrial psychology. Includes direct observational, psychophysical, regression, survey, experimental, and quasi-experimental methods. (Lecture 2 hours, laboratory 3 hours.)

585. Proseminar in Personnel Psychology (3) F,S

Prerequisites: PSY 315 and 381 or 486 or consent of instructor & Graduate Coordinator. 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.

587./486. Personnel Psychology (3) F

Prerequisite: PSY 381 or 481. Survey of existing knowledge and description of research techniques in personnel psychology.

590. Advanced Topics in Psychology (3) Demand

Prerequisite: Consent of instructor. Topics of current interest in psychology selected for intensive development. May be repeated (with selection of a second topic) for a maximum of six units. Topics will be announced in the Schedule of Classes.

595./495. Ethical and Legal Issues in Psychology (3) F

Prerequisites: Psychology 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.

599. Independent Study (1-3) F,S,SS

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 funite.

631. Seminar in Perception and Physiological Psychology (3) F,S

Prerequisites: PSY 331 or 341 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.

632. Seminar in Learning (3) Demand

Prerequisites: PSY 333 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Advanced consideration of selected topics in learning.

634. Seminar in Cognition (3) Demand

Prerequisites: PSY 333 or 332 or consent of instructor, consent of graduate coordinator, advancement to candidacy. An examination of method, theory and experimental evidence in selected topics from the area of cognition.

637. Seminar in Emotion and Motivation (3) Demand

Prerequisites: PSY 336 or 337 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Advanced consideration of selected topics in animal and human motivation and emotion.

651. Seminar in Social Psychology (3) Demand

Prerequisites: PSY 351 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Critical examination of interpersonal relations, social influence, group membership and influence, and intergroup relations.

656. Seminar in Personality (3) Demand

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.

661. Seminar in Developmental Psychology (3) Demand

Prerequisites: PSY 361 or consent of instructor, consent of graduate coordinator, advancement to candidacy. 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.

672. Seminar in Community Psychology (3) F

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.

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.

673B. Practicum in Program Development (3) F

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) S

Prerequisites: PSY 673A,B. Supervised experience in implementation of projects developed in PSY 673B.

Religious Studies

677. Community Internship Placement (3) F,S

Prerequisite: Open to second or third year MS students. Students will serve as MFCC Trainees 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. Traditional grading only. Course must be repeated for a maximum of 6 units.

678. Clinical Practicum (3) F,S

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, diagnostic procedures, staff conferences, and case management. May be repeated for a maximum of six units of credit.

679. Clinical Family Therapy (3) S

Prerequisites: PSY 473. Didactic training in the theories and practice of family therapy.

681. Seminar in Applications of Psychology to Industry (3) F,S

Prerequisites: Must be advanced to candidacy, and two of the following: PSY 527, 581, 585; and co-requisite PSY 515 or 6961 and consent of graduate coordinator. Psychological applications to current problems of industry. Development of thesis proposal and pretest of thesis research techniques required.

688. Practicum in Industrial and Organizational Psychology (3) S

Prerequisites: PSY 681, consent of graduate coordinator. Practice of industrial psychology or human factors in various industrial settings. Individual research and consultation with industrial or governmental organizations.

690. Seminar in Psychology (3) Demand

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.

A. Seminar - Psychology of Aging
B. Thesis - Research Development

Psychology (3) S

696C. Research Methods in

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.

696L. Research Methods in Psychology (3) F

Prerequisites: PSY 411/511 or 412/512, 481/582, consent of graduate coordinator advancement to candidacy. 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. Offered particularly for Master of Arts, Industrial and Organizational Option students and does not include the comprehensive examination required for Master of Arts Research Option students.

697. Directed Research (1-3) F,S

Prerequisites: Consent of graduate coordinator, department, advancement to candidacy. Theoretical and experimental problems in psychology requiring intensive analysis.

698. Thesis (1-6) F,S

Prerequisites: Advancement to candidacy, consent of advisor. Planning, preparation, and completion of a thesis in psychology. Must be repeated for a total of six units of credit.

P.3. (6) anniesiuno? asseud

Department Chair: Anthony Battaglia
Department Office: McIntosh
Humanities Building (MHB), Rm 619
Telephone: 985-5341
Faculty: Professors: Anthony
Battaglia Robert H. Fisenman Peter

Faculty: Professors: Anthony
Battaglia, Robert H. Eisenman, Peter
M. Lowentrout; Associate
Professors: Jeffrey L. Broughton, F.

Stanley Jones; Assistant
Professors: Edward J. Hughes,
Carlos R. Piar

Emeritus Professor: Alexander Lipski

Bachelor of Arts in Religious Studies

The program in Religious Studies intends to develop in students a critical understanding of the forms of religious phenomena in their cultural and historical contexts and a sensitivity to different value systems. The program provides students with an introduction to the major religious traditions and to religion in the modern world. Religious Studies places special emphasis on relating the religious dimension to the humanities and social sciences. Students interested in the degree in Religious Studies should apply to the Department Chair, MHB-619.

Requirements for the Bachelor of Arts in Religious Studies (code 2-6011)

A minimum of 36 units is required, distributed in the following way:

Core Courses: 15 units selected from the following: R/ST 100, 112, 152, 292, 301, 322, 3311, 4251, 4821, or PHIL 330.

Area courses: Fifteen additional upper division units from three of the following five categories:

- (a) Jewish Studies: R/ST 311, 312I,314, 315I, 316, 375, 376I, 490*, 495*; (b) Christian Studies: R/ST 312I,
- 322, 324, 375, 376l, 383l, 471l, 472l, 487, 490*, 494*, 495*; (c) Asian Studies: R/ST 341l, 343,
- 344, 351, 487, 490*, 494*, 495*; (d) Biblical Studies: R/ST 311, 312l, 322, 375, 376l, 490*, 494*, 495*;
- (e) Contemporary Religious Studies: R/ST 383I, 391I, 396*, 425I, 485, 487, 490*, 494*, 495*. "When subject matter of special topics course is applicable, the course may be used.

College of Liberal Arts

Six additional units are to be selected from either religious studies courses, or AIS 335, C/LT 342, PHIL 306, 307, 313, 442. Six to eight units of Hebrew, Greek or Sanskrit may be

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 Committee.

Lower Division: A minimum of six units selected from R/ST 100, 111, 112, 152, 291, 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, 312l, 314, 315l, 316, 322, 324, 331l, 375, 376l, 425l, 471l, 472l; (b) Eastern Religious Thought: R/ST 341l, 343, 344, 351, 487. 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 313, 330.

Requirements for the Certificate in Religious Studies (code 1-6011)

(1) 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 Committee.

Lower Division: A minimum of nine units selected from R/ST 100, 111, 112, 152, or 291.

Upper Division: A minimum of 21 units including one course from each of the following: (a) Biblical Studies: R/ST 311, 3121, 322, 375, 3761; (b) Western Religious Thought: R/ST 314, 3151, 316, 3311, 4711, 4721, 485; (c) Eastern Religious Thought: R/ST 3411, 343, 344, 351, 487. A minimum of twelve upper division units from the preceding courses and the following electives: R/ST 3831, 396, 4821, 490, 494, 495, 499; AIS 335; ANTH 406; ASAM 380; B/ST 353; C/LT 342; HIST 333; PHIL 313, 330.

Courses (R/ST)

Lower Division

100. Introduction to Religion (3) F.S

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.

111. Introduction to Western Religions (3) S

A survey of representative figures, themes, the schools in Western religious thought, including Judaism, Christianity and Islam.

112. Introduction to the Bible (3) F,S

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 111.

152. Introduction to Asian Religions (3) F,S

A survey of Indian, Chinese and Japanese religious thought. Emphasis will be on original texts in translations.

291. Religion and Society (3) F,S

Religious and secular views of man in relation to society with emphasis upon contemporary problems of personal and social ethics, political responsibility and social structure.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

301. Approaching Religion (3) F,S Study of the methodology of religious studies, including the history of religions, comparative and

cluding the history of religions, comparative and phenomenological study of religions, textual criticism, exegesis, research methods and techniques.

311. Old Testament (3) F,S

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.

312l. Intertestament Literature, Palestine History, and Early Christianity (Dead Sea Scrolls) (3) S

Prerequisites: ENGL 100 and upper division status. Historical development of Jewish religion and culture in the Second Temple period from the rise of the Maccabbees 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, Phariseeism and Sadduceeism).

314. History of the Jewish Religion (3) F

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) F,S

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) F

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) S

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) S

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) F,S

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) F

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.

331l. Islamic Religion and Culture (3) F,S

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).

341I, Buddhism (3) F,S

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) F,S

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) F,S

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. Hinduism (3) F,S

Survey of ancient, classical and medieval Hinduism. Emphasis on analysis of Upanishads, Bhagavad Gita and the various paths of yoga.

375. The Historical Jesus (3) F,S

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. Lecture.

376l. Christian Origins (3) F,S

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.

383l. 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.

391I. Religion and Science (3) F,S

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) S

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.

425l. Religion and Modern Literature (3) F,S

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.)

471I. Early Christianity and Society (3) F,S

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.)

472l. Formation of Modern Christianity (3) F,S

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. Same course as HIST 4341.

482I. American Religious Experience (3) F,S

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. Same course as HIST 4821.

485. Contemporary Religious Thought (3) F

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.

487. Mystics West and East (3) F

Analysis of the nature and methods of mysticism. Comparison of Christian, Jewish, Moslem, Buddhist and Hindu mystics. Emphasis on Christian mystics, especially Meister Eckhart and St. Therese of Avila.

490. Special Topics in Religious Studies (1-3) F,S

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) F,S

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.

495. The Religious Personality (3) F.S

Prerequisites: Three units of religious studies or 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) F,S

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.

epartment Chair. Ciorinda

Repartment Chair. Ciorinda

Repartment Chair. Ciorinda

Repartment Directores with a secure services in arts menagement and historic secure services. It is a secure services in a secure services in a secure services in a secure services. It is a secure services and critical secure services and critical secure services. It is a secure services and critical secure services and critical secure services. It is a secure services and critical secure services and critical secure services.

Telephonni (919) Epin-Att vice and Country and Indian Carabean, and Tentral Francis and Indian Carabana an

Gesiar, Elizabeth Cuillen
Fiederick M. Swensen, Lindsey
Thomas, Jr., Herberth Wilher Gorbens vond They office the List tide
Pierre Yperman
Germannan Russland
Germann

Executive Examples of serion and programs at Ph D. granting induced two coll structures are available as a serion of the property of the prope

Professors Hardin L. Capring, the polless condended not are or the sulmate objects and activities and contain the sulmate objects itself according. Associate Professors, lyan, one turn turnish the student with a solid in the student with a solid in the student objects for the ending solid in the sulmate of the solid in the

ideral studies major seeling 2, 1 (b)

rg-Tonelli, Francis Donanue,

homanites based concentration

The learnmer or de be laten in con
linitivative Secretary

The Ween and other major and learnmer or de be laten.

The Ween and the secretary and the secretary and the secretary and the secretary and the secretary.

The Strengthan Strength Congress of the Art Art History, Business Congress of Literary of Congress of Congress of Literary of Congress of

the Social Sciences. The Italian order at CSUB is strong and or an at CSUB is strong and order or and advances ranger or program.

ETY to be program or and advanced level or and advanced level or an advanced level.

referral to one of the dedulty size one:

Learning altherdischolosetrally size one:

Craderpial Advisor, Straducture Markana travel abroad in the International Adegree is French placeautre on the California State

Programs of the California State

ulture ervour lingerfiber Activities avoure, including avoir foremost languages of the foremost languages of the foremost languages and literary study. Students at diplomacy, relations, and

Romance, German, Russian Languages and Literatures

College of Liberal Arts

Department Chair: Clorinda

Program Directors: French and Italian: Clorinda Donato German and Russian: Harold K. Schefski Spanish: Claire E. Martin Department Office: McIntosh Humanities Building (MHB), Rm 820 Telephone: (310) 985-4317 Faculty: French and Italian: Professor: Clorinda Donato: Associate Professor: Irene Marchegiani Jones; Assistant Professor: Stephen Fleck. Emeritus Faculty: Eugene E. Kessler, Elizabeth Quillen, Frederick M. Swensen, Lindsay Thomas, Jr., Herbert A. Winter, Pierre Yperman. German and Russian: Professors: Wilm A. Pelters, Harold K. Schefski; Associate Professor: Jutta Birmele; Emeritus Faculty: Irmgard Bartenbach, Harvey L. Kendall, Johanna Roden, Graham K. Spring. Spanish: Professors: Harold L. Cannon, Shirley Mangini, Grinor Rojo; Associate Professors: Juan Hernandez, Claire E. Martin; Emeritus Faculty: Alfonso L. Archuleta, Beverly J. DeLong-Tonelli, Francis Donahue, Raul Inostroza, John H. Schmitt.

> The French and Italian Program:

Administrative Secretary:

Karen Fawson

Program Director: Clorinda Donato The Program

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Undergraduate Advisor, Graduate Advisor.

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-Elysees 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 en-

courages 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)

The major in French consists of 30 upper-division units in the 300and 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 French 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 studies. 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 upperdivision 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, 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 upperdivision 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:

- 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 minimum

percentile 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.

Requirements for the Single Subject Teaching Credential, French:

Same as for the major in French with French Phonetics, FREN 414, as one of the 400-level courses

Courses (FREN)

Lower Division

101A-B. Fundamentals of French (4,4) F,S

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. 101B: Prerequisite: FREN 101A or two years of high school French or equivalent. Continuation of FREN 101A.

201A-B. Intermediate French (4,4) F,S

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.

214. Intermediate Conversation (3) F,S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

312A. Advanced French I (3) F,S

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) F,S

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) F,S

Prerequisite: FREN 214 or consent of instructor.

Continuation of FREN 214. Traditional grading

335. Survey of French Literature I (3) F

Prerequisite: Upper division standing in French. From the Middle Ages through the Eighteenth Century.

336. Survey of French Literature II (3) S

Prerequisite: Upper division standing in French. Eighteenth to Twentieth Century.

411. Advanced French Syntax and Composition (3) F

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) S

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) S

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.

470./570. French Literature of the Middle Ages (3) S, Odd Years

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) F, Odd Years

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) F,Odd Yrs

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) S, Even Years

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) F, Even Yrs

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) F, Even Yrs

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) F,S

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.

499. Directed Studies (1-3) F,S

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) S, Odd Years

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) F, Odd Years

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) F,Odd Yrs

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) S, Even Years

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) F,Even Yrs

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) F, Even Yrs

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

599. Directed Studies (1-3) F,S

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) F,S

Prerequisite: Corresponding 400/500 level century survey course or consent of instructor. Intensive studies in one of the following: (a) Medieval period, (b) 16th Century, (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.

688. Seminar in French Literature or Culture (3) F,S

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) F

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) F,S

Prerequisite: Consent of department chair. Individual study under the guidance of a faculty member. May be taken for a maximum of three

698. Thesis (2-6) F,S

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 for the Minor in

A minimum of twenty units must include:

Lower Division ITAL 201A-B, and 214.

Upper Division ITAL 312A, 312B, and 314.

Courses (ITAL)

Lower Division 00 to muminim A

101A,B. Fundamentals of Italian (4,4) F,S

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) F,S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

312A. Advanced Italian I (3) F,S

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) F,S

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) F,S

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.

490. Special Topics in Italian (3) F.S

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) F,S

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 Program

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. German studies maintains exchange programs in 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).

Bachelor of Arts in German

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. The program offers graduate study leading to the M.A. in German. Teaching Assistantships are available.

Requirements for the Bachelor of Arts in German (code 2-6813)

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 intern-

ship in a German-speaking country and will assist in such plans.

Single Subject Teaching Credential, German

Requirements are the same as for the B.A. plus German 303 and 410: Minor in German (code 0-6813)

A minimum of 20 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 for the Minor in Russian

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.

Requirements for the Master of Arts

- (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;
- (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.

German Courses (GERM)

Lower Division

101A-B. Fundamentals of German (4,4) F,S

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) F,S

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) F

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.

250. Cultural Landscape of Germany (3) F

History and culture of specific areas in Germany. Lecture-discussion with audiovisual presentations. Taught in English.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

301. Advanced German I (4) F,S

Prerequisite: GERM 2018 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) F.S

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) F,S

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) F,S

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) F,S

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) F

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 German 307 or 308.)

315. Survey of German Literature and Culture I (3) F

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) S

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.

370I. Wagner's Operas in Perspective (3)

Prerequisites: ENGL 100 and upper division status. The texts of the Wagner operas, their literary/mythological background, primary critical comments, the musical themes, Wagner's contributions to music. Taught in English.

380l. Contemporary Germany, Society, and Culture (3) F

Prerequisites: English 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) F,S

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) F,S

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) S

Prerequisite: Upper-division standing in German. Historical development of important German institutions, customs and thought.

430./530. German Poetry (3) F

Prerequisite: Upper-division standing in German. German poetry from the Baroque to the present.

441./541. German Novella (3) F

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) S

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) S

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) F

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) S

Prerequisite: Upper-division standing in German. Significant contemporary German writers of prose, drama, and poetry.

470. German Literature in English (3) S

Study of significant German writers, German literary movements, or a specific literary genre in English translation.

*498. Topics in German (3) F,S

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) F,S

Prerequisite: Consent of instructor. Independent study undertaken under the supervision of a faculty member.

Graduate Division

508. Topics in German Language Studies (3) S

Prerequisite: B.A. in German or equivalent. Intensive studies of etymological, phonological, morphological, and syntactical aspects of the German language. May be repeated to a maximum of 12 units with different topics.

511. Selected Topics in German Culture and Civilization (3) F, Even Years

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) F

Prerequisite: Graduate standing in German. German poetry from the Baroque to the

541./441. German Novella (3) F

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) S

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 and Drang."

558./458. Nineteenth Century Literature (3) S

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) F

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) S

Prerequisite: Graduate standing in German. Significant contemporary German writers of prose, drama, and poetry.

590. Approaches to the Study of German Literature (3) F, Even Yrs

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) F,S

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.

652. Seminar in Medieval German Literature (3) S, Even Years

Prerequisite: B.A. in German or equivalent. Reading and analysis of Middle High German texts with an introduction to Middle High German grammatical forms and structures. Not open to students with credit in GERM 505.

653. Seminar in a Century of German Literature (3) F,S

Prerequisite: Corresponding 400/500-level century course or consent of graduate advisor. Topics dealing with literary trends, literary genres, or individual authors. Intensive studies in one of the following: (a) 16th century, (b) 17th century, (c) 18th century (d) 19th century, (f) 20th century. Courses may be taken concurrently. A century may be repeated once if topic studied is different.

697. Directed Research (1-3) F,S

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) F,S

Prerequisite: Consent of graduate advisor. Planning, preparation, and completion of a thesis. Does not count toward 30 units required for the M.A. degree.

Russian Courses (RUSS)

Lower Division

101A-B. Fundamentals of Russian (4,4) F,S

Practice in grammar, reading, pronunciation, writing, and conversation. 101A: For those who are beginning the study of Russian. 101B: Prerequisite: RUSS 101A or one year of high school Russian. Continuation of RUSS 101A.

201A-B. Intermediate Russian (4,4) F,S

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.

205A. Russian Conversation (3) F,S

Designed for students who wish to acquire or review fundamental skills of beginning Russian for conversation.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

310. Russian Literature in English (3) F

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) F

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) F

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) F,S

A Directed Studies course designed to meet the individual needs of students.

410l. Introduction to Russian Civilization (3) S

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.

499. Directed Studies in Russian (1-3) F,S

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 The Program

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. Even 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 many other parts of our country, and the Department of Spanish is ready to aid all students to succeed in vocations and avocations.

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 Department of Spanish 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. and M.A. degrees in the Special Major, and M.A. degree in Linguistics.

All students are urged to consult the Departmental Student Handbook, in addition to this *Bulletin*, 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. Please note that all options will satisfy the singlesubject credential requirements. For all options, at least one year of a second foreign language at the University level is required.

Prerequisites for the Bachelor of Arts in Spanish:

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 for the Bachelor of Arts in Spanish:

Upper Division Basic Core: A minimum of 30 units of upper-division Spanish coursework, which must include the Basic Core of 18 units as follows: SPAN 312, 313, 330, 341, 425, and either 430 or 445. (Both 430 and 445 are required for the Single Subject Teaching Credential and may be taken while completing work toward the B.A. degree in Spanish.) In addition to the Basic Core, the student must complete one of the following Options:

Option in General Spanish (12 units) (code 2-6816)

The option in General Spanish requires 12 upper division units in addition to the Basic Core. A faculty member should be consulted to ascertain the appropriate courses for this option.

Option in Language/Linguistics (12 units) (code 2-6801)

The Language/Linguistics option is especially designed for students who wish to better understand the structure and workings of the language or who plan on graduate study in Linguistics. 12 upperdivision units including at least 9 units from the following courses is required: SPAN 314, 410, 412, 426, 427

Option in Literature/Culture (12 units) (code 2-6802)

The option in Literature and Culture 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. 12 upper-division units including at least 9 additional upper division units must include a choice from SPAN 410, 413, 430 or 445, 439, 441, 490, 491, 492.

Option in Translation (12 units) (code 2-6804)

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. 12 upper-division units including at least 9 units are required, selected from the following courses: SPAN 412, 413, 414, 415, 427.

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 in Spanish

Requirements are same as for B.A. in Spanish, but must include both 430 and 445.

Advisement:

In the Liberal Studies Core, under Area I, Group 2, students should complete ENGL 310 and in Area I, Group 3, students should complete ENGL 325. Under Area IV, Group 2.b, students should have completed SPAN 101A,B or equivalent. Students should seek early advisement from a professor from the participating departments and be advised on the Liberal Studies Bilingual/Cross-Cultural Track.

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 Graduate Advisor 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 a transcript of credits or a change of objective form, 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 24 units in Spanish, of which at least 18 units must be in the 500 and 600 series in Spanish. (Approved upper-division courses are shown with *);
- (2) Specifically required courses include: SPAN 412, 525, 639, 696, and 697 (or, in special cases, 698);
- (3) The student must pass, with a score of at least 550, the Educational Testing Service examination in a second foreign language. 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: Master's Paper plus Comprenhensive examinations. The Master's Paper is the project

to be completed under Spanish 697 Directed Research, which normally takes two semesters to complete, with a 1-unit enrollment in the first semester and a 2-unit enrollment in the second semester. Spanish 696 is the prerequisite. See the Graduate Advisor.

Plan 2: Thesis plus 30 units and oral defense of the Thesis. See the Graduate Advisor.

(7) No more than six units of transfer graduate credit are allowed, subject to approval by the Graduate Advisor. No more than six 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.

Courses (SPAN)

Lower Division

101A-B. Fundamentals of Spanish (4,4) F,S

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.

101B. Prerequisite: SPAN 101A or two years of high school Spanish or equivalent. Continuation of SPAN 101A.

201A-B. Intermediate Spanish (4,4) F,S

Continued development of audio-lingual skills, reading and writing.

201A. Prerequisites: SPAN 101A-B or three years of high school Spanish or equivalent. 201B. Prerequisite: SPAN 201A or four years of high school Spanish or equivalent.

250. Spanish for Bilinguals (6) F,S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300. Hispanic Literature in Translation (3) F,S

Study of a specific author, generation, genre or work, to be announced each semester in the Schedule of Classes. Such topics as the following may be offered: Federico Garcia Lorca; the Latin American new novel, Unamuno, Ortega y Gasset, Don Quixote. May be repeated with different topics for a maximum of six units. Not applicable to 30 units of upper division work required for the B.A. or minor in Spanish.

312. Advanced Spanish I (3) F,S

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) F,S

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) F.S

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) F

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. (Not applicable to B.A. in Spanish or minor in Spanish. No credit for students with credit in SPAN 320 or 321.)

330. Literary Masterpieces: Spain (3) F,S

Prerequisite: Upper division standing in Spanish. Critical analysis of masterworks of Spanish literature.

341. Literary Masterpieces: Spanish America (3) F,S

Prerequisites: Upper division standing in Spanish. Critical analysis of masterworks of Spanish American literature. (No credit for students with credit in SPAN 331.)

*410. Introduction to Literary Analysis (3) S

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) F,S

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) F,S

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) F,S

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) F,S

Prerequisite: SPAN 412. Seminar designed to develop marketable translation skills for business correspondence and contracts, legal documents, from English to Spanish and viceversa.

416. Translation Technology (3) F,S

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.

425. Spanish Phonetics and Phonology (3) F,S

Prerequisites: SPAN 312 and 313 or consent of instructor. Articulatory phonetics as a means to form native Spanish pronunciation habits with emphasis upon the difficulties encountered by speakers of American English.

426./526. Spanish Morphology and Syntax (3) F

Prerequisites: SPAN 425 or consent of instructor. Morphemic and syntagmatic analysis of Spanish; introduction to transformational grammar. (No credit for students with credit in SPAN 513.)

427./527. Contrastive Analysis of Spanish and English (3) S

Prerequisite: SPAN 425 or consent of instructor. Study of the known points of similarity and differences between the two languages.

*430. Spanish Civilization (3) S

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. (M.A. program may not include both 430 and 445. No credit for students with credit in SPAN 440.)

439./539. Modern Spanish Narrative (3) S

Prerequisite: SPAN 330 or permission of instructor. Representative 19th and 20th century novelists. (No credit for students with credit in SPAN 459.) (Seminar)

441./541. Modern Spanish American Narrative (3) S

Prerequisites: SPAN 341 or permission of instructor. Critical analysis of 20th century Spanish American prose fiction. (No credit for students with credit in SPAN 461.) (Seminar)

*445. Latin American Civilization (3) F

Prerequisite: Upper division standing in Spanish or consent of instructor. Analysis of main currents in Latin American civilization. (M.A. program may not include both 430 and

446./546. The Politics of Literature in 20th Century Spain (3) F,S

Prerequisite: SPAN 410. The course will examine contemporary Spanish literature by focusing on the social and political factors essential to its development. Topics include: Modernism, Surrealism, Spanish Civil War literature, Autobiography, Social Realism and Franco period and censorship.

490. Special Topics (3) F,S

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. (Hispanic Folksong not applicable to M.A.) A. Modern Hispanic Thought

B. Spanish Civil War 491./591. Nobel Poets and Others (3) S

Prerequisites: SPAN 330, 341, or permission of instructor. Critical analysis of representative works of Nobel Poets (Aleixandre, Jimenez, Mistral and Neruda) and other significant poets (Alberti, Becquer, Dario, Garcia Lorca, Garcilaso, Gongora, Guillen, Vallejo, etc.). (No credit for students with credit in SPAN 460.)

492./592. Modern Hispanic Theatre (3) F

Prerequisites: SPAN 330 or permission of instructor. Representative Spanish and Spanish American plays of the 20th century. (No credit for students with credit in SPAN 462.)

499, Independent Study (1-3) F.S

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

524. Second Language Acquisition: Theory and Practice (3) F

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. Two

hours of lecture; 2 hours of activity. Traditional grading only.

525. History of the Spanish Language (3) F

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. (No credit for students with credit in SPAN 505.)

526./426. Spanish Morphology and Syntax (3) F

Prerequisites: SPAN 425 or consent of instructor. Morphemic and syntagmatic analysis of Spanish; introduction to transformational grammar. (No credit for students with credit in SPAN

527./427. Contrastive Analysis of Spanish and English (3) S

Prerequisite: SPAN 425 or consent of instructor. Study of the known points of similarity and differences between the two languages.

528. Romance Linguistics (3) S, Odd Yrs

Prerequisites: SPAN 525 or equivalent. Methods used in Romance philology and linguistics; origin and evolution of Romance languages, comparative characteristics of Romance languages. (No credit for students with credit in

530. Contemporary Spanish Poetry (3) S

Study of the most significant contemporary Spanish poets. (No credit for students with credit in SPAN 585.)

538. Spanish Poetry of the Golden Age (3) F

Study of traditional ballads, Renaissance and Baroque poetry with emphasis on Garcilaso, Gongora and other poets.

539./439. Modern Spanish Narrative (3) S

Prerequisite: SPAN 330 or permission of instructor. Representative 19th and 20th century novelists. (No credit for students with credit in SPAN 4591

540. Modernismo in Spanish American Literature (3) F,Odd

Origin and development of the Modernista movement in poetry and prose during the period from 1880 to 1920. (No credit for students with credit in SPAN 520.)

541./441. Modern Spanish American Narrative (3) S

Prerequisites: SPAN 341 or permission of instructor. Critical analysis of 20th century Spanish American prose fiction. (No credit for students with credit in SPAN 522.) (Seminar)

543. Contemporary Spanish American Poetry (3) F

Study of representative Spanish American poets from 1920 to the present. (No credit for students with credit in SPAN 521. (Seminar)

546./446. The Politics of Literature in 20th Century Spain (3) F,S

Prerequisite: SPAN 410. The course will examine contemporary Spanish literature by focusing on the social and political factors essential to its development. Topics include: Modernism, Surrealism, Spanish Civil War literature, Autibiography, Social Realism and Franco period and censorship.

590. Special Topics (3) S

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) S

Prerequisites: SPAN 330, 341, or permission of instructor. Critical analysis of representative works of Nobel Poets (Aleixandre, Jimenez, Mistral and Neruda) and other significant poets (Alberti, Becquer, Dario, Garcia Lorca, Garcilaso, Gongora, Guillen, Vallejo, etc.). (No credit for students with credit in SPAN 584.)

592./492. Modern Hispanic Theatre (3) F process of the state of the st

Prerequisites: SPAN 330 or permission of instructor. Representative Spanish and Spanish American plays of the 20th century. (No credit for students with credit in SPAN 586.)

599. Directed Studies (1-3) F,S

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.)

639. Seminar in Hispanic Studies (3) S work to Attor MASS to Superior . Bt

Concentration on a specific literary or linguistic problem. May be repeated for a maximum of 6 units with a different topics.

A. Garcia Lorca

B. Don Quixote

C. Spanish Theater of the Twentieth Century 696. Bibliographical Methods of Research (3) F

Introduction to methods of research, scholarly writing. Same course as FREN 696.

697. Directed Research (1-3) F,S

Prerequisites: SPAN 696, consent of department chair. Individual study under the guidance of a faculty member, resulting in a scholarly paper (Master's Paper).

698. Thesis (2-4) F,S

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. de-

Russian and East European Studies College of Liberal Arts

Director: Harold Schefski (German and Russian)

Department Office: McIntosh Humanities Building (MHB), Rm 810 Telephone: 985-8525, 985-4317

Administrative Secretary: Karen Fawson

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, management, 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. g alarmagnal wood laansen dra plag

Requirements for the Certificate in Russian and East European Studies:

(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* MGMT 450; 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.

Social Work

Director: James J. Kelly

College of Liberal Arts

Associate Director: Janet Black Undergraduate/Graduate Advisor: Ginger Kuluwaimaka Wilson, 985-4684 Director of Admissions: Ralph Hurtado, 985-4625 MSW 24 Hour Information Line -985-5654 BASW 24 Hour Information Line -985-5427 Department Office: Psychology Building (PSY), Room 114 Telephone: 985-4616 Faculty: Professors: Paul Abels, Janet Black, Kenneth Chau, Catherine C. Goodman, Jean M. Granger, Mary Ann Jimenez, James J. Kelly, Isaiah C. Lee, John Oliver, Elizabeth T. Ortiz, Marilyn Potts, Susan Rice; Associate Professors: Lester Brown, Madeleine Rose; Assistant Professor: Rebecca Lopez. Field Faculty: H. Breton, D. Cebula Nelson, L. Brown, K. Chau, B. Cohen, C. Ellano, A. Glezakos, C. Goodman, J. Granger, R. Hurtado, M. Jimenez, I. Lee, M. Maram, M. McNabola, J. Oliver, L. Ortiz, J. Pijloo, S. Rice, C. Richardson, M. Rose, R. Rountree, J. Rubin, G. Wilson Department Secretary:

Patricia Lauer

The Department

Students desiring information should contact the numbers listed

The profession of social work aims at the 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 methodology is a change-oriented process which helps individuals and social units of all sizes, structures, and functions to discover, develop, mobilize, and use their own and outside resources to change personal and social conditions which are barriers to meeting their needs.

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, national, and international needs and aspirations; to the development and improvement of social institutions; and to the achievement of social justice.

Social workers are employed in the major societal institutions: child welfare, health and mental health care, family services, government, education, justice, aging services, recreation, labor and industry, and religion. They work in many job classifications: direct services, supervision, consultation, management, and administration.

The educational program of the Department of Social Work is directed toward helping students gain professional knowledge and values, developing an understanding of social work methodology and techniques, and achieving 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. Curriculum is designed to meet the basic preparation for State licensing and the certification of the National Association of Social Workers.

Bachelor of Arts Degree in Social

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. The objectives of the baccalaureate program are to prepare students for beginning social work practice and graduate social work education. All social work baccalaureate courses incorporates 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 reguriements in the ethnic studies and women 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

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. 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 undergraduate advisor for academic advising concerning the requirements for admission into the BASW program.

Requirements for the Bachelor of Arts (code 2-8555)

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 2-8556). 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:

- 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 prereguisites or their equivalents with a minimum GPA of 2.5:
- a. cultural anthropology
- b. anatomy and physiology
- c. introduction to psychology
- d. introduction to sociology
- e. elementary statistics
- f. abnormal psychology
- 4. Successful completion of 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 aplication form obtainable from the department office, sign it, and attach two letters of recommendations and transcripts of all previous college work at CSULB or elsewhere. The deadlines 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 con-

- 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. 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 conditonal

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 440, 442,

Fourth Level (spring): SW 441, 465, 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 crosscultural 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

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

The master's program defines its mission as the provision of an educational program which does the follow-

(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 socioeconomic backgrounds who have life experience in bridging cultural

(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;

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 aging 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 pro-

(3) Prepares social workers for

(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: Aging 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 (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 the developmentally disabled, 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

Pupil Personnel Services Credential, School Social Work Credential, and the Child Welfare and Attendance Specialist Credential

The Department of Social Work is in the process of developing the School Social Work credential and the Child Welfare and Attendance Specialist credential within the context of the Master of Social Work (MSW) degree. These credentials are issued by the California Commission on Teacher Credentialing.

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 or Child Welfare and Attendance Specialist. The credential covers pre-kindergarten through 12th grade service in public and other schools requiring the credential. 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 fu-

Requirements:

- 1. Successful completion of all of the requirements for the 60 unit Master of Social Work (MSW) degree; Required coursework will be completed in the following sequence areas: The CYF concentration, Social Work Policy, Social Work Practice, Human Behavior and the Social Environment, Social Work Research, Community Projects and Field Work;
- Completion of SW 665, School Social Work as one of the required electives within the 60 unit MSW degree program;
- Completion of School Social Work seminar series.
- 4. Demonstrated knowledge in the following areas of pupil personnel services: Knowledge of techniques for facilitating individual growth and development to achieve academic success; Knowledge of human assessment: Knowledge of problem prevention and early intervention; Knowledge of consultation services; Knowledge of psychological education; Knowledge of coordination and development of services; Knowledge of legal enablements and constraints, Knowledge of attendance laws and the rights of minors, 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 and utilization, and involvement and use of community resources; Knowledge of social research and services based on research, and Knowledge of the code of professional ethics;

5. Successful completion of 540 clock hours of field practice demonstrating all of the required skills and knowledge areas, under the supervision of an experienced MSW practitioner, preferably one 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 with racial/ethnic diversity in service delivery.

- 6. A certificate of clearance and successful performance on CBEST;
- Completion of required application materials and payment of fees;
- 8. Certification of program completion by the Director of Field. The student may be required to complete additional course work, field work, or demonstrate specific competencies before approval.

The Aging and Families (AF) 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) 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);
- (4) 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;
- (5) Submit a copy of all college/university transcripts to the department;
- (6) International students must apply to the Center for International Education during the month of November. (310) 985-5476
- (7) 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 a practice course 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 8:00am - 5:00pm). The block model of field work occurs during the summer months, with students completing 36 hours per week (M, T, Th, F 8:00am - 5:00pm) in field work while concurrently taking coursework and a field seminar. Students enrolled in the full time (2 year) model, or the part-time (4 year) model may take one year of concurrent and one year of block field work placement. Students in the 3 year model complete both field placements in the academic year model. 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 at the end of any semester.

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 successful completion of 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 for the Master of Social Work (code 7-8555)

The Master of Social Work program requires the completion of 60 semester units, taken in one of the three following sequences.

Plan A: (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

Term 8 -- SW 681 or 682, 699A

(spring)

elective; (fall)

Plan B:(three years) (Special Sessions)

elective; (fall) Term 2--SW 592, 597A or 597B; (spring) Term 3--SW 693, 550; (summer) Term 4--SW 596A, 500; (fall)

Term 1--SW 503, 505, 600 level

Term 5--SW 596B, 560 OR 561, 681 or 682; (spring) Term 6--SW 594, 600 level

elective; (summer) Term 7--SW 680A, 660 or 661, 698A; (fall)

Term 8--SW 680B, 670 or 671, 699A. (spring)

Plan C:(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)

<u>Plan D:(Summer Block Model)</u>

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,

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 B (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) F

(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) F

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.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

330. Human Behavior and Social Environment: Birth through Adolescence (3) F

(Open to non-majors.) Examination of relationship of human behavior to the social environment. Integration of general systems and role theory and concepts of stigma. Application to life cycles from birth through adolescence.

331. Human Behavior and Social Environment: Young Adulthood through Old Age (3) S

(Open to non-majors.) Examination of relationship of human behavior to social environment. Integration of general systems, role and personality theory, and concepts of racism and sexism. Application to life cycles from young adulthood through old age.

340. Generic Social Work Practice (3) S

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 or 442. 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.

350. Social Policy: Law and Court Decisions (3) F

(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) S

(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) F

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-B.

406B. Applications of Social Work (3) S

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/B.

423. Child Abuse and Prevention (3) F,S,SS

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) F

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 & Institutions (3) S

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 applicable to communities and activities applicable to communities and neighborhoods. Non-majors require consent of instructor.

442. Social Work Practice With Individuals and Families (3) F

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) S

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) F,S

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) F,S

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) W,SS

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) W,SS

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.

485. Aging and Mental Health (3) F.S

Intervention strategies, preventive and supportive, used in working with independent older persons. Social aspects and clinical research related to gero-psychiatry. Same course as GERN 485.

490. Special Topics in Social Work (1-4) F,S

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) F,S

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.

495A. Field Experience in Social Work (7) F

Prerequisites: SW 331, 340, 340A, 350. Concurrent enrollment in two of the following: SW 440, and 442. Evidence of satisfactory malpractice disability 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) S

Prerequisites: Evidence of satisfactory malpractice disability insurance coverage; SW 351, 440, 442, 495A. Concurrent enrollment in SW 441 and 465. Must be taken immediately after 495A. 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) F,S

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) F

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) F

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) F

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) F

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) S

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) S

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 approach. 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) S

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,

590. Special Topics (3) F,S

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) S

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 demon-stration 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) S

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) F

Prerequisites: Concurrent enrollment in SW 500. 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. One and a half hours weekly field seminar and 16 hours in agency placement. Credit/No Credit grading only.

596B. Field Instruction II (3) S

Prerequisites: SW 500, SW 596A, 596C and concurrent enrollment in SW 560 or 561. 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. One and a half hours weekly field seminar and 16 hours in agency placement. Credit/No Credit grading only.

596C. Field Instruction I (3) SS

Prerequisites: Concurrent enrollment in SW 500. 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 hour weekly field seminar and 40 hrs in agency placement. Summer session only. Credit/No Credit grading only.

596D. Field Instruction II (3) SS Prerequisites: SW 500, SW 596A or SW 596C,

Prerequisites: SW 500, SW 596A or SW 596C, and concurrent enrollment in SW 560 or SW 561. 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 hour weekly field seminar and 40 hours in agency placement. Summer session only. Credit/No Credit grading only.

597A. Human Behavior and Dysfunction: Focus on Children, Youth and Families (3) S

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) S

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) F,S

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) S,F,SS

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) S,F,SS

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) F

Prerequisites: SW 500, SW 560 or SW 561, SW 596A or SW 596C, SW 596B or 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) F

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) F,S

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) F,S

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) F,S

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) F,S

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) F,S

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) S,F,SS

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) F,S

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) F.S

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) S

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) S

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) F,S

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) F.S

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) F.S

Utilization of in-depth diagnosis as an individualizing rather than labelling or sterotyping 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) F,S

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) S

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) F,S

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.

680A. Field Instruction III (3) F

Prerequisites: SW 500, SW 560 or SW 561, SW 596A, SW 596B, and concurrent enrollment in SW 660 or SW 661. 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. One and a half hours weekly in Field Seminar and 16 hours in agency placement. Credit/No Credit grading only.

680B. Field Instruction IV (3) S

Prerequisites: SW 500, SW 560 or SW 561, SW 596A, SW 596B, SW 680A, SW 660 or SW 661 and concurrent enrollment in SW 670 or SW 671. 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. One and a half hours weekly in Field Seminar and 16 hours in agency placement. Credit/No Credit grading only.

680C. Field Instruction III (3) SS

Prerequisites: SW 596A and SW 596B or SW 596C and SW 596D, SW 500, SW 560 or SW 561, and concurrent enrollment in SW 660 or SW 661. 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 hour weekly Field Seminar and 40 hours in agency placement. Summer session only. Credit/No Credit grading

680D. Field Instruction IV (3) SS

Prerequisites: SW 500, SW 560 or SW 561, SW 560 or SW 661, SW 596A and SW 596B or SW 596C and SW 596D, SW 680A or SW 680C and concurrent enrollment in SW 670 or SW 671. 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 hour weekly Field Seminar and 40 hours in agency placement. Summer session only. Credit/No Credit grading only.

681. Advanced Policy and Programming with Children, Youth and Families (3) S

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) S

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.

690. Special Topics in Graduate Social Work (3) F,S

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.

693. Community Projects II (3) F,S

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) F,S

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) SS

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.

699A. MSW Thesis II (3) F,S

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). Traditional grading only.

ses 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

Department Chair:

Department Office: Social Science

Public Affairs (SS/PA), Room 258

Chinchilla, Barry M. Dank, Michael

Halliwell, Marsha S. Harman, Harold

G. Hubbard, Douglas A. Parker, Carl

Slawski, Theresa G. Turk; Associate

Professors: Gail C. Farmer, Carole

Aarons, Howard E. Fradkin, Audrey

Fuss, William E. Hartman, Gordon L.

Leis, Fernando Penalosa, Alfred W.

Sheets, Peggy J. Smith, Paul S.

Students desiring information

should contact the department office

visors: Undergraduate Advisor:

The major in sociology is intended

to serve as preparation for careers in

teaching, delivery and administration

of social and health services, urban

government service at local, state and

tions. The major also provides training

for advanced graduate work in sociol-

federal levels and related occupa-

ogy, social work and other social

sciences. Sociology is also recom-

mended as a second major or minor

for students of all other social scien-

ces; for business; for the humanities;

especially literature and theatre arts;

for ethnic and area studies; for jour-

nalism and other various applied arts

Students interested in sociology

may also wish to consider the liberal

studies major with a concentration in

sociology, which is described below.

The Liberal Studies program is dis-

Detailed information about the con-

centration may be obtained from the

Sociology courses are suitable for

fulfilling general education or elective

requirements for students of other

majors. However, lower division cour-

cussed elsewhere in this Bulletin.

Sociology Department Office.

and environmental studies, law,

for referral to one of the faculty ad-

Campbell, J. William Gibson:

Emeritus Faculty: Herbert L.

Ullman, Glenn Walker

The Department

Marsha S. Harman

and sciences.

Lily Monji

Department Secretary:

Assistant Professors: Juniper

Faculty: Professors: Norma S.

Marsha S. Harman

Telephone: 985-4602

Wiley.

Requirements for the Bachelor of Arts In Sociology (code 2-8560):

Lower Division: Fifteen units of lower division are required. Students must have credit for SOC 100, 142, 250 or 255, ANTH 120 and C/ST 200 or SOC 200. Students should complete C/ST 200 or SOC 200 prior to enrolling in SOC 255. C/ST 210 may be substituted for SOC 255.

Upper Division: Satisfactory completion of at least 51 semester units of college work is required before students will be accepted into upper division sociology courses. All majors are required to have a minimum of 32 upper division units in sociology. This must include credit for SOC 327 or 420, 3351, 356, 454, 455, 456, and nine units in one concentration and three units of electives from other upper division courses in sociology. Total credit for SOC 490 and 499 combined may not exceed 3 units.

Concentrations:

Deviance and Social Control: SOC 345, 441I, 442, 448, 454, 459, 463

Family and Intimate Relations: SOC 320, 325, (or W/ST 325), SOC 336, 423, 426, 464 (or GERN 464).

Gender and Ethnic Issues: SOC 325 (or W/ST 325), 340 (or CHLS 350), 341 (or CHLS 351), 445, 485I. W/ST 401I.

Medical Sociology: SOC 350, 423, 454, 461l, 462, 463, 464, 465, 466, 495, H SC 400. Research*

*Concentration suspended during current budgetary crisis.

Social Change and Global Issues: SOC 327 or 420 (whichever not taken in the core), 350, 372l, 410l, 449l, 450, I/ST 317l or I/ST 318l, GEOG 307l.

Minor in Sociology (code 0-8560)

A minimum of 24 units which must include:

Lower Division: SOC 100, 142.

Sociology College of Liberal Arts

Upper Division: SOC 335I and a minimum of 15 units selected from other upper division courses in sociology. Total credit for SOC 490, 495, 499 may not exceed 6 units.

Courses (SOC)

Lower Division

100. Principles of Sociology (3) F.S

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) F,S

Sociological principles applied to contemporary social trends and problems. Topical 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) F,S

A course for beginners in computer-aided data analysis and computer programming. Topics covered include principles of scientific research, data coding, entry, editing, and analysis, plus programming techniques. Students will use the Statistical Package for the Social Sciences to analyze research data and will learn to program in BASIC and Pascal. Same course as C/ST 200.

250. Elementary Statistics (4) F,S

(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 the semester prior to enrollment. 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) Same course as HDEV 250 and C/LA 250.

255. Elementary Statistics (3) F,S

Not open to students with credit in C/ST 210, HDEV 250, PSY 210, C/LA 250 or MATH 180. Prerequisite: Knowledge of mathematical procedures usually covered in elementary high-school algebra. 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.

290. Special Topics in Sociology (1-3) F,S

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.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

320. The Family (3) F,S

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) F,S

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.)

327. Social Order and Social Change (3) F,S

Prerequisite: SOC 100. 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.

332I. Sociocultural Dimensions of Sport and Human Movement (3) F,S

Sociological and psychological correlations to human movement. Same course as P ED 3321.

335l. Social Psychology (3) F,S

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) F,S

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) F

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) S

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) F,S 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

350. International Population Problems (3) F

diversion programs.

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) F,S

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.

372l. Living in Space (3) F,S

Prerequisites: ENGL 100 and upper division status. The relationship between the environment and social institutions is analyzed, along with the potential of space activities to strengthen identification with humanity rather than one's own nationality or ethnic group. The social and biological necessities for a permanently manned space station are outlined. The social implications of human settlements away from Earth are discussed, including the potential impact of contact with other intelligent life forms.

410l. Social Ecology (3) S

Prerequisites: ENGL 100 and upper division status, SOC 100. Analysis of interdependencies of elements of populations, environment, technology and social organization. Examines socioecological 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) F,S

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) F,S

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 of Sexual Behavior (3) F,S

The social context of human sexuality, effects of socialization, social class, occupation and religion on sexual attitudes and behavior.

440. Sociology of Deviance (3) F,S

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) F,S

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) Grading: Either.

444. Humanistic and Naturalistic Sociology (3) F,S

This course is about ordinary people as they try to understand themselves and others and survive, interact and succeed in an existentially absurd world. The focus is on people who are 'on-stage' and playing games with themselves and others in their relationships at home, at work, at school, on the beach, in bars and in other everyday places. Many real-life videotapes and some full-length movies will be shown in class. This course is especially designed for Psychology, Business, Theatre Arts, Speech Communications, Nursing and Health Science majors.

445. Race, Gender & Class (3) F,S

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.

448. Impersonality, Violence and Survival: An Analysis Through Film (3) F,S

Exploration through film of the societal conditions that facilitate impersonality, and allenation 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)

449l. Sociology of Political Rights (3) S

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) S

Analysis of human behavior, society and social change from a Marxist perspective.

454. Qualitative Methods of Social Research (4) F,S

Prerequisites: SOC 100, SOC 250 or 255, or C/S 210, and one upper division course in Sociology. Review and critique of principles and essential features of classical and contemporary qualitative studies. 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. Use of qualitative methods in a natural setting and the field. An individual student research project is required. (Lecture 3 hours, laboratory 2 hours).

"three units of SPC1 430 may be

455. Methods of Social Research (4) F,S

Prerequisites: SOC 100, 255, or 250, 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) F,S

Prerequisites: SOC 100, 356 and one other upper division course in sociology. Critical analysis of the contributions of contemporary sociologists. Intended primarily for majors in this field.

461I. Alcohol and Society (3) F,S

Prerequisites: 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) F,S

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) S

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) F

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. Same course as GERN 464.

466. AIDS and Society (3) F,S

Prerequisites: Sociology 100 or 142 or Psychology 100. Recommended: Biology 100 or 200 or Microbiology 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.

485I. Sociology of Language (3) S

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) F,S

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.

495. Internship (1-4) F,S

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.)

499. Directed Studies (1-3) F,S

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.

Speech Communication

College of Liberal Arts

Department Chair: Craig R. Smith Department Office: McIntosh Humanities Building (MHB), Rm 717 Telephone: 985-4301 Faculty: Professors: Karl W. E. Anatol, Nancy E. Briggs, Owen O. Jenson, Patricia Kearney, G. Bruce Loganbill, Jerry E. Mandel, Timothy G. Plax, Richard E. Porter, Craig R. Smith, Fathi S. Yousef; Associate Professors: Sharon D. Downey, Valerie C. McKay, Karen Rasmussen, James S. Sauceda; Assistant Professors: Terre Allen,

Andrew A. Sachs; Emeritus Faculty: Steven M. Buck, Earl R. Cain, Ottis L. Castleberry, Luster E. Hauth, Ellis R. Hays, John L. Healy, Jack H. Howe, James G. Powell, Fred Rogers, Joseph A. Wagner.

The Department

Students desiring information about the speech communication program at CSULB should contact the department undergraduate advisor or the graduate advisor.

Located within the College of Liberal Arts, the Department of Speech Communication 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 Speech Communication maintains a tradition of liberal education which traces the world's heritage of humanistic tradition in its multicultural diversity. The speech communication curriculum focuses on the issues of ethics, creative thought, historical and scientific inquiry, critical thinking, understanding communication phenomenon, aesthetic expression, and the development of excellent human communication skills. To this end. the Department of Speech Communication 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 inquiry, 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 Speech Communication are intended to provide students with the opportunity to emphasize an area of speech communication which will best suit their personal and career goals. Each student is required to consult with the department undergraduate or graduate advisors as appropriate for advisement. Student advising available during the Fall and Spring Semester only.

NOTE: Lower division 100 & 200 level classes taken through California Community Colleges satisfy CSULB, Speech Communication requirements.

Bachelor of Arts Degree in Speech Communication

Undergraduate Degree Programs

The Department of Speech Communication offers three undergraduate degree programs in communication arts and sciences. The Bachelor of Arts Degree in Communication, The Option in Interpersonal and Organizational Communication, and the Option in Rhetorical Studies.

All majors shall complete:

- (1) 12 units of lower division course work drawn from 130, 131, 132, 200, 210* with 210W, 220*, and 271 and;
- *210 is a prerequisite for 410 and *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.

serviced. Acceptable Topought

(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

The General Speech option, as the title implies is concerned with all the dimensions found in the speech 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 for the Bachelor of Arts Option in General Speech (code 2-6841)

(This major consists of 42 units of which 30 are upper division.) In addition to the core above, students must complete:

- (a) three units required from SPCH 331, 333, 334, 335, and 344;
- (b) six* units required from SPCH 410, 412, 414, 420, 432, 449, 450, 451, and 452;
- (c) six* units required from SPCH 433, 436, 437, 441, 442.

*three units of SPCH 490 may be substituted in either (b) or (c).

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:

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 for the Option in Interpersonal and Organizational Communication (code 2-6838)

(This option consists of 54 units of which 42 are upper division.) In addition to core listed above, students must complete:

- (a) nine units from SPCH 344, 410, and 420
- (b) three units required from SPCH 331 or 335
- (c) three units required from SPCH 333 or 338
- (d) six units required from SPCH 411, 412, 414, 421, 432, or 450
- (e) six units required from SPCH 334, 337, 405, 441, 442, 449, 451, 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:

The Rhetorical Studies option is designed for students who wish to approach the study of human communication from a historical-critical perspective. In this option, students will give particular attention to the historical development of rhetoric and to the study of great speakers. Six of the lower division units may be applied to meet General Education requirements in oral communication and critical thinking.

Requirements for the Option in Rhetorical Studies (code 2- 6840)

(This option consists of 46 units of which 34 are upper division.) In addition to core listed above, students must complete:

- (a) Ten units required from SPCH 331, 335, 336, and either 333 or 338
- (b) nine units required from SPCH 433, 436, 437, 441, 442, and 449. Three units SPCH 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 speech communication, 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 offers two options leading to the Master of Arts Degree. The Option in Speech Communication Studies includes course work in the core areas of communication and rhetorical studies with the opportunity to further develop individual interests in interpersonal, intercultural, interpretive, organizational, and small group communication, as well as in communication education, forensics, persuasion, rhetorical theory and criticism, and public address. Individuals with at least two years fulltime experience in management may select the Option in Communication and Human Information Systems.

Students applying to the graduate program who meet all University and Departmental requirements for admission enter as "classified" graduate students in the Speech Communication Department. Applicants who are otherwise eligible for admission to the University with graduate standing but who have not fulfilled departmental prerequisites enter as "conditionally classified" graduate students; their standing changes to "classified" after all deficiencies have been removed.

General Prerequisites (both options):

The Department of Speech Communication requires a 3.00 undergraduate grade point average for admission to its programs. Students wishing to apply for entrance who do not meet that criteria may:

- A. Petition the Graduate Committee of the Speech Communication Department, explaining why the GPA requirement should be waived and requesting immediate admission to the program on probation, or
- B. Take classes as unclassified graduate students and then petition for admission to the program after completing at least six (6) hours of graduate core course work with a 3.00 GPA or better ("core" courses are SPCH 540, 546, and 696).

All entering students must:

- A. Complete the Graduate Record Exam and send results to the Speech Communication Department:
- B. Make application to the University for post graduate work;
- C. Make application to the Speech Communication for admission to the option selected;
- D. Consult with the Graduate Advisor about procedures, requirements, and course of study before enrolling in the graduate program; only enrolled students who have met with the Graduate Advisor will receive the Graduate Handbook;
- E. Pass the Writing Proficiency Examination or its equivalent by the end of the first semester of graduate work.

NOTE: The date of Advancement to Candidacy determines the catalogue which applies.

Option in Speech Communication Studies (code 5-6841)

Prerequisites:

A. A bachelor's degree with a major in speech communication to include SPCH *300, *301, *305, *306, and *309 or their equivalents;

OR

B. A bachelor's degree and 24 units of upper division work in speech communication, including the courses listed in (A) above.

Advancement to Candidacy:

- A. Removal of all undergraduate deficiencies;
- B. Completion of six (6) units of 500 and/or 600 level courses including 695 OR 696 with a minimum grade point average of 3.0;
- C. Approval of graduate program by the Graduate Advisor, Graduate Committee, Department Chair, and School Associate Dean for Graduate Studies (Educational Policy).

Requirements for the Master of Arts in Speech Communication with Option in Speech Communication Studies

- A. A minimum of 30 units in graduate courses approved by the Graduate Advisor and the Department Graduate Committee to include:
- 1. SPCH 695 or 696 to be completed as early as possible in the graduate program and prior to advancement to candidacy:
- 2. SPCH 540, 546; one course selected from SPCH 635, 636, 637, 638, and 641; one course selected from SPCH 600, 610, 611, 620 632, 648, 649, 650 and 651;
- 3. Fifteen elective units of 500 or 600 level course work approved by the Graduate Advisor and the Department Graduate Committee. Elective units may contain (a) only ONE 3-unit 400/500 series course and (b) only ONE directed study (SPCH 697) which can be taken only after completing SPCH 696.
- 4. SPCH 698 (4 units) if the thesis option is elected.
- 5. Students may take a maximum of six (6) units of APPROVED graduate work outside the Speech Communication Department (student teaching does not apply).
- B. Satisfactory completion of a thesis or passing a comprehensive examination (written and oral).
- 1. Students electing the thesis option must submit to the Department Graduate Committee a Thesis Prospectus approved by the student's thesis committee no later than the end of the semester prior to completing the thesis.
- 2. Students must petition to take the Comprehensive Examination no later than the end of the semester prior to the term in which they will take the examination.

Option in Communication and Human Information Systems (code 5-6848)

Prerequisites:

- A. A bachelor's degree in any subject area with a minimum grade point average of at least 3.00;
- B. A minimum of two years of experience in management or in a managerial-like position in a public or private organization (as determined by the Department Graduate Committee);
- C. Completion of SPCH *305, *306, *309, 510, and 520 or their equivalents.

Advancement to Candidacy:

- A. Satisfaction of all prerequisites;
- B. Completion of at least six (6) units of 500 and/or 600 level courses in the designated course of study including SPCH 696 with a grade point average of at least 3.0;
- C. Recommendation for advancement to candidacy by the Department Graduate Committee, the Department Chair, and the School Associate Dean of Graduate Studies (Educational Policy.)

Requirements for the Master of Arts in Communication and Human Information Systems:

- A. Completion of the following courses: SPCH 534*, 610, 620, 651, and 696.
- B. Completion of a minimum of 15 additional hours of course work selected from among the following courses: SPCH 546, 550, 600, 611, 632, 648, 650, AND 697. Students may petition to substitute SPCH 540 or a 600 level course within the Department graduate offerings for one (1) of the options courses. Such substitutions will be approved only if they are accompanied by a rationale that demonstrates that the substitution is integral to the student's course of study. Elective units may contain (1) only ONE 3unit 400/500 series course and (b) only ONE directed study (SPCH 697) which can be taken only after
- completing SPCH 696.

 C. Satisfactory completion of a comprehensive examination (written and oral).
- 1. Students <u>must</u> petition to take the Comprehensive Examination no later than the <u>end of the semester prior to the term</u> in which they will take the examination.

Courses approved as acceptable toward the Master's Degree:

- 510, 511, 520, 521, 505[530],*
 531, 532, 533, 534[503]*, 536, 537, 540, 546, 549, 550, 551, 552, 590, 600, 610, 610, 520, 632, 633, 635, 636, 637, 638, 641, 648, 649, 650, 651, 695, 696, 697, 698.
- * NOTE: Course numbers in brackets are old numbers. Courses were renumber in 91/92 CSULB Bulletin. See Below:
- 300 [440], 301[435], 305[230], 306[446], 309[448], 503 & 534 [combined as 534 in 1992].

Applicants for a Graduate Teaching Assistantship should send a letter of application to the Chair Include (3) three letters of recommendation, a transcript, and your GRE scores. Assistantships pay approximately \$800.00 per month, but tuition is not waived.

The Graduate Advisor and Graduate Committee are available during the Fall and Spring Semesters only. They are NOT available during the Winter and Summer Sessions.

Courses (SPCH)

Lower Division

130. Essentials of Public Speaking (3) F,S

Composition and delivery of speeches to inform and persuade. Logical organization is stressed. (CAN SPCH 4)

131. Essentials of Argumentation (3) F,S

Theory and practice of argumentation. Includes evidence, proof, refutation in argumentative speaking and evaluative techniques. (CAN SPCH 6)

132. Small Group Discussion (3) F,S

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)

200. Nonverbal Communication (3) S

Basic characteristics of the nonverbal elements of human communication in the oral communication setting.

210. Interpersonal Communication (2) F,S

Prerequisites: Concurrent enrollment in SPCH 210W. 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. (Lecture 2 hours.)

210W. Interpersonal Workshop (1) F,S

Prerequisites: Concurrent enrollment in SPCH 210. Planned exercises and activities designed to develop interpersonal communication skills (Workshop 2 hours).

220. Elements of Organizational Communication (3) F

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) F,S

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 & Applied Speaking (3) F,S

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. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300. Survey of Rhetorical Theory (3) F, S

Major rhetorical contributions from Classical to Modern Period. Special emphasis on relationship between rhetoric, history, and philosophy.

301. Communication Criticism (3) F,S

Prerequisite: SPCH 300. The analysis and criticism of public communication events including speeches, editorials, advertisements, and documentaries from a variety of rhetorical perspectives.

305. Measurement in Communication Research (3) F.S

Prerequisite: Completion of the University GE requirement in mathmatics. 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) F,S

Prerequisite: SPCH 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) F, S

Symbolic basis of human communicative behavior; relationship between language and behavior; investigation and analysis of discourse and behavioral effects.

331. Argumentation and Debate (3) F.S

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) F,S

Derivation of meaning in various literary forms and its communicative interpretation to specific audiences.

334. Business and Professional Communication (3) F,S,SS

Prerequisite: SPCH 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) F,S

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) F,S

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) F,S

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) S

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) F,S

Theory and techniques of oral communication in the process of interviewing. Practical application in employment, information gathering and persuasive interviews.

352. Story Telling (3) F,S

Cultural heritage in story telling; analysis of story types for oral presentation; techniques of preparation, presentation and listening.

358. Speech Arts for Children (3) F,S

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.

405./505. Computer Applications In Communication (3) F

Prerequisites: SPCH 305 or equivalent or consent of instructor. Role and use of computers in communication research; data processing, elements of programming, statistical analyses; elements of database files and systems, information storage and retrieval.

410./510. Advanced Concepts in Interpersonal Communication (3) F,S

Prerequisites: SPCH 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) S

Prerequisites: SPCH 210 and SPCH 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, interpersonal, and international perspectives.

412. Gender & Communication (3) F,S

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) S

Prerequisites: SPCH 305, SPCH 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) F,S

Prerequisites: SPCH 220 and SPCH 305. Philosophy, methods and designs for studying the communication systems of complex organizations; organizational communication reeds assessment, methods for developing and improving communication in organizations are examined and studied.

421./521. Communication in Bargaining & Negotiation (3) F

Prerequisites: SPCH 220 and SPCH 305. Role of communication in the decision-making

process of negotiation and bargaining. Emphasis on the functions of communication in resolving disputes through bargaining.

432./532. Communication Leadership (3) F

Development of leadership skills in problemsolving communication environments; leadership theories, strategies and techniques of problem-solving and decision making.

433./533. Trends in Interpretive Communication (3) F

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) F,S

Prerequisites: SPCH 300 and SPCH 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 European Speakers (3) F,S

Prerequisites: SPCH 300 and SPCH 301. Comparison and contrast of famous European speakers and their techniques, effects and environments from Demosthenes and Cicero to Churchill and Hitler.

441I. Issues in Freedom of Communication (3) S

Prerequisites: 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 prelaw students.

442I. Campaign Persuasion (3) S Even Years

Prerequisites: 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) F,S

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) F

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) S

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) F

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 Communications (1-3) F,S

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) F,S

Prerequisite: "PERMIT" required to enroll with consent of instructor; open only to senior majors in "Interpersonal & Organizational Communication" degree option. 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. SPCH 492A is for unpaid Internship. SPCH 492B is for paid internship. @10B = 499. Special Studies (1-6) F,S

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

505./405. Computer Applications in Communication Research (3)

Prerequisite: SPCH 305 or equivalent or consent of instructor. Role and use of computers in communication research; data processing, elements of programming, statistical analyses; elements of database files and systems, information storage and retrieval.

510./410. Advanced Concepts in Interpersonal Communication (3)

Prerequisites: SPCH 210 and SPCH 305. Systems and symbolic interaction approaches to interpersonal communication, consideration of interpersonal needs, self disclosure, under-

standing, interpersonal perception, interpersonal attraction, and social conflict; rule and performance-centered theories of interpersonal communication.

511./411. Communication in Conflict Resolution (3) S

Prerequisites: SPCH 210 and SPCH 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) F,S

Prerequisites: SPCH 220 and SPCH 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) F

Prerequisites: SPCH 220 and SPCH 305. Role of communication in the decision-making process of negotiation and bargaining. Emphasis on the functions of communication in resolving disputes through bargaining.

531. Administering the Forensic Program (3) F,S

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) F

Development of leadership skills in problemsolving communication environments; leadership theories, strategies and techniques of problem-solving and decision making.

533./433. Trends in Interpretive Communication (3) F

Trends and issues in the theoretical and historical development of oral interpretation as applied to current times.

534. Communicating Professionally (3) F, Odd Years

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. (Seminar)

536./436. Communication Strategies of American Speakers (3) F

Prerequisites: SPCH 300 and SPCH 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 European Speakers (3) F

Prerequisites: SPCH 300 and SPCH 301. Comparison and contrast of famous European speakers and their techniques, effects and environments from Demosthenes and Cicero to Churchill and Hitler.

540. Contemporary Rhetorical Theory (3) F

Prerequisite: Consent of instructor. The rhetorical theory of British and American rhetoricians since 1750.

546. Issues in Communication Studies (3) S

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) F,S

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) F

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) S

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) F

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. (Undergraduates register in SPCH 452; graduates register in SPCH 552.) Traditional grading only.

590./490. Special Topics in Speech Communication (1-3) F

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) S, Odd Yrs

Prerequisite: SPCH 695 or 696 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) F, Odd Years

Prerequisite: SPCH 695 or 696 or consent of instructor. Current theories and research in interpersonal communication.

611. Seminar in Negotiation and Conflict Resolution (3) S, Odd Yrs

Prerequisites: SPCH 411 or 421 and either 695 or 696 or consent of instructor. Investigation, analysis, and criticism of the nature, development, and dynamics of conflict and the role of negotiations in interpersonal, group, organizational, and international and intercultural communication; study and understanding of conflict management.

620. Seminar in Organizational Communication (3) F, Even Yrs

Prerequisite: SPCH 695 or 696 or consent of instructor. Theories and models of communication in large organizations; design and management of organizational communication systems.

632. Seminar in Small Group Communication (3) S, Even Yrs

Prerequisite: SPCH 695 or 696 or consent of instructor. Research in small group discussion.

633. Seminar in Interpretive Communication (3) F, Odd Years

Prerequisite: SPCH 695 or 696 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) F, Even Years

Prerequisite: SPCH 695 or 696 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) S, Even Yrs

Prerequisite: SPCH 695 or 696 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) S, Odd Yrs

Prerequisite: SPCH 695 or 696 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) F, Odd Years

Prerequisite: SPCH 695 or 696 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.

641. Seminar in Rhetorical Theory (3) F, Odd Years

Prerequisite: SPCH 695 or 696 or consent of instructor. Studies of the major figures in the development of rhetorical theory; consideration of the philosophic bases of rhetoric and the relationship of their social, political and cultural settings.

648. Seminar in Language and Behavior (3) F, Even Years

Prerequisite: SPCH 695 or 696 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) S, Even Yrs

Prerequisite: SPCH 695 or 696 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) S, Odd Years

Prerequisites: SPCH 695 or 696 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.

651. Seminar in Intercultural Communication (3) S Even Yrs

Prerequisites: SPCH 695 or 696 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 for effective intercultural communication in both international and domestic settings.

695. Empirical Research Methods (3) S

Prerequisite: SPCH 305 or equivalent course in statistics. Empirical research methodologies applied to communication research; problems of measurement, quantification and measuring instruments; theory and design of scientific research; analysis of findings.

696. Communication Research Methods (3) F,S

Methodological problems involved in graduate research; bibliographical problems and library research; study and critical evaluation of research; methods in the development of rhetorical, experimental, descriptive and critical research.

697. Directed Research (1-6) F,S

Prerequisites: SPCH 695 or 696, authorization of the department Graduate Advisor, consent of instructor. Directed research leading to the definition and discussion of a selected problem of 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) F,S

Prerequisites: SPCH 695 or 696 or 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.

Attitude Change (3) 8 Eyen ra-

Strategies of European Speniters

(3) F of het contraction

(3) F of het contraction

(4) F of het contraction

(5) F of het contraction

(6) F orequires

Answore excellent spirithfoot certifiche raseles que

Forequisites Strong Social Soc

AC. Conformation Vibration of the conformation of the conformation

nucleating tenouspe and symbols resemble took operation and attitude after exceptioning to the communication requirement of the communication requirement of the communication requirement of the communication and attitude Change Persthallow and Attitude Change

Persusation and Astructo Clusting
(I) F.S.
communication of destroyer in the communication of destroyer in the communication of destroyer in the communication of destroyers the communication of destroyers the communication of destroyers occurred centralists, business of the communication of destroyers occurred centralists, business of the communication of the comm

Sucrive messages; source cleation, nicres of control of personnels of the control of th

munication of common arrangements of the state of municipal common of common and markets of an arrangement of society equations of society equations and markets of the state of municipal common of the state of municipal common of the state of the state

communication is a complement of a communication of

Study of the returnant publishments and communication with amounting the social social accounting to social psychological, appropriate and psychological, appropriate and psychological, appropriate and the psychological appropriate to the psychological appropriate to the psychological appropriate and the psychological appropriate to the psychological appropriate

Communication in the Communication of the Communica

Total Sensitive Report Comments and the restore of the restore of

Action from the control of the contr

Tomer AC) reprosed toolston first selftion content annually on fair floor all actions the Salvator (consignition or near that terror to the sale (terror method and provide to the part self-in and salvator of the provide tools rectal read and reguest toolston method to the

Director: Norma Chinchilla (Women's Studies and Sociology) Telephone: 985-4839 or 985-4344 Faculty: Professors: Pamela Bunte (Anthropology), Norma Chinchilla (Women's Studies and Sociology), Margaret Costa (Physical Education), Shirley Mangini (Spanish/Portuguese), Consuelo Nieto (Education), Sharon Sievers (History), Toni Stanton (Anatomy/Physiology and Women's Studies). Theresa Turk (Sociology); Associate Professors: Elyse Blankley (English and Women's Studies), Betty Edmondson (Physical Education), Claire Martin (Spanish/Portuguese), Genevieve Ramirez (Chicano and Latino Studies), Pat Rozee (Psychology and Women's Studies); Assistant Professors: Wendy Lozano (Women's Studies), Patricia Cleary (History), Elizabeth Young (English). Emeritus Faculty: Vivian Sucher (Nursing), Ruth Afflack (Mathematics) Department Secretary:

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

Carol Craven-Garwood

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 reexamination of traditional ideas about women and men in cultures characterized by patterns of sex-role stereotyping; 2) the acquisi-

tion of 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 two 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 studies.

The Women's Studies Program offers a minor which may be combined with many majors, and the American Studies major includes a concentration in Women in American Society. CSULB also offers a Special Major at the graduate and undergraduate 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 requirement, as well as I.C. requirements.

Other programs and departments offering courses on women, some of which are cross-listed with Women's Studies, include Anthropology, American Indian Studies, Comparative Literature, English, History, Home Economics, Math, Chicano and Latino Studies, Physical Education, Psychology, Radio, Television and Film, Women's Studies

College of Liberal Arts, Religious Studies, Social Welfare, Sociology and Speech Communication.

Women's Studies College of Liberal Arts

Minor in Women's Studies

Requirements for the Minor in Women's Studies (code 0-0013)

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 310 (or B/ST 310); W/ST 314, 315, 319, 320 (or CHLS 415), W/ST 365l, 401l, 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) F,S

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) F,S

An introduction to some of the basic questions raised by the contemporary feminist movement relating to the social, political and economic status of women. Same course as AMST 190.

Upper Division

General Education Category A must be completed prior to taking any upper division course. This requirement will be monitored by way of the registration process beginning Fall semester 1995.

300. Introduction to Feminism (3) F

An introduction to feminist history, thought, and methodology that emphasizes, but is not limited to, United States and European experience. Traditional grading only.

307l. Women and the Economy: Money, Sex, and Power (3) F,S

Examination of assumptions about the economic roles of women; analysis of sexual division of labor; domestic work and its ideology; women as wage workers; women and development; American women and the economy since 1945.

308. Women and the Law (3) S

History of women's experience under the law; constitutional law; 19th amendment and ERA; equal protection issues; discrimination in employment; marriage and family law.

310. Black Male and Female Relationships (3) S

Analysis of the effects of social, economic, racial and cultural influences of society on the black male-female relationship. Focuses on the externally projected images of the relationship and the nature of changed roles from the beginnings in Africa through the present day. Changing role cycles and the role changes' effects upon the relationship. Same course as B/ST 310.

314. Women's Lives (3) F

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) F

Examination of the roles of American black women; taught from an interdisciplinary perspec-

316. Women in the History of U.S. Film (3) F,S

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

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

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 C/LA 319, AMST 319, AIS 319, ASAM 319, B/ST 319, CHLS

320. La Chicana (3) S

This course is designed to survey the historical and psychology of the woman in the Chicano community. Class work will include the analysis of the history, development, themes, and genres of the literature of the Chicana and by the Chicana in English- and Spanish-language texts. Same course as CHLS 415.

325. Sociology of Women (3) F,S

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.

338l. Women in Sport (3) F,S

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 P ED 338I.

350. Feminist Issues in Mental Health F

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.

356. The Lesbian (3) S

History of lesbianism, including literary history; examination of the relationship between lesbianism and feminism; presentation and representation of lesbians in various media; the politics of gay liberation, and the place of lesbians in it.

365l. Images of Women in Popular Culture (3) F,S

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)S

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) F,S

This course will explore the largely unwritten history of Asian American women. Using an interdisciplinary 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)F,S

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.

401l. History of Women in Cross-Cultural Perspective (3) F

Prerequisites: ENGL 100 and upper division status. Comparison of how different social and cultural systems have affected the changing historical role of women. Analysis of women's work roles, social status and political participation in selected, developed and undeveloped Western and Third World, capitalist and socialist societies.

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. Traditional grading only. Same course as POSC 401.

405. Topics in Women's Oral History (3) F,S

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.

406. Asian Women (3) S

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) F

A study of the Judeo-Christian understanding of the nature of woman and her role in church and society from biblical times to the present. Biblical, historical, theological, and practical aspects of the subject will be investigated.

415. Feminist Theory (3) F

Prerequisite: W/ST 101, 102 or consent of instructor. Examination of major feminist analyses and discussion of reformist, revolutionary and psychosocial theories for bringing about female-male equality/emancipation.

420. Mothers and Daughters (3) F

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.

425. Women and Power (3) S

Examination of the various means women use to achieve both public and private power, and the extent to which women have gained power in the family, the workplace, and politics. Traditional and feminist definitions of the meaning of power are explored.

428. Women's U.S. Labor History (3) S

Examination of women's experiences as workers in various settings to understand how both the nature of their participation in the labor force, and their life experiences as workers in the home have often times led to different issues, needs and forms of organization.

Problems of rape, woman battering, incest, pornography and sexual harassment; examination of legal, religious and philosophical issues and alternatives for change.

430. Women and Violence (3) F

Women as victims and survivors of physical,

psychological, and philosophical violence.

432. Women in the City (3) F

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

440. Issues in Women's Health (3) F

cal studies of cities.

interdisciplinary range of theoretical and empiri-

Fundamentals of normal physiology and natural defense mechanisms are covered in order to understand the cause, prevention and treatment of various disorders, including reproductive organ dysfunction, infertility, PMS, complications of pregnancy, sexually-transmitted disease, cancer, etc. Gender differences in health and mortality, and the relationship between women's roles and health are also addressed.

475. Language and Gender in Cross-Cultural Perspective (3) F

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.

483. Women in Europe and America, 1500-1800 (3) F,S

Prerequisites: English 100 and upper division status. Study of representations and realities of women's lives, 1500-1800, 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

485A. History of Women in the U.S. — Early Period (3) F

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 AMST 485A and HIST 485A.

485B. History of Women in the U.S. — Since 1850 (3) S

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 AMST 485B and HIST 485B.

490. Special Topics (1-3) F,S

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) F

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) S

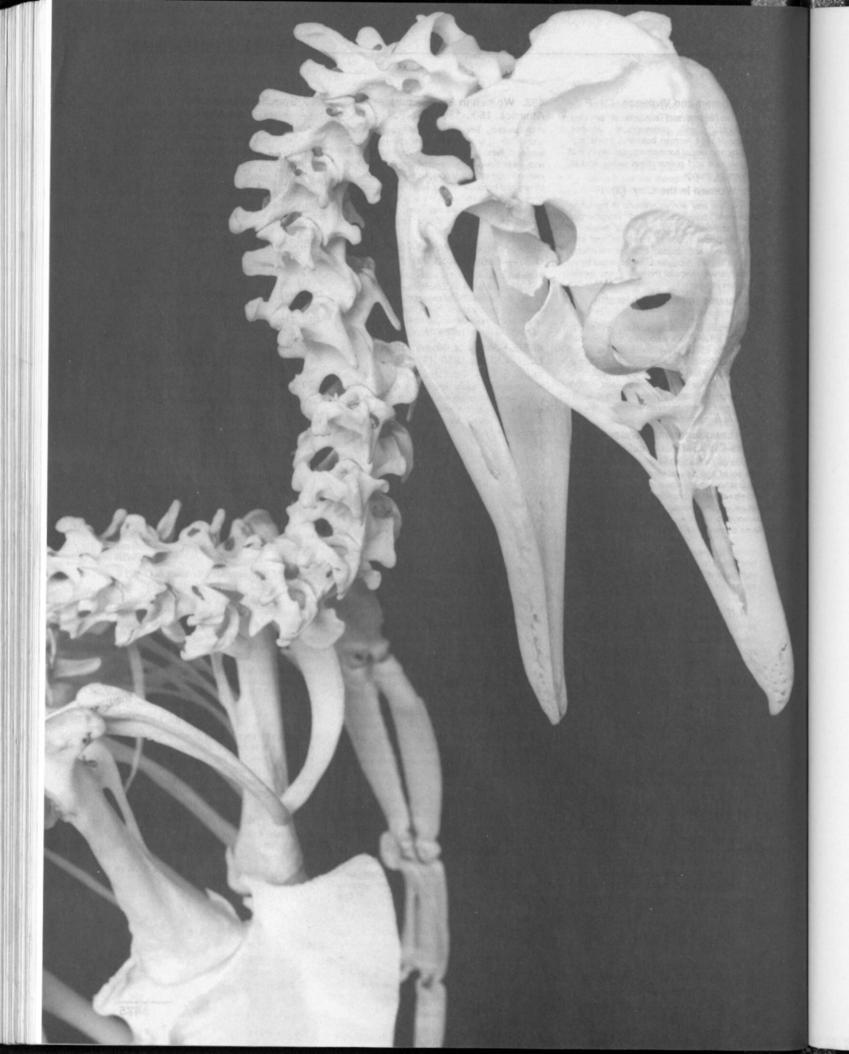
Integrates body of knowledge accumulated in multidisciplinary minor or special major. Designed as a seminar in research and methodology.

498. Field Work (1-3) F,S

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) F,S

Consent of instructor. Independent work in areas of special interest to student and instructor. May be repeated for a maximum of six units.



College of Natural Sciences and Mathematics

Acting Dean: James L. Jensen
Acting Associate Dean for
Instruction: Henry C. Fung
Acting Associate Dean for
Facilities: Robert L. Loeschen
College Office: Faculty Office 5
(FO5),Room 104
Telephone: (310) 985-4707

Recent surveys indicate that nearly 80% of the new jobs being created require a technical skill. 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 and act in a scientific way. 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.

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 and Biochemistry, Geological Sciences, Mathematics, and Physics/Astronomy, plus the Science Education Program are committed to providing an outstanding educational experience for all students.

Degrees Offered

All departments within the College of Natural Sciences and Mathematics offer both the Bachelor of Science and Master of Science degrees. The Departments of Biological Sciences, Chemistry and Biochemistry, and Physics and Astronomy also offer the Bachelor of Arts degree. Each degree has unique requirements and students should refer to a departmental section of this *Bulletin* to determine specific requirements. All students need to participate in the Enrollment and Orientation in Natural Sciences (EONS) program offered each July

(for those entering in August) and January (for those entering in January). A department advisor must be consulted early, preferably prior to the first semester of enrollment, in order to develop an appropriate academic plan consistent with career goals.

Student Research Opportunities

Faculty in the College involve more than 200 students, 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 a number 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 adjacent to the Dean's office is dedicated to facilitate the programs funded by The National Institutes of Health (MARC and MBRS), National Science Foundation (ACCESS), and Howard Hughes Medical Institute (HHMI Undergraduate Biological Science Education Program). These rooms contain mailboxes for all students supported by one of our programs and also serve as the resource center for professional and graduate school opportunities, summer research opportunities, fellowships, etc.

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, and funding is being requested from NSF and NIH for programs to foster Health Careers Opportunities, Community College Transfers, etc.

The Director is Dr. James Jensen, the Associate Directors are Dr. Roger Bauer and Dr. Henry Fung. Maria DelaCruz, Cheryl Mullenberg, and Don Sillings are full time staff responsible for fiscal and programmatic activities

Mobile Science Museum

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.

Minority Programs in Science

The University is known for its ethnic diversity. There are a host of activities and programs that involve students in science, those below have special ethnic focus. 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.

Freshman Science Enrichment and Mentoring Program, All entering science majors from underrepresented ethnic 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.

Student Organizations. There are three active organizations designed to foster interaction of students of a particular ethnicity who are majoring in science: Latinos in Science (LIS), Chicanos for Community Medicine (CCM), and Black Students in Science Organization (BSSO). These organizations are student-led and sponsor meetings and design activities on topics of particular interest and help to science students at CSULB.

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 a newly acquired Joel-1200EXII transmission electron microscope. which was obtained with funds generated from an NSF instrumentation grant. The Joel-1200EXII has a resolution of 0.14 nm and a magnification range of from 50 to 1,000,000 times. Hopefully, analytical instrumentation for elemental analysis and quantification will be acquired for the Joel-1200EXII in the near future. The EM Facility possesses additional TEMs and an AMR 1000 scanning electron microscope. The latter will be upgraded to include analytical capabilities.

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, and San Diego State 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 use the Center.

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 class-room.

Four other groups offer activities for students who are planning careers in one of the health professions (medicine, dentistry, etc.). The Organization of Preprofessional Stu-dents (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) also provides 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, 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 prehealth professions students as well as providing guidance and insight into a variety of health professions and professional schools.

Science Education Program
Director: William C. Ritz
Program Office: F05-118
Telephone: 985-4801
Faculty: Professors: Patrick F.
Kenealy, William C. Ritz; Assistant
Professor: Teny Topalian
Secretary: Delia Flores

The College of Natural Sciences and Mathematics is strongly committed to science education, K-University, focused through its Science Education Program. The activities of the Program are highly diversified, ranging from its roots in teacher preparation through science education projects of national significance. Faculty of the Science Education Program play an important role in preparing and credentialing both elementary and secondary school teachers for science teaching. Significant emphasis, as exemplified by a unique series of "Mini-Courses in Science," is also placed on providing experienced teachers with continuing opportunities to increase their science teaching effectiveness. Through its 'New Horizons' project, the Science Education Program serves scientists, engineers, and others who wish to pursue second-career opportunities in science and/or mathematics teaching. The 'Young Scholar's Ocean Science

Institute,* offered annually in the summer with the support of a grant from the National Science Foundation, provides selected high school students an opportunity to learn and explore scientific research prior to their college years. The most recent projects of the Program include: The Project to Improve Methods Courses in Elementary Science and The Minority Opportunities in Science Teaching Project (Project MOST).

In addition to 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 Program also maintains an extensive Science and Environmental Education Curriculum Materials Resource Center which includes science teaching guides, textbooks, professional journals, audio-visual materials, and computer software.

College Courses (NSCI)

200. Introduction to Computer Methods in Science (2) F

Prerequisites: Two years of high school mathematics. Introduction to computer methods used in collecting, analyzing, and presenting scientific data. Will introduce word processing, spreadsheet analysis, data base management, and statistical analysis. Essentials of programming using BASIC will be presented. (Lecture 1 hour, laboratory 3 hours.) A course fee may be required.

301. Science in the Elementary School (3) F,S

Prerequisite: Six units of course work in departments in the College of Natural Sciences and Mathematics. A sampling of the broad fields of science, emphasizing the process of science. Practice approaches to teaching elementary school sciences are integrated throughout. Equivalent to BIOL 301. Not open to students with credit in NSCI 401. (Lecture 2 hours, activities 2 hours.) A course fee may be required.

302. Elementary School Science Workshop (2) F,S

Prerequisites: BIOL 301 or NSCI 301 or NSCI 401. A practicum on the development and use of 'hands-on' elementary school science teaching/learning activities, units and learning centers. Equivalent to NSCI 302. Not open to students with credit in NSCI 401. (Lecture 2 hrs, workshop 2 hrs) A course fee may be required.

305. Workshop In Environmental Education (3) F,S

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. (Lecture 2 hours, workshop 2 hours.) A course fee may be required.

370l. Science and the New Creation Epic (3) F,S

Prerequisites: a course in the life or physical sciences, with lab; ENGL 100 and upper division status. The earliest accounts of creation and the impact of the scientific advances occurring during the nineteenth century are reviewed from historical, religious, and scientific viewpoints. The current 'evolution-creation' controversy is elucidated starting from this context, with a special focus on the evidences for the current scientific understanding of how our planet came to be as we know it. (Lecture 3 hours.)

375I. Discovery: The Serendipitous Science (3) F,S

Prerequisites: a course in the life or physical sciences, with lab; ENGL 100 and upper division status. Major scientific discoveries, while sometimes involving an element of luck or chance, are frequently serendipitous. Such discoveries are not the result of blind luck, nor are they the result directly sought from the experiments undertaken. Rather, a unique combination of circumstances arises that provides the opportunity for the serendipitous idea or observation. Illustrations from recent discoveries in the physical and life sciences are discussed, along with the appropriate basic science. A special focus is placed on the scientific, philosophical, and social factors promoting creativity, (Lecture 3 hours)

376l. Science and Modern Culture (3) F,S

Prerequisites: ENGL 100 and upper division status; at least two courses in the departments of the College of Natural Sciences and Mathematics, and two courses from the Department of History or Political Science. Study of the manner in which culture has been shaped by the enterprise of science. Issues or subtopics within emerging themes will deal with the interaction of the scientific community and other social or cultural groups during specific historical periods since the beginning of the modern scientific age. (Discussion 3 hours.)

377I. Blood Research: A Study In Landmark Discoveries (3) F,S

Prerequisites: Upper division status, ENGL 100, BIOL 200 or 210A, 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 hours.)

401. A Process Approach to Science (3) F,S

Prerequisites: BIOL 200; PHSC112; 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 NSCI/BIOL 301. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

402. Problem Solving Applications in Mathematics for Elementary Teachers (3) F,S

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.) Traditional grading only.

443./543. Laboratory Techniques In Biotechnology (3) S

Prerequisites: CHEM 443; BIOL 370 or MICR 450 and 451; MICR 453. Students will conduct laboratory experiments using techniques that are commonly used in industrial biotechnology. Students will conduct experiments on DNA, RNA, and protein isolation and characterization using procaryotic and eucaryotic cell lines of commercial importance. Hands-on experience will prepare the students for entry-level laboratory positions in the biotechnology industry. (Lecture 1 hour, laboratory 6 hours.) Traditional grading only. A course fee may be required.

490. Special Topics In Science Education (1-3) F,S

Prerequisite: 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 instructor.

492. Internships in Natural Science (3) F

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. Directed Studies In Science Education (1-3) F,S

Prerequisite: Consent of instructor. Supervised study of current topics in science education. A course fee may be required.

543./443. Laboratory Techniques In Biotechnology (3) S

Prerequisites: CHEM 443; BIOL 370 or MICR 450 and 451; MICR 453. Students will conduct laboratory experiments using techniques that are commonly used in industrial biotechnology. Students conduct experiments on DNA, RNA, and protein isolation and characterization using procaryotic and eucaryotic cell lines of commercial importance. Hands-on experience will prepare the students for entry-level laboratory positions in the biotechnology industry. (Lecture 1 hour, laboratory 6 hours.) Traditional grading only. A course fee may be required.

Department Chair: David L. Soltz

Biological Sciences

College of Natural Sciences and Mathematics

Department Office: PH1-109 Telephone: 985-4806 Faculty: Professors: Frank J. Alfieri, Rajen S. Anand, Carl R. Anselmo, James Archie, Mark C. Biedebach, Richard N. Brav. George L. Callison, David M. Carlberg, Charles T. Collins, L.K. (Vern) Eveland, Henry C. Fung. Charles P. Galt, Kenneth M. Gregory, Ju-Shey Ho, Kenneth L. Jenkins, Ira Jones, Balwant S. Khatra, Juhee Kim, Laura Kingsford, Steven L. Manley, Andrew Z. Mason, Donald L. Maurer, Alan C. Miller, Donald R. Nelson, Ruth L. Russell, Brenda M. Sanders, David L. Soltz, Toni L. Stanton, Stuart Warter; Associate Professors: Philip C. Baker, David G. Huckaby, Carol A. Itatani, Lisa Klig, Terrence A. Shuster, Edward Tiloe; Assistant Professors: Editte Gharakhanian, Mel M. Wines. Emeritus Faculty: John J. Baird, Bruce E. Beekman, James A. Bourret, Hiden T. Cox, Murray D. Dailey, Honore Dash, Robert P. Durbin, Cliff W. Hill, Everett H. Hrubant, Betty H. Kazan, Byron C. Kluss, Ronald A. Kroman, Richard G. Lincoln, Lucile McD. Logan, Greaver Mansfield-Jones. Kenneth E. Maxwell, Anna M. Parmley, Milton A. Petty, Dennis Rainey, Harkisan D. Raj, Donald J. Reish, Frank C. Schatzlein, Elbert L. Sleeper, Lee B. Stephens, Frank E. Swatek, E. Marjorie Wood. Department Secretary: Shirlee Critchfield

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

Visors.
Credential Advisor: William C. Ritz.
Undergraduate Advisors:
Biology - David G. Huckaby
Marine Biology - Donald L. Maurer
Microbiology - Carol A. Itatani
Physiology - Toni L. Stanton
Graduate Advisors:
Biology - Alan C. Miller
Microbiology - L.K. (Vern) Eveland
Health Professions Advisors:
Editte Gharakhanian, Carol A.
Itatani.

Clinical Laboratory/Medical Technology Advisor: Carol Itatani. Biological Sciences Department Advisory Council:

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 are 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 Bulletin. 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 seven degrees: both a Bachelor of Arts and 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, a Master of Science in Microbiology, and a Master of Public Health. The BS 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. The Master of Public Health has options in Medical Laboratory Supervision and Nursing Epidemiology. 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 medical technology. State-of-the-art facilities are available for graduate and undergraduate research in the W. M. Keck Cellular and Molecular Biology Laboratory, electron microscope facility, and the Molecular Ecology Institute.

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 Bulletin 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 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 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 catalogue as minimal; some graduate schools, professional schools, or careers may require additional coursework in mathematics, physics, chemistry, or biology.

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, 320B, 377A, 377B, 441A, and 441B).

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 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.

Bachelor of Arts in Biology (code 2-7621)

This degree is designed primarily for those interested in teaching high school biology; it is the liberal arts degree of this department and is designed to offer broad coverage of the many areas of study within the biological sciences without specializing in any one field. Students interested in graduate work in biology should opt for one of the B.S. degrees in this department. This degree requires a total of 71-77 units in the major, of which 43-44 are in lower division and 28-33 in upper division.

Lower Division: BIOL 210A,B, 240, 260; CHEM 111A,B; MATH 119A or 122; MICR 210; NSCI 200; and PHYS 100A,B.

Upper Division: CHEM 327 or both CHEM 320A and 320B; a minimum of 25 units in biological science including BIOL 350, 370; one of these four physiology courses: A/P 340 and 340L, 342 and 342L, 440, BIOL 447 and 447L; one of these five animal diversity/morphology courses: BIOL 313, 316, 324, 332, 333; one of these four plant diversity/morphology courses: BIOL 425, 427, 438, 439. The students entire program must include a minimum of two upper division animal biology courses and two upper division plant biology courses. Animal biology courses acceptable for this degree: A/P 335, 340, 342; BIOL 313, 314, 315, 316, 324, 332, 333, 351, 413, 417, 419, 421, 423, 424, 453, 456, 460. Plant biology courses acceptable for this degree BIOL 328, 425, 427, 438, 439, 447, 450. A/P 340 and 342 and BIOL 447 may also be used to satisfy the

physiology requirement. The remaining 2-5 of these units should be selected from above as well as other courses in consultation with a faculty advisor. The following courses are not acceptable toward these 25 biological science units: A/P 305, 307, 308I, 400, 401; BIOL 301, 302, 303I, 305; MICR 300I, 301, 302I, 321, 429; NSCI 492.

Bachelor of Science in Biology

This degree includes a general option in biology and five additional options for those desiring a more specialized program.

Biology (code 3-7621)

This option is designed for students pursuing careers that involve the study of life; it is especially approriate 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 a total of 85-87 units in the major, of which 46-48 are in lower division and 39 are in upper division, and a minimum of 132 units for graduation.

Lower Division: BIOL 210A,B, 240, 260; CHEM 111A,B; MATH 119A or 122, 119B or 123; MICR 210; NSCI 200; and PHYS 100A,B.

Upper Division: CHEM 320A, B; at least 31 units in biological science including BIOL 350, 370; A/P 340, 340L or BIOL 447, 447L; BIOL 313 or 324; one of BIOL 427, 438, 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, 307, 308I, 400, 401; BIOL 301, 302, 3031, 305; MICR 300, 301, 302, 321, 429; 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

Option in Botany (code 3-7622)

This option in 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 degree requires a total of 83-85 units in the major, of which 42-44 are in lower division and 41 in upper division, and a minimum of 132 units for graduation.

Lower Division: BIOL 210A, B. 240, 260; CHEM 111A,B; MATH 119A or 122, 119B or 123; NSCI 200; and PHYS 100A, B.

Upper Division: 41 units including CHEM 320A, B, 441A, B; BIOL 350 or 450, 370, 427, 438, 439, 447, 447L. Remaining five units selected in consultation with appropriate faculty advisor. ENGL 317 is acceptable but A/P 305, 307, 3081, 400, 401; BIOL 301, 302, 3031, 305; MICR 300I, 301, 302I, 321, 429; NSCI 492 are not acceptable toward these five units. Students contemplating graduate work should consider taking 1-3 units of BIOL 496.

Option in Ecology and Environmental Biology (code 3-7623)

This option is designed primarily for those 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 reguires a total of 90-97 units in the major, of which 46-48 are in lower division and 44-49 are in upper division, and a minimum of 132 units for graduation.

Lower Division: BIOL 210A,B, 240, 260; CHEM 111A,B; GEOL 102, 104 or 105; MATH 119A or 122, 119B or 123; NSCI 200; and PHYS

Upper Division: CHEM 320A,B; BIOL 312, 350, 370, 427; A/P 340 & 340L or BIOL 447 & 447L; one of BIOL 313, 316, 324; five additional courses including one of these 11 in organic diversity: BIOL 314, 315, 413, 417, 419, 421, 423, 424, 425, 439; one of these seven in advanced ecology: BIOL 414, 450, 453, 454, 455, 457, 458; one of these three in quantitative biology BIOL 456, 463, 465; one of these four in environmental science: BIOL

460, 464, GEOG 440, 442; and another course from any of the preceding four 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.

Option in Physiology (code 3-7624)

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. This option requires a total of 85-87 units in the major, of which 43-45 are in lower division and 42 are in upper division.

Lower Division: BIOL 210A,B, 260; CHEM 111A,B; MATH 119A or 122, 119B or 123; MICR 210; NSCI 200; and PHYS 100A, B.

Upper Division: CHEM 320A, B, 441A, B; 28 additional units in biological science including A/P 440, BIOL 370, one or more courses selected from among these four in morphology and development: A/P 335, BIOL 332, 333, 433; either A/P 340 & 340L or 342 & 342L; nine or more additional units selected from A/P 340, 342, 441, 442, 443, 444, 445, 446, 447, 480, BIOL 473. The remaining 3 of these 28 units should be selected from above or other courses in consultation with a faculty advisor. The following courses are not acceptable toward these 28 units: A/P 305, 307, 308l, 400, 401; BIOL 301, 302, 3031; MICR 3001, 301, 302l, 321, 429; NSCI 492.

Option in Zoology (code 3-7625)

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 a total of 84-88 units in the major, of which 46-48 are in lower division and 38-40 are in upper division, and a minimum of 132 units for graduation.

Lower Division: BIOL 210A,B, 240, 260; CHEM 111A,B; MATH 119A or 122, 119B or 123; either MICR 210 or GEOL 102, 104 or 105; NSCI 200; and PHYS 100A, B.

Upper Division: CHEM 320A, B; A/P 340, 340L; BIOL 312, 350, 370, 332 or 333, 313 or 316; at least one course selected from BIOL 324, 419, 421, 423, 424; 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, 307, 308I, 400, 401; BIOL 301, 302, 3021, 305; MICR 3001, 301, 302l, 321, 429; NSCI 492 will not count towards these six units. Students contemplating graduate work should consider taking 1-3 units of

Option in Cellular and Molecular Biology and Genetics (code 3-7627)

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 a total of 85-91 units in the major, of which 46-48 are in lower division and 39-43 are in upper division, and a minimum of 132 units for graduation. Students in this option might also want to pursue the Certificate in Biotechnology described elsewhere in this Bulletin.

Lower Division: BIOL 210A, B. 240, 260; CHEM 111A, B; MATH 119A or 122, 119B or 123; MICR 210; NSCI 200; PHYS 100A, B.

Upper Division: CHEM 320A, B, 441A, B; BIOL 340, 350, 370; two courses selected from A/P 440, BIOL 333, 433, 473; one course selected from BIOL 468, 477L, MICR 431, both 450 and 451, NSCI 443, CHEM 443; one course selected from A/P 445, CHEM 547, BIOL 312, both 447 and 447L, 463, 464, 465, 477; and 2-3 units of BIOL 496.

Bachelor of Science in Marine Biology (code 3-7626)

This degree is designed for students interested in careers, either in private industry or governmental service, involving the biology of organisms that live in the oceans; it is particularly appropriate for those students contemplating graduate work in this area. This degree requires a total of 92-98 units in the major, of which 42-44 are in lower division and 50-54 are in upper division, and a minimum of 132 units for graduation.

Lower Division: BIOL 210A.B. 240, 260; CHEM 111A,B; MATH 119A or 122, 119B or 123; NSCI 200; and PHYS 100A,B.

Upper Division: CHEM 320A.B: GEOL 364 & 364L or 465 & 466; A/P 340, 340L or 440; BIOL 313, 350,

353, 370, 419, 425; two courses selected from the following nine in marine science: BIOL 423, 414, 417, 420, 422, 454, 455, 458, 464, MICR 441: one course from the following six in methodology and techniques: BIOL 457, 463, 465, 468, OSS 460: and six additional units selected from upper division courses in the College of Natural Sciences and Mathematics and the Ocean Studies Institute with the approval of a marine biology advisor, including courses not already selected from the preceding lists. The following courses are not acceptable toward these six units: A/P 305, 307, 308l, 400, 401; BIOL 301, 302, 3031, 305; MICR 300I, 301, 302I, 321, 429; NSCI 492.

Bachelor of Science in Microbiology

Microbiology is the study of microorganisms and their interactions with people and the environment. There are two options leading to the Bachelor of Science in Microbiology that enable students to prepare for a variety of professional goals. 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.

Option in General Microbiology (code 3-7654)

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 78-83 units in the major, of which 36 are in lower

division and 42-47 are in upper

Lower Division: BIOL 210B; CHEM 111A.B. 251; MATH 112 or 119A or an appropriate college-level mathematics course selected in consultation with departmental advisor; MICR 210; NSCI 200; PHYS 100A,B.

Upper Division: A/P 342; CHEM 327 or both 320A and B, 441A, B; a minimum of 30 units of microbiology courses including: MICR 320, 330, 360, 452, 471, 450 and 451 or BIOL 370. The remaining 6 units in microbiology are to be selected in consultation with a faculty advisor. The following courses are not acceptable towards these 6 units: MICR 300I, 301, 302I, 321, 429.

Option in Medical Microbiology (Laboratory Technology) (code

This option emphasizes the hostparasite relationships of humans and microbes and prepares students for careers in clinical laboratory (medical) technology, medical research, and related areas. This option requires a total of 78-86 units in the major, of which 36 are in lower division and 42-50 are in upper division.

Lower Division: BIOL 210B: CHEM 111A,B, 251; MATH 112 or 119A or an appropriate college-level course selected in consultation with departmental advisor; MICR 210; NSCI 200: PHYS 100A.B.

Upper Division: A/P 342; CHEM 327 (or both 320A and B), 448M (or both 441A and B), a minimum of 30 units of microbiology courses including: MICR 320, 322, 323, 330, 360, 452. The remaining 6 units in microbiology are to be selected in consultation with a faculty advisor. The following courses are not acceptable towards these 6 units: MICR 3001, 301, 3021, 321, 429.

Minor in Biology (code 0-7621)

for the minor. Lower Division: BIOL 210A and

A minimum of 19 units is required

210B.

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, 308l, 401; BIOL 301, 302, 305; MICR 300I, 301, 302I, 321,

Minor in Microbiology (code 0 - 7654)

A minimum of 21 units which must include:

Lower Division: MICR 210;

Upper Division: MICR 320, 330, 471, and any one of the following seguences: (a) MICR 322 and 496 or (b) 360 or (c) 452 and 453.

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, 335, 340, 340L, 342, 342L, 440, 441, 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. 441B, 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, 111B, and BIOL 210A, 210B as prerequisites; some have other prerequisites in ad-

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 Bulletin. Co-directors of the CSULB biomedical art program are in Art, Mr. Peter Mendez, assistant professor; 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 fundamental 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 for the Certificate in Biotechnology:

- 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 240 (or 334); BIOL 370; MICR 210;
- Consent of the biotechnology certificate program director

Requirements for the Certificate in Biotechnology:

- A baccalaureate degree (can be concurrent);
- Completion of the program's prerequisite course requirements;
- Approval by the Program Director;
- 4) Completion of the Core Curriculum: BIOL 477/577 (3); BIOL 477L/577L (4); A/P 480/580 (1); BIOL 473/573 (3); BIOL 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: A/P 496; BIOL 496; CHEM 496; or MICR 496 (undergraduate students) OR A/P 697; BIOL 697; CHEM 697; or MICR 697 (graduate students)
- Total Units Required for Certificate: 18 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 is for either concurrent enrollment or summer enrollment. University policy must also be met. See 'Concurrent Enrollment' and 'Transfer of Undergraduate Credit' in this Bulletin. 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 graduate office.

Admission to the Department:

Prerequisites:

In addition to the prerequisites for entrance into CSULB as a graduate student stated previously in this *Bulletin* under Graduate Degrees and Post Baccalaureate Studies, the Department of Biological Sciences requires:

- (1) A bachelors 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,...
- (2) An undergraduate grade point average in all completed science and math 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 math 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. By the end of the second semester in residence one of these tests must be passed at, or above, the 50th percentile. The GRE Subject Test must have been taken within five years prior to the intended admission date.

Application:

Prospective graduate students in M.S. in Biology, including CSULB graduates, must formally apply for admission to CSULB as described previously in this *Bulletin* 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 departmental graduate 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) Two letters of recommendation from persons familiar with the applicant's academic performance and research potential;
- (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.

Review by the Graduate Studies Committee:

The Graduate Studies Committee will review all folders completed by the deadlines and recommend either acceptance of the applicant as a classified or conditionally classified graduate student or deny admission. All accepted students who expect to enroll in the next semester must schedule an interview with the Graduate Advisor during the in-person registration period that initial semester. This interview will focus on counseling and orienting the applicant with special attention to any academic deficiencies.

Admission to the Department of Biological Sciences as a Classified Graduate Student (7621-52)

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 below).

Admission to the Department of Biological Sciences as a Conditionally Classified Graduate Student (7621-51)

Applicants who fail to meet the criteria above for classified admission to the department and who fall into one of the following three categories may be considered by the Graduate Studies Committee for admission as Conditionally Classified Graduate Students:

(1) Applicants 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) Applicants with GPA deficiencies. An applicant with a 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, applicants with low GPA must contact potential thesis advisors before the Graduate Studies Committee can consider the application. In addition, an applicant receiving Conditional Classification must complete, with a grade of A or B, three approved courses totalling 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 cannot continue pursuit of a Master's degree in this department. An applicant who fails to meet the GPA criteria for normal, classified admission and with either an undergraduate GPA in science and math courses of less than 2.50 or a GPA in the last 40 semester (60 quarter) units of science and math courses of less than 2.75 is not eligible for admission to the M.S. in Biology Degree Program.

(3) Applicants who meet all prerequisites but who do not yet have a chair for the thesis committee. All students must 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 must establish a program of study. 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 then 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 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 pro-

Advancement to Candidacy:

In addition to the general university requirements stated previously under Post-Baccalaureate and Graduate Degrees in this *Bulletin*, the student must complete the following steps before receiving Candidate status (7621-53) 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) Pass the University Writing Proficiency Examination (WPE);
- (3) Establishment of a thesis committee and program of study (see above);
- (4) 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 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 three faculty members selected by the Graduate Studies Committee. No member of the student's Thesis Committee may serve on this committee. The Graduate Advisor will normally also participate in the examination.

Requirements for the Master of Science in Biology (code 6-7621)

In addition to the general University requirements stated previously in this *Bulletin*, the student must meet the following requirements before receiving the degree of Master of Science in Biology.

- (1) Advancement to candidacy (see above);
- (2) Each program must include six units of Thesis (BIOL 698), one-three units of Directed Research (BIOL 697), one unit of Seminars (A/P 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 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 two 300-level courses may be included.
- (3) 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 their graduate program.

- (4) Completion of a written thesis and the oral presentation of the thesis research. The members of the candidate's thesis committee must read and approve of the thesis before the student may schedule the oral presentation. The student may not complete the thesis or give an oral presentation during the summer session.
- (5) Recognizing that effective organization and verbal communication of biological information and ideas are a necessary part of a successful graduate program, the Department of Biological Sciences normally requires that a graduate student serves as a teaching assistant or graduate assistant as part of the Master of Science program.

Master of Science in Microbiology

This degree is available to qualified students preparing for professional careers in the paramedical sciences in industry and government, and those preparing for further studies at the doctoral level. In addition, a masters degree in microbiology, combined with appropriate courses in education, can be utilized for a community college teaching credential.

Inquiries concerning the graduate program in microbiology and requests for application forms for graduate admission should be directed to the Department Graduate Advisor. Prospective graduate students in microbiology, including CSULB graduates must formally apply for admission to CSULB as described in the University Bulletin and also apply directly to the Department of Biological Sciences. Application packets are available from the Department Graduate Office. Preference will be given to applicants filing applications before March 15 for the fall semester and before October 15 for the spring semester. All applicants should submit their applications, original transcripts and three letters of recommendation to the Graduate Advisor before the above dates. Transcripts and letters of recommendations must be sent directly to the Graduate Advisor.

Teaching assistantships and graduate assistantships are available within the resources of the

Department to qualified individuals.
Requests for application forms should be directed to the Department's Graduate Office.

Prerequisites:

A bachelor's degree with a major in microbiology or related fields from an a accredited institution, with a GPA of 2.7 (on a 4.0 scale) in undergraduate science courses. Applicants must have completed or will complete prior to admission to classified graduate standing in the Microbiology Graduate Program the following core courses:

Biochemistry (CHEM 441 A,B or their equivalent; 6 semester units)

Molecular or Cellular Biology (BIOL 240 or 340 or equivalent; 3 semester units)

General Microbiology with Laboratory (MICR 210 or equivalent; 4-5 semester units)

Two upper division Microbiology Laboratory courses (4 or more semester units)

In addition applicants should have completed 24 semester units or their equivalent of Upper Division courses appropriate for a baccalaureate degree in microbiology or related fields. Upper division courses already completed which satisfy any of the "core courses" may be included in determining these 24 units. It is expected that students will have achieved or will achieve a grade of "B" or better in each "core course". (Students who received a grade of "C" in any "core course" may be required to demonstrate proficiency in the subject through additional coursework. Students who received a grade of D or less in any "core" course must repeat the course or its equivalent). The Department's Graduate Committee will review each applicant's records to determine the student's overall caliber for graduate studies, evaluate transcripts to detect any academic deficiencies and counsel the student in his/her chosen discipline. A qualified student is thus admitted with conditionally classified graduate standing to the graduate degree curriculum in microbiology.

Advancement to Candidacy

(1) A 3.0 GPA and the completion of all academic deficiencies and incompletes

- (2) The satisfactory completion of the University Writing Proficiency Examination.
- (3) As early as possible and within one year after acceptance by the Department as a conditionally classified graduate student, each graduate student must choose a thesis advisor who will establish the student's thesis committee consisting of at least three members (including the thesis advisor and at least one other member of the Department with expertise specific to the student's chosen field of interest in microbiology).
- (4) The thesis committee will formulate the student's graduate degree program (a minimum of 30 units).
- (5) Upon evidence of satisfactory progress and completion 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.
- (6) Requests to graduate must be received by Enrollment Services during the preceding May for Spring/Summer graduation or preceding December for Fall graduation. Filings after the deadline are not accepted.

Requirements for the Master of Science in Microbiology (Code 6-7654)

(1) 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. Required courses include:

MICR 450 or an upper division/graduate course in genetics; MICR 471 or an upper division/graduate course in cell physiology; MICR 550A-H courses (minimum: any two of the seven courses); MICR 694; MICR 695 (minimum of one and a maximum of two enrollments in different topic areas); MICR 697 (maximum of 3 units, Independent research/ intensive study approved under guidance of a faculty member. Work completed is not research for the thesis.); MICR 698 (minimum of 4 units and a maximum of 6 units. Two units to include literature search, written proposal, and presentation to student's thesis committee). Other elective units included in the graduate program must be 400-600 level courses acceptable to the University and Microbiology degree program;

- (2) A reading knowledge of a foreign language or computer competency may be required, depending upon the candidate's program of study as recommended by the candidate's Thesis Committee;
- (3) Completion of an approved thesis based on original scientific research:
- (4) A final comprehensive examination including the oral defense of the thesis will be administered by each candidate's Thesis Committee. It will be open to all faculty and the public.

Master of Public Health

The Master of Public Health degree is planned for professionals who have already had experience within a health-related field. It is designed to be completed within 12 months of full-time study. There is a core curriculum with two options. Rather than a thesis, field experience and a comprehensive examination are required. The program has few elective courses. The Department of Biological Sciences offers two options under this degree program.

Option in Medical Laboratory Supervision (code 7-7657)

This option provides advanced instruction necessary for licensed laboratory personnel to advance to senior laboratory and supervisory positions.

Option in Nursing Epidemiology (code 7-7656)

This option provides advanced instruction for licensed nurses with bachelor degrees who wish to be infection control nurses or practicing epidemiologists in hospitals and hospital-related environments.

Prerequisites:

Criteria for admission to the program are: (1) a bachelor's degree in biological science with medical laboratory emphasis for the medical laboratory supervisor option, or a bachelor's degree in nursing for the nurse epidemiology option; (2) minimum overall GPA of 2.5; (3) three letters of recommendation; and (4) two years of full-time professional experience.

Advancement to Candidacy

- (1) Upon acceptance by the Department, a committee will be established for each student specific to her/his chosen and related fields of interest:
- (2) After satisfactory completion of all prerequisites, the committee will recommend the qualified student for advancement to candidacy.

Requirements for the Master of Public Health

- (1) Completion of 30 units of approved course work, of which at least 15 must be in 500 and 600 level courses;
- (2) Satisfactory performance in the field experience;
- (3) A final comprehensive examination after course work and field experience are completed.

All students must take the following core curriculum: BIOL 562 or 565, MICR 429, HCA 500, H/SC 528.

For Option I, Medical Laboratory Supervisor, the following courses are required: EE 407, MICR 526, 546, 691, 696.

For Option II, Nurse Epidemiologist, the following courses are required: EE 407, MICR 425, 427, 691, 696.

For both degree options a student who wishes to demonstrate prior competence by examination and/or course work in either a core or option requirement may be permitted to substitute a course(s) in the same or a related area with the approval of both the student's faculty advisor and an instructor of the specific course(s) in which the student seeks to demonstrate her/his prior competence to complete the total of 30 units required for the degree. Elective courses for the two options may be selected from upper division or graduate courses in microbiology, biology, chemistry, psychology or business administration, in consultation with the faculty advisor and the advisory committee.

Courses (A/P)

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 Body-Structure and Function (3) F,S

Brief survey of structure and function of human systems. Designed for those who desire basic understanding of the body. Not designed for majors in the College of Natural Sciences and Mathematics. (Lec 2 hrs, lab 3 hrs.) A course fee may be required.

202. ## Human Anatomy (3) F,S

General introduction to the structure of human body systems with emphasis on skeletal and muscular systems. Not designed for majors in the College of Natural Sciences and Mathematics. (Lec 2 hrs, lab 3 hrs) A course fee may be required.

206. ## Essentials of Pharmacology (2) F,S

Prerequisite: A/P 209. 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 hours.)

207. ## Human Physiology (4) F,S

General introduction to the functional integration of human body systems. Not designed for majors in the College of Natural Sciences and Mathematics. (Lec 3 hrs, lab 3 hrs.) A course fee may be required.

208. ## Human Morphology (4) F,S

The gross anatomy, histology and neuroanatomy of the human body. Designed primarily for majors in nursing, biomedical engineering and bio-medical art. Not open to students with credit in A/P 202 except by consent of instructor. (Lecture 3 hrs, lab 3 hrs). A course fee may be required.

Courses (A/P)

209. ## Applied Physiology (4) F,S

Prerequisites: A/P 202 or 208, CHEM 201A or equivalent. A/P 208 may be taken concurrently. Principles of human physiology. Designed primarily for majors in nursing and related disciplines. (Lecture 3 hours, laboratory 3 hours.) A course fee may be required.

Upper Division

305. ## Pathophysiology (3) F,S

Prerequisites: A/P 208, 209; CHEM 201B; MICR 210. 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. (Lec 3 hrs.)

307. ## Physiology for Therapists (4) F,S

Prerequisites: Admission to the Professional Physical Therapy Program or consent of instructor. Mechanisms of action and interaction of the various body systems, including the implications related to clinical and therapeutic treatment procedures. Not designed for majors in the College of Natural Sciences and Mathematics. (Lecture 3 hrs, laboratory 3 hrs.) A course fee may be required.

308l. ## 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. (Lec 3 hrs)

*335. Histology (3) S

Prerequisite: BIOL 210B. Microscopic anatomy of animals; nature and characteristics of tissues, organs and organ systems; emphasis on human histology. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

*336. Human Prosection (3) F,S

Prerequisite: Consent of instructor. Detailed regional dissection of the human body with emphasis on dissection technique. May be repeated once for credit. Repeatable to a maximum of 6 units with different topics. (Lecture 1 hr. lab 6 hrs.) A course fee may be required.

*340. Comparative Animal Physiology (3) F,S

Prerequisite: BIOL 2108; CHEM 111A,B. Comparison of the fundamental physiological processes of the major animal phyla. (Lec 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 hours.) A course fee may be required.

*342. Mammalian Physiology (3) F.S

Prerequisites: BIOL 210B; CHEM 111A,B. 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 hours.) A course fee may be required.

401. ## Biology of Human Aging (3) F

Prerequisite: A/P 107 or 207 or 209 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 hours.)

*440. Cell Physiology (4) F,S

Prerequisites: CHEM 327 or 321A; PHYS 100A,B; BIOL 260, either 240 or 370. Mechanisms of cell physiology in multicellular organisms, with emphasis on structure and function of specialized cell types and intra- and inter-cellular communication. (Lecture 3 hours, laboratory 3 hours.) A course fee may be required.

441./541. Cardiovascular Physiology (3) S

Prerequisite: A/P 340 or 342; PHYS 100A-B. (Undergraduates register in A/P 441; graduates register in A/P 541.) Functions of the cardiac, vascular and blood systems in the vertebrate animal. (Lecture 3 hours.)

442./542. Neurophysiology (2) F

Prerequisites: Physics 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 2 hours.)

442L./542L. Neurophysiology Laboratory (1) F

Prerequisite or corequisite: A/P 442/542. (Undergraduates register in A/P 442L; graduates register in A/P 552L.) Laboratory study of selected vertebrate and invertebrate neurophysiological systems with particular emphasis upon the instrumentation required and also upon any single cell microelectrode penetration procedures that may be involved. (Laboratory 3 hours.) A course fee may be required.

443./543. Endocrinology (3) F,S

Prerequisites: CHEM 327 or 320A; six units selected from BIOL 240, 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. (Lec 3 hrs.)

444./544. Experimental Endocrinology (3) F

Prerequisite: A/P 443. (Undergraduates enroll in A/P 444; graduates enroll in A/P 544.) Laboratory techniques basic to the understanding of endocrinology. Quantitative experiments concerning the endocrine control of metabolism, reproduction, differentiation, and adaptation in organismic and molecular biology. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

445./545. Metabolic Regulation (3) S

Prerequisites: CHEM 441B or A/P 440 or A/P 443/543. (Undergraduates 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 hours.)

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 hours.)

447./547. Cell and Molecular Neurobiology (3) S

Prerequisites: CHEM 327 or 320A; six units selected from BIOL 240, 340, 370, A/P 342, 440, 442/542, 443/543, 445/545, CHEM 441A, B; or PSY 342. (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 hours.)

Courses (A/P)

480./580. Seminars in Physiology and Cell Biology (1) F,S

Prerequisite: Consent of instructor. (Undergraduates enroll in A/P 480; graduates enroll in A/P 580.) Topics on current research in physiology and/or cell biology presented by local and visiting scientists or by graduate students. Requires participation in the organization of the seminars and in the critical evaluation of these presentations. May not be repeated for credit towards any single degree. (Lecture 1 hour).

490./590. Special Topics in Physiology (1-4) F,S

Prerequisites: BIOL 210A,B with grade of 'C' or better, consent of instructor. (Undergraduates enroll in A/P 490; graduates enroll 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 eight units toward any single degree. Topics may be announced in the Schedule of Classes. (Lecture 0-3 hours and/or laboratory 0-6 hours). A course fee may be required.

Graduate Division

541./441. Cardiovascular Physiology (3) S

Prerequisite: A/P 340 or 342; PHYS 100A-B. (Undergraduates register in A/P 441; graduates register in A/P 541.) Functions of the cardiac, vascular and blood systems in the vertebrate animal. (Lecture 3 hours.)

542./442. Neurophysiology (2) F

Prerequisites: Physics 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 2 hours.)

542L./442L. Neurophysiology Laboratory (1) F

Prerequisite or corequisite: A/P 442/542. (Undergraduates register in A/P 442L; graduates register in A/P 542L.) Laboratory study of selected vertebrate and invertebrate neurophysiological systems with particular emphasis upon the instrumentation required and also upon any single cell microelectrode penetration procedures that may be involved. (Laboratory 3 hours.) A course fee may be required.

543./443. Endocrinology (3) F,S

Prerequisites: CHEM 327 or 320A; six units selected from BIOL 240, 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 hours.)

544./444. Experimental Endocrinology (3) F

Prerequisite: A/P 443. (Undergraduates enroll in A/P 444; graduates enroll in A/P 544.) Laboratory techniques basic to the understanding of endocrinology. Quantitative experiments concerning the endocrine control of metabolism, reproduction, differentiation and adaptation in organismic and molecular biology. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

545./445. Metabolic Regulation (3) S

Prerequisites: CHEM 441B or A/P 440 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 hours.)

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 hours.)

547./447. Cell and Molecular Neurobiology (3) S

Prerequisites: CHEM 327 or 320A; six units selected from BIOL 240, 340, 370, A/P 342, 440, 442/542, 443/543, 445/545, CHEM 441A, B; PSY 342. (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 hours.)

580./480. Seminars in Physiology and Cell Biology (1) F,S

Prerequisite: Consent of instructor. (Undergraduates enroll in A/P 480; graduates enroll in A/P 580.) Topics on current research in physiology and/or cell biology presented by local and visiting scientists or by graduate students. Requires participation in the organization of the seminars and in the critical evaluation of these presentations. May not be repeated for credit towards any single degree. (Lecture 1 hour)

590./490. Special Topics in Physiology (1-4) F,S

Prerequisites: BIOL 210A,B with grade of "C" or better, consent of instructor. (Undergraduates enroll in A/P 490; graduates enroll 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 eight units toward any single degree. Topics may be announced in the Schedule of Classes. (Lecture 0-3 hours and/or laboratory 0-6 hours). A course fee may be required.

661. Seminar in Anatomy and Physiology (1) F,S

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques.

Courses (BIOL)

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,W,S,SS

Biological perspective on the interaction between humans and their environment. Specifically designed for non-science majors. (Lecture 3 hours.)

200. ## General Biology (4) F,S

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

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 hours, laboratory and field 3 hours.) Field trips may be required outside of scheduled class time. A course fee may be required.

210A. Biological Science I (5) F,S

Prerequisites: CHEM 111A. The first semester of a two-semester sequence designed for biological science majors. Principles of biological science: an introduction to cell structure, cell metabolism, molecular biology, and the biology of photosynthetic organisms. Not open to students with credit in BIOL 212. (Lecture 3 hours, laboratory 6 hours.) A course fee may be required. (BIOL 210A&B, CAN BIOL SEQ A)

Courses (BIOL)

210B. Biological Science II (5) F,S

Prerequisites: BIOL 210A (Microbiology majors may substitute MICR 210), CHEM 111B. The second semester of a two-semester sequence designed for biological science majors, Continuation of the principles of biology: an introduction to heredity, evolution, ecology, and the biology of heterotrophic organisms. Not open to students with credit in BIOL 216. (Lecture 3 hours, laboratory 6 hours.) A course fee may be required. (BIOL 210A&B, CAN BIOL SEQ A)

240. Introduction to Cell and Molecular Biology (3) F,S

Prerequisites: BIOL 210A, CHEM 111A,B with a grade of "C" or better. The behavior and composition of biological macromolecules and how they are organized into cellular components; structure and function of subcellular organelles; introduction to recombinant DNA technology and its applications in cell and molecular biological research. Not open to students with credit in BIOL 334. (Lecture 3 hours.)

260. Biostatistics (3) F,S

Prerequisites: BIOL 210A, MATH 112 or 119A. Use of probability and statistics in the description and analysis of biological data. (Lecture 2 hrs, lab 3 hrs.) A course fee may be required.

Upper Division

301. ## Science in the Elementary School (3) F,S

Prerequisites: Six units of course work in departments of the College of Natural Sciences and Mathematics. A sampling of the broad fields of science, emphasizing the processes of science. Practical approaches to teaching elementary school science are integrated throughout. Same course as NSCI 301. Not open to students with credit in NSCI 401. (Lecture 2 hours, activities 2 hours.) A course fee may be required.

302. ## Elementary School Science Workshop (3) S

Prerequisites: BIOL 301 or NSCI 301. A practicum on the development and use of 'handson' elementary school science teaching/learning activities, units and learning centers. Same course as NSCI 302. Not open to students with credit in NSCI 401. (Lecture 2 hrs, workshop 2 hrs.) A course fee may be required.

303l. ## Coastal Systems and Human Impacts (3) F,S

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 GEOL 303. (Lecture 3 hours)

305. ## Workshop In Environmental Education (3) F,S

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. (Sem 2 hrs, wrkshp 2 hrs.) A course fee may be required.

*312. Evolutionary Biology (3) F

Prerequisites: BIOL 210A, BIOL 210B, 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. (Lecture 3 hours.)

*313. Invertebrate Zoology (4) F,S

Prerequisite: BIOL 210A,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 hours, laboratory and field 6 hours.) A course fee may be required.

*314. Biology of the Protozoa (4)

Prerequisites: BIOL 210A,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 hours, laboratory 6 hours.) A course fee may be required.

*315. General Animal Parasitology (4) S

Prerequisites: BIOL 210A,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 hours, laboratory: 6 hours) A course fee may be required.

*316. General Entomology (3) F.S

Prerequisites: BIOL 210A,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 hours, laboratory 3 hours.) A course fee may be required.

*324. Vertebrate Zoology (4) F.S

Prerequisite: BIOL 210A,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, 423 or 424. (Lecture 2 hours, laboratory 6 hours.) A course fee may be required.

328. Plants and Human Affairs (3) F,S

Prerequisites: BIOL 210A,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 hours.)

*332. Comparative Anatomy (4) F.S

Prerequisite: BIOL 210A,B with grade of "C" or better. History of vertebrate structures: application of anatomy to phylogeny, taxonomy and functional morphology. (Lecture 2 hours, laboratory 6 hours.) A course fee may be required.

*333. Vertebrate Embryology (4) F,S

Prerequisite: BIOL 210A,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 hours, laboratory 6 hours.) A course fee may be required.

*340. Advanced Cell Biology (3) F,S

Prerequisites: BIOL 210A,B, 240; CHEM 320A,B; PHYS 100A,B; all with grade of "C" or better. Complements and builds upon BIOL 240. A detailed study of the molecular and supramolecular organization and functioning of organelles and cells. Cell bioenergetics and metabolism with special emphasis on the access of biological information and structure/function relationships. Individual research paper on a current aspect of cellular/molecular biology required. Not open to students with credit in BiOL 334. (Lecture 3 hours)

*350. General Ecology (3) F,S

Prerequisites: BIOL 210A,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 hours, and two required Saturday field trips.)

*351. Animal Behavior (4) F,S

Prerequisite: BIOL 210A,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 hours, laboratory 3 hours.) A course fee may be required.

*353. Marine Biology (3) F,S

Prerequisites: BIOL 260, 313. Study of pelagic and benthic marine ecosystems, including topics of food resources, mariculture and pollution. Weekend field trips may be required. (Lecture 2 hours, laboratory and field 3 hours.) A course fee may be required.

Courses (BIOL)

370. General Genetics (4) F,S

Prerequisites: BIOL 210A,B, with grade of 'C' or better, 240, 260 or CHEM 441A,B and consent of instructor. 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 hours, laboratory 3 hours.) A course fee may be required.

413./513. Marine Zooplankton (4) S, Even Years

Prerequisite; BIOL 313, may be taken concurrently. (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 hours, laboratory and field 6 hours.) A course fee may be required.

414./514. Marine Ornithology (3)

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 attendence on field trips required. (Lecture 1 hour, laboratory and field 6 hours.) A course fee may be required.

417./517. Biology of Marine Benthic Invertebrates (3) S, Odd Years

Prerequisites: BIOL 313, 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 hours, laboratory and field 3 hours). A course fee may be required.

*419. Ichthyology (3) F

Prerequisites: BIOL 210A,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 hours, laboratory 3 hours.) A course fee may be required.

420./520. Advanced lchthyology (2) S, Even years

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 hour, laboratory and field 3 hours.) A course fee may be required.

*421. Herpetology (3) S, Odd Years

Prerequisites: BIOL 210A,B with grade 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. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

422./522. Advanced Ornithology (2) F

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 hour, laboratory 3 hours.) A course fee may be required.

*423. Mammalogy (3) F, Even Years

Prerequisites: BIOL 324 or 332. Evolutionary survey of the living mammals of the world. Emphasis on the adaptation of the major taxa to their environments. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

*424. Ornithology (3) S, Even Years

Prerequisites: BIOL 210A,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 hours, laboratory and field 3 hours.) A course fee may be required.

*425. Phycology (3) F,S

Prerequisites: BIOL 210A,B with 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 hours, laboratory and field 3 hours.) A course fee may be required.

*427. Taxonomy of Vascular Plants (4) S

Prerequisite: BIOL 210A,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 hours, laboratory and field 6 hours.) A course fee may be required.

433./533. Developmental Biology (4) S

Prerequisites: BIOL 240, 370; CHEM 320A,B. (Undergraduates register in BIOL 433; graduates 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 3-4 hours, laboratory 0-3 hours). A course fee may be required.

*438. Plant Anatomy (3) F

Prerequisite: BIOL 210A,B with grade of 'C' or better. Structure and growth of meristems; development and structure of cells, tissues and tissue systems; comparative anatomy of leaf, stem and root. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

*439. Plant Morphology (4) S

Prerequisite: BIOL 210A,B with grade of "C" or better. Comparative structure, life history and phylogenetic relationships of plants. (Lecture 2 hours, laboratory 6 hours.) A course fee may be required.

*447. Plant Physiology (3) F

Prerequisites: BIOL 210A,B with grade 'C' or better; CHEM 327. Photosynthesis and other anabolic syntheses, respiration, mineral nutrition, water relationships, growth and development of plants. (Lecture 3 hours.)

*447L. Plant Physiology Laboratory (1) F

Prerequisite: BIOL 447 (may be taken concurrently). Laboratory experiments in plant physiology. (Laboratory 3 hours.) 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 hours, laboratory and field 3 hours.) A course fee may be required.

*453. Insect Ecology (3) S

Prerequisite: BIOL 316. Field and experimental studies of abundance dispersal, distribution and behavior. (Lecture 2 hours, laboratory and field 3 hours.) A course fee may be required.

454./554. Research in Tropical Marine Ecology (2) S, Even Years

Prerequisites: BIOL 260, either 350 or 353. (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 hour, 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 hours, field 3 hours.) A course fee may be required.

Courses (BIOL)

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. (Lec.)

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. (Lec 2 hrs, lab 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. (Lec 3 hrs, lab and field 3 hrs) Course fee may be required.

460./560. Biological Control (3) F

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. (Lec 3 hrs.)

463./563. Computer Applications in Biology (4) S

Prerequisites: BIOL 260, 350 or consent of instructor. (Undergraduates register in BIOL 463; graduates register in BIOL 563.) Computer programming in the biological sciences. Emphasis on simulation, modeling, and use of statistical packages. (Lecture 3 hours, lab 3 hours.) A course fee may be required.

*464. Environmental Toxicology (3) F

Prerequisites: BIOL 210A,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 hours.)

465./565. Advanced Biostatistics (4) F

Prerequisites: BIOL 260; six units of upper division biological science or consent of instructor. (Undergraduates register in BIOL 465; graduates register in BIOL 565.) The application to problems in biology of advanced statistical techniques such as analysis of variance and covariance, multiple regression, experimental

design, and multivariate statistics. Laboratory experience in analyzing biological data with a computerized statistical package. (Lecture 3 hrs, lab 3 hrs). A course fee may be required.

468./568. Principles and Applications of Electron Microscopy (4)

Prerequisites: BIOL 210A,B, 240; 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 hours, lab 6 hours.) 'A course fee may be required.

473./573. Molecular Genetics (3)

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 hours.)

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 hours.)

477L./577L. Biotechnology: Recombinant DNA Laboratory (4) F

Prerequisites: Concurrent enrollment in BIOL 477 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 hours.) A course fee may be required.

480./580. Seminars (1) F,S

Prerequisites: BIOL 210A,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 hour.)

*490. Special Topics in Biology (1-4) F,S

Prerequisites: BIOL 210A,B with grade of "C" or better, consent of instructor. Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit for a maximum of eight units toward any single degree. Topics may be announced in the Schedule of Classes. (Lecture, laboratory, and/or field.) A course fee may be required.

495. Supervised Laboratory Techniques (1-2) F,S

Prerequisite: BIOL 210A,B with grade of 'C' or better. Experience for upper division students in the organization of and techniques for a laboratory in biology. Includes individual supervision of directed teaching. A written report will usually be required. May be repeated for a maximum of two units. (Conference 1 hour, laboratory 3 hours per unit.)

496. Investigations in Biology (1-3) F,S

Prerequisites: BIOL 210A,B with grade of *C* or better, consent of instructor. Research in a specific subject in biology. Topic of study to be approved and directed by a faculty member in the Department of Biological Sciences. A written report will usually be required. May be repeated to a maximum of 3 units. Not available to graduate students. (Conference 1 hour, lab 3 hours per unit.) A course fee may be required.

Graduate Division

513./413. Marine Zooplankton (4) S

Prerequisite: BIOL 313, may be taken concurrently. (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 hours, laboratory and field 6 hours.) A course fee may be required.

514./414. Marine Ornithology (3)

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 hour, laboratory and field 6 hours.) A course fee may be required.

517./417. Biology of Marine Benthic Invertebrates (3) S, Odd Yrs

Prerequisites: BIOL 313, 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 hours, laboratory and field 3 hours). A course fee may be required.

520./420. Advanced lchthyology (2) S,Even years

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, lab and field 3 hours.) A course fee may be required.

Courses (BIOL)

522./422. Advanced Ornithology (2) F

Prerequisite: BIOL 424 or consent of instructor. (Undergraduates register in BIOI 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. (Lec 1 hr, lab 3 hrs.) A course fee may be required.

533./433. Developmental Biology (4) S

Prerequisites: BIOL 240, 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 garnetogenesis, fertilization, differential gene expression, and role of oncogenes in development. (Lecture/discussion 3-4 hours, lab 0-3 hours). 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 hours, laboratory and field 3 hours.) A course fee may be required.

554./454. Research in Tropical Marine Ecology (2) S, Even Yrs

Prerequisites: BIOL 260, either 350 or 353. (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 hour, 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 hours, field 3 hours.) A course fee may be required.

556./456. Advanced Population Ecology (3) S, Even Years

Prerequisites: BIOL 350, MATH 1198 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. (Lec-

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 echniques. Five weekend field trips required. (Lecture 2 hours, laboratory and field 3 hours.) A course fee may be required.

558./458. Ecology of Marine Plankton (4) S, Odd Years

Prerequisites: BIOL 260, 353, CHEM 327, MATH II9A. (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 hours, laboratory and field 3 hours.) A course fee may be required.

560./460. Biological Control (3) F

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 hours.)

563./463. Computer Applications in Biology (4) S

Prerequisites: BIOL 260, 350 or consent of instructor. (Undergraduates register in BIOL 463; graduates register in BIOL 563.) Computer programming in the biological sciences. Emphasis on simulation, modeling, and use of statistical packages. Not open to students with credit in BIOL 362. (Lecture 3 hours, laboratory 3 hours.) A course fee may be required.

565./465. Advanced Biostatistics (4) F

Prerequisites: BIOL 260; six units of upper division biological science or consent of instructor. (Undergraduates register in BIOL 465; graduates register in BIOL 565.) The application to problems in biology of advanced statistical techniques such as analysis of variance and covariance, multiple regression, experimental design, and multivariate statistics. Laboratory experience in analyzing biological data with a computerized statistical package. (Lecture 3 hours, laboratory 3 hours). A course fee may be required.

566. Research Methods (3) F,S

Prerequisites: BIOL 260. Practical experience in the skills necessary for publication and presentation of biological research, including writing, computer editing, figure preparation and photography. (Lecture 2 hours, laboratory, 3 hours.) A course fee may be required.

568./468. Principles and Applications of Electron Microscopy (4)

Prerequisites: BIOL 210A,B, 240; 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 micros-

copy. 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 hours, laboratory 6 hours.) A course fee may be required.

573./473. Molecular Genetics (3)

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 hours.)

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 hours.)

577L./477L. Biotechnology: Recombinant DNA Laboratory (4) F

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 hours.) A course fee may be required.

580./480. Seminars (1) F,S

Prerequisites: BIOL 210A,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 hour.)

590. Special Topics in Biology (1-4) F,S

Prerequisite: Consent of instructor. Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit for a maximum of eight units toward any single degree. Topics may be announced in the Schedule of Classes. (Lecture, laboratory, and/or field.) A course fee may be required.

661. Seminar in Biology (1) Demand

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.

Courses (BIOL)

662. Seminar in Botany (1) F

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.

663. Seminar in Genetics and Development (1) F

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.

664. Seminar in Marine Biology (1) S

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.

665. Seminar in Terrestrial Zoology (1) S

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.

697. Directed Research (1-3) F,S

Prerequisites: Consent of instructor. Research on a specific subject in biology. Topic for study to be approved and directed by a faculty member in biological sciences. A written report will be required. May be repeated for degree credit to a maximum of 3 units. A course fee may be required.

698. Thesis (1-6) F,S

Prerequisites: Consent of departmental graduate advisor and Advancement to Candidacy for the Master of Science in Biology. Planning, preparation, and completion of a thesis in the biological sciences. A course fee may be required.

Courses (MICR)

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. ## Microbiology (3) F,S

Life processes and roles of micro-organisms in ecological systems; emphasis on harmful and beneficial interrelationships with humans and their environment. Not open for credit to majors in microbiology. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

101. ## Introduction to Human Disease (3) F,S

Prerequisites: None. Introduction to the study of human disease including moral/ethical and economic issues. (Lecture 3 hours).

210. General Microbiology (4) F,S

Prerequisites: CHEM 111B or equivalent. CHEM 201A may be substituted for CHEM 111B for Nursing students only. Introduction to microorganisms in morphology, metabolism and cultural characteristics (Lecture 2 hrs laboratory 6 hrs.) A course fee may be required.

Upper Division

300l. ## Human Immunology: In Self-Defense (3) F,S

Prerequisites: ENGL 100, 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 hours)

301. ## Advances in Biotechnology (3) S

Prerequisite: one course in a biological science. Survey of recent advances in biotechnology for the non-science major. Subjects to be included: recombinant DNA research, cloning (molecular, cell, organ and organism), gene therapy, artificial organs (bionics), genetic diagnosis and

predictive medicine. (Lec 3 hrs) Not applicable for credit toward the major in Microbiology.

302l. ## Molecular Biology and Bioethics (3) F

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 hours). Same course as PHIL 3021.

320. Medical Bacteriology (5) F,S

Prerequisites: MICR 210 and CHEM 327. Pathogenic bacteria of humans and animals; emphasis on isolation and identification of microorganisms by morphological and cultural characteristics; their reaction to various antibiotics. (Lecture 3 hours, laboratory 6 hours.) A course fee may be required.

321. ## Public Health and Pollution (3) F,S

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. (Lecture 3 hours.)

322. Medical Parasitology (3) F,S

Prerequisites: BIOL 210B. Survey of parasitic protozoa and helminths of animals; emphasis on human parasites, identification of fresh and preserved specimens. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

323. Hematology (4) F,S

Prerequisites: Six units of biological science, MICR 210. Physiology and pathology of blood; preparation of blood for counts, hemoglobin determination, and related procedures. (Lecture 3 hours, laboratory 3 hours.) A course fee may be required.

330. Immunology and Serology (5) F,S

Prerequisites: MICR 320, CHEM 327 or consent of instructor. Principles of immunity, immune response in vivo and in vitro, immunohematology, forensic serology, syphilis serology, and the principles and uses of serologic methods for the qualitative and quantitative evaluation of the immune response. (Lecture 3 hours, laboratory 6 hours.) A course fee may be required.

360. Medical Mycology (4) F,S

Prerequisites: MICR 210, 320, CHEM 327. Introduction to pathogenic fungi commonly responsible for mycotic infections of humans. (Lecture 2 hours, laboratory 6 hours.) A course fee may be required.

412. Supervised Laboratory Techniques (2) F,S

Prerequisites: Consent of instructor and "B" or better grade in the course in which the student elects to do MICR 412. Experience for advanced students in organization and techniques of a microbiology lab, under the direct supervision of the regular faculty member teaching that particular laboratory section. (Conference 1 hour, laboratory 6 hours.)

Courses (MICR)

*424. Advanced Hematology (3)

Prerequisites: Medical technology license or a grade of 'B' or better in MICR 323. Investigation into blood cell formation in bone marrow and the reticulcendothelial system. Response of these cells to disease processes. (Lecture and demonstration 3 hours.) Either MICR 424 or 432, but not both, will be accepted toward fulfillment of the 6 units of upper division microbiology electives. A course fee may be required.

*425. Public Health Microbiology and Diagnostic Procedures (2) F,S

Prerequisites: MICR 320. Diagnostic procedures by bacterial, mycobacterial, spirochaetal, viral, and ricketisial agents of public health importance. Standard methods for the examination of food, water and dairy products. Either MICR 425 or 426, but not both will be accepted toward fulfillment of the six upper division Microbiology electives.

*426. Laboratory Methods in Public Health Microbiology (2) F,S

Prerequisite: MICR 425 (May be taken concurrently) Laboratory course for studying diagnostic procedures for infectious agents of public health importance and examination of food, water and dairy products. (Laboratory 6 hours.) A course fee may be required.

*427. Public Health and Diagnostic Procedures Laboratory (2) F,S

Prerequisite: Concurrent enrollment in MICR 425. Laboratory course in the techniques for studying those microbes involved in hospital and other institutionally acquired infections. Not available for credit for microbiology majors. (Laboratory 6 hours.) A course fee may be required.

*429. Control of Disease Patterns in the Community (3) S

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 and non-infectious diseases. May be included only in graduate MPH programs. Not available for upper division credit. (Lecture 3 hours.)

431./531. Principles of Immunobiology (3) S

Prerequisites: MICR 330, CHEM 441A-B, consent of instructor. (Undergraduates enroll in MICR 431; graduates enroll in MICR 531.) Integrated biological and chemical consideration of immunology. Host parasite relationships and immune response of antigens and antibodies, their physical, chemical and biological properties and the mechanisms, dynamics and kinetics of the antigen-antibody reaction. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

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 hours.) (Either MICR 424 or 432, but not both, will be accepted toward fulfillment of the 6 units of upper division microbiology electives.)

*441. Marine Microbiology (3) S

Prerequisites: MICR 210 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 hour, lab 6 hours.) A course fee may be required.

*450. Microbial Genetics (2) F,S

Prerequisites: MICR 210, CHEM 441A-B or 448M, consent of instructor. Biochemical and cytological bases of microbial genetics; nature, replication, modification and transfer of genetic material. (Lecture 2 hours.)

*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 hours.) A course fee may be required.

*452. Virology (3) F,S

Prerequisites: MICR 210, CHEM 327. It is recommended that CHEM 448M or 441B be taken prior to or concurrently with this course. 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. (Lec 3 hours.)

*453. Virology Laboratory (2) S

Prerequisites: MICR 320, 452 (may be taken concurrently), consent of instructor. Laboratory study of bacteriophage and animal viruses. Propagation, titration methods, and cytopathological effects of viruses will be considered. Emphasis is placed on cell cultrus techniques applicable to the study of viruses. (Laboratory 6 hours.) A course fee may be required.

*471. Bacterial Physiology (3) F,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 hours.)

*473. Food and Industrial Microbiology (3) F,S

Prerequisites: MICR 210, CHEM 441A or consent of instructor. Role of microorganisms in food and other industrial processes; emphasis on bacteria, yeasts and molds. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

480. Selected Topics in Microbiology (2) F,S

Prerequisites: Senior standing in microbiology and consent of instructor. Faculty and student discussions and analysis or laboratory in microbiology on current topic in microbiology. This course may be repeated for credit with different discussions and/or laboratory topics. (Lec 0 - 2 hrs, lab 0 - 6 hrs). A course fee may be required.

496. Investigations in Microbiology (1-3) F,S

Prerequisites: Consent of instructor. Research in a specific subject in microbiological sciences to be approved and directed by a faculty member. The one unit course involves library research. The two and three units courses involve library and experimental research. Special projects may include experience with such techniques as ultracentrifugation, electron microscopy, radiotracers, tissue culture, etc. Course may be repeated for a maximum of 3 units. A course fee may be required.

Graduate Division:

514. Microbiological Instrumental Methods and Analysis (3) S

Prerequisites: MICR 471, CHEM 441B. Theory and application of instrumental methods in microbiological problems. (Lecture 1 hour, lab 6 hours.) A course fee may be required.

526. Biochemical Diagnostic Procedures in Microbiology (3) F

Prerequisites: MICR 330, CHEM 441A-B, 447. Medical laboratory experience is recommended. Theory and application of diagnostic procedures for the clinical microbiology research laboratories. (Lecture 1 hr, lab 6 hrs.) A course fee may be required.

531./431. Principles of Immunobiology (3) S

Prerequisites: MICR 330, CHEM 441A-B, consent of instructor. (Undergraduates enroll in MICR 431; graduates enroll in MICR 531.) Integrated biological and chemical consideration of immunology. Host parasite relationships and immune response of antigens and antibodies, their physical, chemical and biological properties and the mechanisms, dynamics and kinetics of the antigen-antibody reaction. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

532./432. Immunohematology (2) S

Prerequisites: A final grade of 'B' or better in MICR 323 and 330 or consent of instructor required. (Undergraduates register in MICR 432.) 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 hours.) (Either MICR 424 or 432, but not both, will be accepted toward fulfillment of the 6 units of upper division microbiology electives.)

Courses (MICR)

546. Clinical Diagnosis by Laboratory Methods and Quality Control (4) S

Prerequisite: California Clinical Laboratory Technologist licensed or equivalent with consent of instructor. Correlation of laboratory tests in relation to alterations in normal physiology. Result of laboratory measurement of pathology of the cardiovascular, gastrointestinal, renal and endocrine systems will be interpreted in relationship to laboratory evaluation of these diseases. This course does not study technigues of laboratory tests. Students must already be familiar with the methods of performing general laboratory tests.

550. Experimental Microbiology (3)

Detailed study of selected topics in microbiology, with emphasis on laboratory approaches to the problem.

A. Microbial Ecology F.S Prerequisites: MICR 210 or consent of instructor. Microbial populations as they occur in the natural environment and their interactions with the environment. (Lecture 1 hour, lab 6 hours.)

A course fee may be required. B. Immunochemistry S Prerequisite: MICR 431. The chemical bases of

the immune response as well as the use of precise, sensitive and specific immunochemical methods for the characterization and study of various biological processes and materials. A course fee may be required.

C. Microbial Metabolism F

Prerequisites: MICR 471, CHEM 441B (may be taken concurrently), consent of instructor. Advanced concepts of microbial physiology with emphasis on their chemical activities and metabolic pathways. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

D. Molecular Biology of Eukaryotes F 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. (Lec 1 hr, lab 6 hrs.) A course fee may be required.

F. Pathoparasitology S

Prerequisites: MICR 322, 330. Pathogenesis of medically important endo- and ectoparasites: emphasis on specialized procedures and techniques. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

E. Molecular Virology F

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. (Lec 1 hr, lab 6 hrs) Course fee may be required.

G. Schizomycetes S

Prerequisite: MICR 471. Detailed study of the bacteria; special emphasis on heterotrophic and autotrophic forms. (Lecture 1 hour, lab 6 hours.) A course fee may be required.

691. Supervised Independent Study (1-4) F,S

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 max of 4 units.

694A.B. Seminar in Principles and Theories of Microbiology (1,1) F,S

Prerequisite: Graduate standing in microbiology. Presentation and discussion of advanced work in special fields including original research of faculty and graduate students. (Weekly meetings.)

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. (2 hours weekly.)

- A. Seminar in Cellular and Molecular Mechanisms
- B. Seminar in Food Microbiology

Promoved MICR 240 CATALASS &

- C. Immunology
- D. Industrial Microbiology
- F. Medical Microbiology
- G. Microbial Ecology
- J. Microbial Genetics
- K. Microbial Physiology
- M. Mycology
- N. Parasitology
- P. Virology

696. Field Experience in Medical Laboratory Supervision (2-4) F,S

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 max. of 4 units.

697. Directed Research (1-3) F,S

Prerequisites: Consent of instructor. Laboratory work supervised on an individual basis. Course may be repeated for a maximum of three units. A course fee may be required.

698. Thesis (1-6) F,S

Prerequisite: Consent of instructor. Original research in microbiology carried out under supervision of the faculty on an approved topic of mutual interest and the formal report of this research. A course fee may be required.

Devore, Dorothy M. Goldish, Edwin R. Harris, James L. Jensen, Gene E. Kalbus, Van T. Lieu, Robert L. Loeschen, Tom J. Maricich, Kenneth L. Marsi, Henry N. Po, Nail M. Senozan, Leslie K. Wynston; Associate Professors: Dennis M. Anjo, Margaret L. Merryfield, Kensaku Nakayama; Assistant Professors: Marco P. Lopez, Kimberly A. Schugart; Emeritus Faculty: Roger D. Bauer, Edwin N.

Department Chair: Kenneth L. Marsi

Faculty: Professors: Roger A. Acey,

Department Office: PH3-213

Peter Baine, Stuart R. Berryhill,

Jeffrey A. Cohlberg, Jerald A.

Telephone: 985-4941

Becker, Arnold J. Berry, Julie V. N. Kierbow, Darwin L. Mayfield, Clyde E. Osborne, Louis E. Perlgut, Donald H. Simonsen, A.G. Tharp Department Secretary:

Jeannette Santage The Department

Students desiring information should contact the department office for referral to one of the faculty ad-

Undergraduate Advisors: Acey, Anjo, Berryhill, Goldish, Harris, Marsi, Merryfield, Nakayama, Wynston;

Graduate Advisor in Chemistry: Po; Graduate Advisor in Biochemistry: Cohlberg; Graduate Studies Committee: Acey, Anjo, Berryhill, Cohlberg, Marsi, Po, Senozan.

Chemistry Department Advisory Council

This 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 promote development of a background in a specific science, to serve as preparation for graduate work in chemistry or biochemistry, and to provide a foundation for those students

Chemistry and Biochemistry College of Natural Sciences and Mathematics

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.

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 Bulletin 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, 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 Advisor, 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 reguired. Satisfactory performance on appropriate proficiency examinations may also be required.

Bachelor of Science in Chemistry

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 Acey, Anjo, Berryhill, Goldish, Harris, Marsi, Merryfield, Nakayama, or Wynston) to plan his or her individual program.

Chemistry majors must achieve a grade of "C" or better in all chemistry courses required for the major.

Requirements for the Bachelor of Science (code 3-7661):

Lower Division: CHEM 111A, 111B, 251; courses to support the major to include PHYS 151, 152, 153, and MATH 122, 123, 224, and either MICR 210 or BIOL 210A.

Upper Division: CHEM 320A.B. 371A.B. 373, 385, 420, 431, 451, ENGL 300 or 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.

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 370A, 247, 380, 364A.

Bachelor of Arts in Chemistry

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 all chemistry courses required for the major.

Requirements for the Bachelor of Arts (code 2-7661):

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

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 all chemistry and biochemistry courses required for the major.

Requirements for the Bachelor of Science in Biochemistry (code 3-7658):

Lower Division: CHEM 111A, 111B, 251; courses to support the major to include BIOL 210A or MICR 210; BIOL 210B; 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 (or 440), 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, 201A, 201B.

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 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 Bulletin. 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 postgraduate 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.
- (2) 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 Studies in the College of Natural Sciences and Mathematics, and the Dean of Graduate Studies.

Master of Science in Chemistry Prerequisites:

- (1) Acceptance as a graduate student by the Chemistry and Biochemistry Department;
- (2) A bachelor's degree with a major in chemistry; or
- (3) 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;

- (4) 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.
- (5) 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:

- (1) 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;
- (2) Earned an average of at least 3.0 (B) in all work completed at this University as a graduate student;
- (3) Passed the Writing Proficiency Examination;
- (4) 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 Studies 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.

Requirements for the Master of Science in Chemistry (code 6-7661):

(1) Advancement to candidacy at least one semester before the graduation date;

(2) The completion of a minimum of 30 units to be distributed in the following way:

(a) 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. A minimum of six units is recommended from two of the following three courses: CHEM 471, 441A, 421/521. At the discretion of the Graduate Studies Committee equivalent courses taken as an undergraduate may meet these requirements but may not count toward the 30 unit requirement. Changes in the above pattern of course requirements may be made only at the discretion of the Graduate Studies Committee and the

graduate advisor.
(3) Completion of an acceptable thesis.

Master of Science in Biochemistry Prerequisites:

- (1) Acceptance as a graduate student by the Chemistry and Biochemistry Department;
- (2) 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 microbiology. A student deficient in any of these courses must complete the course as a graduate student;
- (3) 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.

(4) 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 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:

- (1) 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;
- (2) Earned at least a 3.0 (*B*) average in all graduate work completed at this University or transferred to meet degree requirements;
- (3) Passed the Writing Proficiency Examination;
- (4) 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 Studies 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.

Requirements for the Master of Science in Biochemistry (code 6-7658):

- (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) CHEM 377A and 377B or CHEM 371A and 371B; 443 and 451 taken either prior to or during the course of this program. 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) F,S

Prerequisite: One year of high school algebra. 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. (Lec 3 hrs, lab 3 hrs.) A course fee may be required.

101. Introduction to General Chemistry (4) F,S

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. (Lec 3 hrs, lab-problem session 3 hrs.) A course fee may be required.

111A. General Chemistry (5) F,S

(Recommended for students who intend to pursue careers in science or engineering.) Prerequisite: A passing score on the Chemistry Placement Examination and two years of high school algebra or equivalent; 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 hours, laboratory and problem session 6 hours.) A course fee may be required. (CAN CHEM 2)

111B. General Chemistry (5) F,S

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 elements and their compounds. Qualitative inorganic analysis and extensive solving of aqueous equilibrium problems are emphasized in laboratory and problem solving sessions. (Lecture 3 hours, lab and problem solving sessions 6 hours.) A course fee may be required. (CAN CHEM 4)

201A. Survey of General and Organic Chemistry (2) F,S

Prerequisites: High school chemistry or equivalent. Three years of high school mathematics including algebra and geometry and intermediate algebra (or MATH 010) or the equivalent. The first semester of a two semester sequence (CHEM 201A and 201B) covering general and organic chemistry and biochemistry. CHEM 201A deals with general chemistry and organic chemistry. Not open for credit to students with credit in CHEM 111A or CHEM 200. (Lec 2 hrs).

201B. Survey of Biochemistry (3) F,S

Prerequisites: CHEM 201A with a grade of "C" or better and satisfactory performance on a qualifying examination. The second semester of a two semester sequence (CHEM 201A and 201B). 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 300. (Lecture 2 hours, laboratory 3 hours). A course fee may be required.

251. Quantitative Analysis (4) F,S

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 hours, laboratory 6 hours.) A course fee may be required.

Upper Division

320A. Organic Chemistry (4) F,S

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 CHEM 320B). This sequence meets the requirements for medical and dental schools. Emphasis is upon the application of modern principles to structure, reactivity, methods of synthesis, and physical properties of organic compounds; spectroscopy includes UV, IR, NMR, and mass spectroscopy. Not open to students with credit in CHEM 321A. (Lecture 3 hours, laboratory 3 hours). A course fee may be required.

320B. Organic Chemistry (4) F,S

Prerequisites: CHEM 320A with a grade of "C" or better. The second semester of a two semester sequence (CHEM 320A and CHEM 320B). A continuation of the study of organic chemistry including heterocycles, nitrogen compounds, natural products, and special topics. In addition to regularly scheduled lectures, students are expected during the semester to attend two hours of lecture on use of the chemical literature. Not open to students with credit in CHEM 321B or CHEM 322. (Lecture 3 hours, laboratory 3 hours). A course fee may be required.

321B. Organic Chemistry (5) F,S

Prerequisite: CHEM 321A with a grade of "C" or better. The second semester of a two-semester sequence (CHEM 321A and 321B) for students desiring 10 units of organic chemistry. A continuation of the study of organic chemistry including heterocycles, nitrogen compounds, natural products, and special topics. In addition to regularly scheduled lectures students are expected during the semester to attend two hours of lecture on use of the chemical literature. (Lec 3 hrs, lab and quiz section 6 hrs.) A course fee may be required.

322. Organic Chemistry Lecture (3) F,S

Prerequisite: CHEM 321A with a grade of "C" or better. The second semester of a two-semester sequence (CHEM 321A and 322) for students desiring 8 units of organic chemistry. Not open to chemistry majors or to students with credit in CHEM 321B. CHEM 322 is the lecture portion of CHEM 321B. In addition to regularly scheduled lectures, students are expected during the semester to attend two hours of lecture on use of the chemical literature. (Lecture 3 hours.)

323. Organic Chemistry Laboratory (2) F,S

Prerequisites: CHEM 322 with a grade of "C" or better and consent of department chairperson. For students who have credit in CHEM 322 and change to a major requiring 10 units of organic chemistry. (Laboratory 6 hours.) A course fee may be required.

327. Organic Chemistry (3) F,S

Prerequisites: CHEM 111A with a grade of "C" or better; CHEM 111B is recommended. CHEM 201A may not substitute for CHEM 111A. Lecture course in the chemistry of the carbon compounds. Not applicable to a degree in chemistry. (Lecture 3 hours.)

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 or 372.) Principles and applications of classical thermodynamics. Introduction to statistical thermodynamics. (Lecture 3 hours.)

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. (Lec 3 hrs)

372. Physical Chemistry (3) F

Prerequisite: CHEM 371A with a grade of "C" or better. Selected topics in physical chemistry of particular interest to chemical engineers. Equilibrium and steady state thermodynamics of multi-component systems including combustion gases, strong electrolytes, fused salts and alloys, transport phenomena, chemical kinetics and topics in atmospheric chemistry. (Lecture 3 hours.)

373. Physical Chemistry Laboratory (3) S

Prerequisites: CHEM 251, 371AB, or 377AB (CHEM 371B or 377B may be taken concurrently), all with a grade of 'C' or better. Introduction to basic apparatus and techniques of physicochemical experimentation and research and application of the principles discussed in 371A,B and 377A,B. Reference to chemical literature is required. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

377A. Fundamentals of Physical Chemistry (3) F

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 the principles. (Lecture 3 hours.)

377B. Fundamentals of Physical Chemistry (3) S

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 hours.)

385. Computer Methods in Chemistry (2) F,S

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 hour, laboratory 3 hours.) Not open to students with credit in CH E 210. A course fee may be required.

420. Advanced Organic Chemistry Laboratory (3) S

Prerequisites: CHEM 251 and CHEM 320B(or 321B) 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. (Lecture 1 hour, laboratory 6 hours) A course fee may be required.

421./521. Physical Organic Chemistry (3) F

Prerequisites: CHEM 321B or 322 or 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 hours.)

422./524. Identification of Organic Compounds (3) S

Prerequisites: CHEM 251, 321B, 371A (or 377A), all with a grade of "C" or better, or pass the organic entrance exam. (Undergraduates register in CHEM 422; graduates register in CHEM 524.) Characterization of organic compounds through study of their chemical and physical properties. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

*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 hours.)

*441A. Biological Chemistry (3) F.S

Prerequisites: CHEM 111B and CHEM 321B or 322, or 327 all 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 hours.)

*441B. Biological Chemistry (3) F.S

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 hours.)

*443. Biological Chemistry Laboratory (3) F,S

Prerequisites: CHEM 251 and 441B, both with a grade of "C" or better. Laboratory techniques used in biochemical research. (Lecture 1 hour, lab 6 hours.) A course fee may be required.

447. Clinical Chemistry (3) S

Prerequisites: CHEM 251 and either 448M or 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. (Lec 1 hr, lab 6 hrs) A course fee may be required.

448. Fundamentals of Biological Chemistry (3) F

Prerequisites: CHEM 111A and 327, both with a grade of "C" or better. CHEM 201A may not substitute for CHEM 111A, and CHEM 201A/B 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 hours.)

448M. Fundamentals of Biological Chemistry for Medical Microbiologists (3) F

Prerequisite: CHEM 327 with a grade of "C" or better. Similar to CHEM 448 with special emphasis on topics related to clinical chemistry. Open to medical microbiology majors only; other students admitted only by consent of instructor. (Lecture 3 hours.)

449. Nutritional Biochemistry Laboratory (3) S

Prerequisite: CHEM 448 with a grade of "C" or better. Analytical and biochemical analyses of foodstuffs and other compounds of biochemical interest. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

*451. Instrumental Methods of Analysis (4) F,S

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, lab 6 hrs.) A course fee may be required.

*471. Chemical Thermodynamics (3) F,S

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) F.S

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) F,S,SS,EXED

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) F,S

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) F Prerequisites: CHEM 321B or 322 or 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 hours.)

522. Special Topics in Organic Chemistry (3) F,S

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.

524./422. Identification of Organic Compounds (3) S

Prerequisites: CHEM 251, 321B, 371A (or 377A), all with a grade of "C" or better, or pass the organic entrance exam. (Undergraduates register in CHEM 422; graduates in CHEM 524.) Characterization of organic compounds through study of their chemical and physical properties. (Lec 1 hr, lab 6 hrs.) A course fee may be required.

531. Advances in Inorganic Chemistry (3) F, Even Years

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 hours.)

Metallo-organic Chemistry: Complexes of transi-

tion metals in low oxidation states, emphasizing structure of complexes and bonding, reaction types and homogeneous carataysis.

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) F, Even Years

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 hours.)

544. Physical Biochemistry (3) S, Odd Years

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 hours.)

545. Enzymology (3) F, Even Yrs

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 hours.)

547. Biochemistry of Nucleic Acids (3) S, Even Years

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 hours.)

552. Special Topics in Analytical Chemistry (3) F, Odd Years

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 hours.)

571. Advanced Thermodynamics (3) F,S

Prerequisite: CHEM 371A. Continuation of CHEM 371A to include statistical and solution thermodynamics. (Lecture 3 hours.)

572. Advanced Physical Chemistry (3) S

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 hours.)

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) F,S

595B. Colloquium in Organic Chemistry (1) F,S

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.

660. Seminar in Chemistry (1) F,S

Weekly meetings for presentation and discussion of advanced work in special fields including original research by faculty and graduate students.

695. Directed Reading (1) F,S

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) F,S,SS,EXED

Prerequisite: Arrangement with instructor. Laboratory work supervised on an individual basis. A written report will be required. May be repeated for credit. (Independent Study.) 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.

Center for Environmental Studies College of Natural Sciences and Mathematics

Director: Roswitha B. Grannell **Location:** Peterson Hall 3 (PH3), Room 130

Telephone: 985-4927 or 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 for the Certificate in Environmental Studies:

- (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);

 (a) Life Sciences: At least three
 units from BIOL 200, 201, 210A,
 210B, 313, 324, 350, 351, 353,
 427, 450, 453, 464; MICR 100,
 210, 441;

(b) Physical Sciences: At least three units from CHEM 100, 111A, 111B, 201A, 201B; GEOL 102, 104, 105, 160, 163, 465; PHYS 100A, 100B, 104, 151, 152; (c) 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):

(a) PHIL 360;

(b) E/ST 490 (2 units) and 490L (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) <u>Elective Requirements</u> (15 units, distributed over the following three categories; nine of these units must be outside the major department, six units must be outside the school, and six units must be at upper division level);

(a) Human Behavior: At least three units outside the major department from MICR 321; POSC 442; PSY 351 or SOC 3351; SOC 350;

(b) 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; HSC 422; SOC 4101; (c) Analysis and Application: Three units from BIOL 260; C/ST 210: 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) Upper Division

490. Special Topics in Environmental Studies (1-3) F,S

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.

490L Special Topics Laboratory (1-2) F,S

Prerequisite: Consent of instructor. Laboratory in topics of current interest in environmental studies selected for intensive development. May be repeated for a maximum of four 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 toward the Environmental Studies Certificate in lieu of equivalent units in appropriate subject areas.

499. Directed Studies (1-3) F,S

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).

Geological Sciences

College of Natural Sciences and Mathematics

Department Chair: Stanley C. Finney Department Office: PH3 102A Telephone: 985-4809 Faculty: Professors: Kwan M. Chan, Stanley C. Finney, Roswitha B. Grannell, Jack Green, Robert E. Winchell; Associate Professor: Elizabeth L. Ambos. R.D. Francis; Assistant Professors: Isam Amin, ames C. Sample. Emeritus Faculty: Bert L. Conrey, Albert L. Ehrreich, Paul J. Fritts, Charles T. Walker. Department Secretary: Victoria V. Nguyen

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

Undergraduate Advisor: Ambos. Graduate Advisor: Francis.

Geological Sciences Professional Advisory Council

The Geological Sciences Advisory and Development Council consists of outstanding geologists, engineers, and executives from industry and government. The function of the council is to provide a liaison between the University and Industry. This will insure that the curriculum is appropriate in light of modern practice. The council also advises the department on employment opportunities for students who are majoring in geology.

The Geological Sciences

The Geological Sciences include 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 *Bulletin* 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 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 Bulletin. Courses not receiving prior approval will not be accepted for credit by the department.

Bachelor of Science in Geology (code 3-7664)

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 threedimensional 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 stu-

dent 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, 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 or 210AB. 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)

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 210; 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 or 210A; 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 or 210A; MATH 247, 370AB; PHYS 153, 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 or 210A; 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, micropaleontology, 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 masters 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 geophysi-

cal 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. flame photometer, UV/visible spectrometer, 3.2 meter emission spectrograph, carbon-sulfur analyzer, electron microprobe, 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, System 10 colorenhanced ground penetrating radar, telluric current recording meter, total field magnetometer with gradiometer, X-ray diffraction and fluorescence units, hydrous pyrolysis pressure vessel, gas chromatographs, stable isotope vacuum lines, departmental computer network featuring three SUN microcomputers and five PC's, Macintosh computer, a portable PC for interfacing with field geophysical instruments, a Hewlett-Packard Draft-Master plotter, several printers, campus VAX mainframe computer, and access to oceanographic research ship R/V Yellowfin with associated oceanographic equipment including a proton precession magnetometer and a high resolution seismic reflection system.

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 coursework 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 *Bulletin* 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) Departmental Application Form, available from the departmental 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 departmental 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 reevaluated for full admission to the
department.

Initiation of Graduate Study

Students are responsible for all University and Departmental regulations governing master's degrees as outlined in this Bulletin. 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 Bulletin. 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

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 subdiscipline 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 departmental 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 (if any) 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. The thesis format adopted by the Department and the University for theses in the Geological Sciences is the format of Geological Society of America professional papers. 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) F,S

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 hours)). (102+104, CAN GEOL 2)

104. Geology Laboratory (1) F,S

Prerequisites: Concurrent or prior enrollment in Geol 102 or consent of Geological Sciences Department Chair. Laboratory study of earth materials. (Laboratory 3 hours). A course fee may be required. (104+102, CAN GEOL 2)

105. Geology Field Laboratory (1) F,S

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) F,S

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 hours.)

160L. Introduction to Oceanography Laboratory (1) F,S

Prerequisite: 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. (Lab-field 3 hrs.) A course fee may be required.

163. Science of the Atmosphere and Weather (3) F,S

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) F,S

Interrelationships of man and landslides, floods, erosion, subsidence, volcanism, earth-quakes and seismic sea waves. Case histories will be discussed. (Lecture 3 hours.)

191. Air and Water Pollution (3) F.S

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 hours.)

240. Historical Geology (4) S

Prerequisites: GEOL 102 and 104. History of the earth and evolution of animals and plants. (Lecture 3 hours, laboratory 3 hours, field trips.) A course fee may be required.

273. Computer and Statistical Methods in Geology (4) S

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 hours, laboratory 6 hours, field trips.) A course fee may be required.

Upper Division

303l. Coastal Systems and Human Impacts (3) F,S

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 303. May not apply units towards elective requirements of Geology and Earth Science majors. (Lecture 3 hours).

321. Optical Mineralogy (3) S

Prerequisites: GEOL 324, MATH 123, PHYS 151. Optical properties of crystals and minerals. Laboratory study of minerals in immersion liquids and thin sections with polarizing microscope. Traditional grading only. (Lecture 1 hour, laboratory 6 hours.) A course fee may be required.

324. Mineralogy and Crystallography (4) F

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 hours, laboratory 6 hours, field trips). A course fee may be required.

341. Paleontology and Biostratigraphy (4) F

Prerequisites: GEOL 240 and either BIOL 200 or 210A, 210B. 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 hours, laboratory 3 hours, field trips.) A course fee may be required.

343. Stratigraphy/Sedimentology (4) S

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 hours, lab 3 hours, field trips). A course fee may be required.

364. Introduction to Geological Oceanography (2) S

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. Shipboard techniques in marine geology. (Lecture 2 hours; sea trips).

364L. Laboratory in Geological Oceanography (1) S

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. (Lab 3 hours; sea trips). A course fee may be required.

370. Engineering Geology (2) F,S

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 hours, field trips.)

*420. Geowriting (3) F

Prerequisites: Upper division or graduate standing in 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. (Lec 3 hrs).

424./524. Sedimentary Petrology (4) F

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 hours, laboratory 3 hours.) 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 metamorphic 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 hours, field trips.)

*429. Igneous and Metamorphic Petrography Laboratory (2) F

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. (Lab 6 hours.) A course fee may be required.

430./530. Seminar in Structural Geology and Tectonics (3) F

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. (Lec 2 hrs, lab 3 hrs; field trips.) A course fee may be required.

431./531. Geomorphology (3) F

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 hours, laboratory 3 hours, field trips.)
A course fee may be required.

433. Structural Geology (4) F

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 hours, laboratory 3 hours, field trips.) A course fee may be required.

434./534. Photogeology (3) S

Prerequisites: GEOL 433 and 450. (Undergraduates register in GEOL 434; graduates register in GEOL 534.) Terrain analysis using aerial photographs. Emphasizes photogeologic interpretation using stereoscope, basic photogrammetric techniques for quantitative data, and construction of geologic maps. (I hour lecture, 3 hours laboratory, and field trip.) A course fee may be required.

442./542. Paleoecology (3) F

(Undergraduates register in GEOL 442; graduate students register in GEOL 542.) Prerequisite: GEOL 341. Environmental significance and age of occurrence of fossil assemblages. Understanding of fossil communities. (Lec 2 hrs, lab 3 hrs.) A course fee may be required.

*443. Micropaleontology (3) S

Prerequisites: GEOL 104, 341; or upper division standing in biology with consent of instructor. Morphology, taxonomy and ecology of microfaunas; biostratigraphy. (Lec 2 hours, lab 3 hours, field trips.) A course fee may be required.

*444. Palynology (3) S

Prerequisites: GEOL 240 (may be taken concurrently); GEOL 341 or BIOL 427. Study of fossil and modern pollen and spores, including morphology, taxonomy, paleoecology, and fossil assemblages through time. Laboratory to emphasize identification and description of fossil and modern forms. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

450. Summer Field Geology (6) SS

Prerequisities: 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) F

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 hour, field trips). A course fee may be required.

452. Advanced Topics in Marine Geology (3) F

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 hour, laboratory 3 hours, 5 days of sea trips.) A course fee may be required.

*460. Introduction to Geophysics (4) F

Prerequisites: PHYS 152, MATH 123, and GEOL 273. Introduction to geophysics; principles and processes; methods of investigation. (Lecture 2 or 3 hours, laboratory 3 or 6 hours, field trips.) A course fee may be required.

*461. Introduction to Geochemistry (4) S

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 hours, laboratory 3 hours.) A course fee may be required.

*462. Physics and Chemistry of the Earth's Interior (3) F

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 hours.)

465./565. Physical and Chemical Oceanography (3) F,S

Prerequisites: CHEM 111B, PHYS 100B, and upper division standing in the 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 hours.)

*466. Oceanography Laboratory and Ocean Studies (1) F,S

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 hours, 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 hours, laboratory 3 hours.) A course fee may be required.

*471. Petroleum Geology and Well Log Analysis (4) F,S

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 hours, laboratory 6 hours, field trips.) A course fee may be required.

*472. Regional Geology of North America (3) S

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 hours, discussion session 2 hours, field trips.) A course fee may be required.

477./577. Hydrogeology (3) F

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 hours, laboratory 3 hours). Traditional grading only. A course fee may be required.

486./586. Engineering Geophysics (3) F,S

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 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 hours, laboratory 3 hours; field trips.) A course fee may be required.

*489. Current Topics in Geological Sciences (1-3) F,S

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. A course fee may be required.

*490. Current Topics in Geological Sciences (1-3) F,S

Prerequisite: Consent of instructor. Topics of current interest in the geological sciences selected for intensive development. Topics to be selected from such areas as (b) Ground water geology, (f) Aerial photo interpretation, (k) Economic mineral deposits, (f) Planetary geology. 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) S

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 hours, laboratory 3 hours.) A course fee may be required.

496. Investigations in Geology and Other Earth Sciences (1-4) F.S

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) F

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 hour.)

515. Advanced Micropaleontology (3) F,S

Prerequisites: Three units of micropaleontology or consent of instructor. Advanced studies in morphology, taxonomy, ecology and paleoecology of microfossils; biostratigraphy and age determination of sedimentary rocks. (Lecture 1 hour, lab 6 hours.) A course fee may be required. Traditional grading only.

520. Advanced Stratigraphic Analysis (3) F,S

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 paleo-geography. Course will revolve around a field problem and include application of methods from physical stratigraphy, biostratigraphy and sedimentary petrology to solution of the problem. (Lecture 1 hour, laboratory 3 hours, field work 8 days.) A course fee may be required. Traditional grading only.

524./424. Sedimentary Petrology (4) F

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. (Lecture 3 hours, laboratory 3 hours.) A course fee may be required. Traditional grading only.

530./430. Seminar in Structural Geology and Tectonics (3) F

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. (Lecture 2 hours, lab 3 hours; field trips.) A course fee may be required. Traditional grading only for majors.

531./431. Geomorphology (3) S

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. (Lec 2 hrs, lab 3 hrs, field trips.) A course fee may be required. Traditional grading only.

532. Neotectonics (3) F,S

Prerequisites: Graduate standing in geological sciences or consent of the instructor. Application of geomorphic principles to tectonic problems. Evaluation of the shape of hills, streams, fault scarps, and marine terraces in order to understand the locations, magnitudes, and timing of Quaternary displacements. Reading and discussion of research articles, preparation of paper. Traditional grading only for Majors. (Lecture 2 hours, laboratory 3 hours, field trips). A course fee may be required.

534./434. Photogeology (3) S

Prerequisites: GEOL 433, and 450. (Undergraduates register in GEOL 434; graduates register in GEOL 534.) Terrain analysis using aerial photographs. Emphasizes photogeologic interpretation using stereoscope, basic photogrammetric techniques for quantitative data, and construction of geologic maps. (Lecture 1 hour, laboratory 3 hours, field trip.) A course fee may be required.

535. Remote Sensing (3) F,S

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. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

537. California Geology (3) F,S

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 hours, field trips.) A course fee may be required.

542./442. Paleoecology (3) F

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 hours, lab 3 hours.) A course fee may be required. Traditional grading only.

543. Carbonate Petrology (3) F,S

Prerequisites: GEOL 321, 343. Microscopic description and characteristics of carbonate rocks in relation to their origin. (Lecture 2 hours, lab 3 hours.) A course fee may be required. Traditional grading only.

544. Clastic Petrology (3) FS

Prerequisites: GEOL 321. Advanced study of clastic sedimentary rock using petrographic microscope, scanning electronic microscope and microprobe to evaluate their composition and origin. (Lecture 2 hours, lab 3 hours.) A course fee may be required. Traditional grading only.

545. Rock Mechanics in Engineering Practice (3) F

Prerequisites: CE 345, 346. Principles of rock mechanics with emphasis on engineering practices for problems of slopes, foundations and tunnels. Same course as CE 545. (Lecture, problems 3 hours.) Traditional grading only.

554. Environmental Geochemistry (3) F,S

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 hours, 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) F,S

Prerequisites: CHEM 111B, PHYS 152 or 100B, and upper division standing in the 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 hours.) Traditional grading only.

570. Special Topics in Geology (1-3) F,S

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. A course fee may be required. Traditional grading only.

573. Groundwater Modeling (3) F.S.

Prerequisites: GEOL 373 and 572, MATH 224, and PHYS 152. Mathematical analysis of groundwater flow in aquifers of variable geometry and application of these mathematical models to problems of depletion, recharge and pollution. Traditional grading only for Majors. (Lecture 2 hrs laboratory 3 hrs.) A course fee may be required.

574. Geological Aspects of Waste Management (3) F,S

Prerequisites: Graduate standing in geology or civil engineering or consent of the instructor. Classification of wastes, effects on soils and hydrologic systems, geologic requirements for waste disposal sites. Traditional grading only for Majors. (Lecture 3 hours, field trips.)

575. Advanced Topics in Sedimentology (1-4) F

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. A course fee may be required. Traditional grading only.

576. Practicum in Geohydrology (3) S

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 combination 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 hours.)

577./477. Hydrogeology (3) F

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 hours, laboratory 3 hours). Traditional grading only. A course fee may be required.

578. Groundwater Hydraulics (3) S

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)

580. Special Topics in Geophysics (1-6) F,S

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. A course fee may be required. Traditional grading only.

581. Seminar in Engineering Geology (3) F,S

Prerequisite: Upper division course in engineering geology or consent of instructor. Advanced study relating geologic factors to engineering projects, with emphasis on slope stability, subsidence, engineering seismology and construction problems related to engineering geology. Traditional grading only.

582. Seismic Stratigraphy (3) F.S

Prerequisites: GEOL 460. Use of seismic wave characteristics (amplitude, polarity, presence of diffractions) to interpret lithologic composition and structure from seismic record sections. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required. Traditional grading only.

583. Advanced Seismic Data Processing (3) F,S

Prerequisites: GEOL 273, 467; MATH 370A-B. Mathematical principles underlying seismic data processing: Fourier transforms, sampling theorems, deconvolution and filtering. (Lecture 2 hrs, lab 3 hrs.) A course fee may be required.

584. Geothermal Exploration (3)

Prerequisites: GEOL 433, 460. Occurrence and origin of geothermal resources. Heat transfer and fluid migration. Exploration techniques using geophysical, geological and geochemical methods. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required. Traditional grading only.

585. Advanced Gravity and Magnetics (3) F,S

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 hours, laboratory 3 hours, field trips.) A course fee may be required.

586./486. Engineering Geophysics (3) F,S

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 hours, laboratory 3 hours; field trips.) A course fee may be required. cram in which the greatest nggood

591./491. X-ray Crystallography (3) S

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 hours, laboratory 3 hours.) A course fee may be required. Traditional grading only.

592. Clay Mineralogy (3-4) F,S

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 hours; laboratory/problem session 3-6 hours.) A course fee may be required.

697. Directed Research (1-3) F

Prerequisite: Consent of instructor. Research on a specific subject in geology. Topic for study to be approved and directed by a staff member in geological sciences. A course fee may be required. Traditional grading only.

698. Thesis (1-6) F

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.

Mathematics

College of Natural Sciences and Mathematics

Department Chair: Samuel G. Councilman Department Office: FO3-120 Telephone: 985-4721 Professors: M. Shafqat Ali, Charles W. Austin, John M. Bachar, Jr., Howard B. Beckwith, Linda H. Byun, Samuel G. Councilman, Carl H. Dorn, Milton J. Fatt, Bernard N. Harvey, Melvin D. Lax, Kau-Un Lu, William G. Margulies, Daniel G. Martinez, Thomas A. McCullough, Roberto A. Mena, Howard J. Schwartz, James D. Stein, Lindsay A. Tartre, M. Barbara Turner, Kenneth K. Warner, Saleem H. Watson, Robert R. Wilson: Associate Professors: Joseph Bennish, Linda J. DeGuire, Morteza Ebneshahrashoob, Harry D. Eylar, Yihnan David Gau, Kent G. Merryfield, Robert C. Valentini, Ngo N. P. Viet, Derming Wang, Arthur K. Wayman; Assistant Professors: Bruce J. Chaderjian, William K. Ziemer.

Emeritus Faculty: Ruth H. Afflack, Eugene Albert, Floyd A. Cohen, Robert Froyd, Willard D. James, Jerome H. Manheim, Anthony Mardellis, Edward B. McLeod, Norman E. Sexauer, Alton H. Smith, Joseph Verdina.

Administrative Operations Analyst: Linda Dixon

The Department

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 as well, and 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 provides instruction for students at all levels beyond high school mathematics, providing the computational

and analytic skills needed for a variety of majors, as well as advanced theoretical courses 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, as well as 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.

Undergraduate Degree Programs

The Mathematics Department offers four undergraduate degree programs in mathematical sciences.

Bachelor of Science in Mathematics

The student in this program is required to take a selection of fundamental courses in algebra and analysis. It is the most flexible program, in which the greatest number of electives may be chosen by the student. Elective upper division mathematics 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 for the Bachelor of Science in Mathematics (code 3-6666):

Lower Division: ENGL 101 or 300 or 317; MATH 122, 123, 224, 233, 247; CECS 242; PHYS 151.

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 444A but not 311, 317, 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.

Bachelor of Science in Mathematics — Option in Applied Mathematics:

578 Groundwater Hydrautics 524 Commercal Embaration (3)

The student who is most interested in the applications of mathematics has a choice of two suboptions: the first concentrates on the applications in engineering and science while the second concentrates on the applications to 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 for the Bachelor of Science in Mathematics — Option in Applied Mathematics (code 3-6608)

Suboption I: Area of Application in Science and Engineering.

Lower Division: ENGL 101 or 317; MATH 122, 123, 224, 247; CECS 242; PHYS 151, 152; PHYS 153 or 154 or EE 211 or 212 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:

- 1. PHYS 310, 311, 340A, 340B, 350, 410, 422, 450;
- 2. EE 310, 370, 382, 411, 460, 482;
- 3. CE 335, 359, 437, 438, 458, 494; ME 371, 373.

Suboption II: Area of Application in Management.

Lower Division: ENGL 101 or 317; MATH 122, 123, 224, 247; CECS 242; ECON 201 and 202, or ECON 300.

Upper Division: MATH 323, 361A, 361B, 364A, 380, 381, 382,

485; ECON 333. A minimum of 6 units from the following courses: MATH 423, 463, 479, 480; a minimum of 12 units from the following courses: MGMT 310, 410, 411, 412, 413, 414, 415, 426; IS 463; ECON 486

Bachelor of Science in Mathematics — Option in Statistics

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 for the Bachelor of Science in Mathematics — Option in Statistics (code 3-6008)

Lower Division: ENGL 101 or 317, MATH 122, 123, 224, 247; CECS 242; and any one of the following: PHYS 100A-B, or PHYS 151 and 152; 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; MICR 420; SOC 455. In addition, any student planning to pursue graduate studies in mathematics should take MATH

Bachelor of Science in Mathematics — Option in Mathematics Education

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 NTE Waiver Program in Mathematics. Thirty units of post-bac-

calaureate coursework are also required for the Clear Single-Subject Teaching Credential in Mathematics (see Single Subject Teacher Education Program in the Graduate School of Education for more specific information about courses and other requirements.)

Requirements for the Bachelor of Science in Mathematics — Option in Mathematics Education (code 3-6609)

Lower Division: MATH 122, 123, 224, 233, 247; one of the following: MATH 278*, CECS 174, 242; one of the following: ENGL 101, 300, 317; one of the sequences: PHYS 151, 152; PHIL 170, 270; or eight units of a foreign language; to a total of 30 to 32 lower-division units.

Upper Division: MATH 310, 341, 355, 361A, 380, 444A, either MATH 364A* or 381; EDSS 300M; and a minimum of 9 additional units of upper-division Mathematics courses.

* indicates preferred courses among choices.

Requirements for the Minor in Mathematics (code 0-6666)

MATH 122, 123, 224, 247 and 9 units of upper-division Mathematics courses to include MATH 361A, but not 370A.

Requirements for the Minor In Applied Mathematics (code 0-6608)

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:

- 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 444A, 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 (and no more than nine 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) Fulfill the requirements in either Alternative A or Alternative B;

 (a) Alternative A - pass a comprehensive written examination;

(b) Alternative B - subject to the approval of the Graduate Committee of the Department of Mathematics, write a thesis in mathematics and defend it orally.

Master of Science in Mathematics — 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, 584 and 590. (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.

Courses (MATH)

For students entering the university Fall 1983 and thereafter, satisfying the Entry-Level Math (ELM) requirement (see "Undergraduate Programs" section of this *Bulletin*) is a prerequisite for all mathematics courses except MATH 001, 007, and 010. A score of 410 (26 correct) or higher is required for MATH 010.

Lower Division

001. Elementary Algebra and Geometry (3) F,S

Prerequisite: Any ELM score 400 or below. 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. Not open to students who are exempt from the ELM or who have not yet taken the ELM but are required to do so. (Lecture 3 hrs.)

007. Math Without Fear (3) F,S

Prerequisite: permission of instructor. The course will help students strengthen their problem solving abilities while developing their quantitative skills. A broad range of topics in mathematics will be covered with emphasis being placed on recognizing patterns, analyzing problems and generalizing concepts. This course may not be taken for credit toward a university degree. (Lecture 3 hrs.)

010. Intermediate Algebra (3) F,S

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) F,S

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) F,S

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. (Lec 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) F,S

Prerequisites: 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. (Lec 3 hrs.) Not open for credit to Mathematics majors. (CAN MATH 4)

111. Mathematics for Elementary Teachers II (3) F,S

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

112. College Algebra (3) F,S

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) F,S

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) F,S

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., Activity 2 hrs.) Not open to students with credit in MATH 122. (CAN MATH 16)

119A. Survey of Calculus I (3) F,S

Prerequisites: Three years of high school mathematics including algebra, geometry, and intermediate algebra (or MATH 010), or the equivalent. Real numbers and functions; limits and continuity, differentiation and integration of functions of one variable with applications to physical, life and social sciences. Emphasis on problem-solving techniques rather than theory. (Lec 3 hrs) Not open to students with credit in MATH 115B, 115S, 120 or 122. (CAN MATH 30.)

119B. Survey of Calculus II (3) F,S

Prerequisites: MATH 119A. Further topics in differentiation and integration of functions of one variable including numerical integration, use of tables and improper integrals; introduction to calculus of several variables and elementary differential equations. (Lecture 3 hrs.) Not open to students with credit in MATH 116, 123 or 224.

120. Calculus for Technology (4) F,S

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. Not open for credit to science and technology. Not open for credit to students with credit in MATH 122. (Lecture 3 hrs, problem session 2 hrs)

122. Calculus I (4) F,S

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 intergration. (Lecture 3 hrs, problem session 2 hrs.) (CAN MATH 18)

123. Calculus II (4) F,S

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 hours, problem session 2 hours.) (CAN MATH 20)

180. Elementary Statistics (3) F,S

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)

224. Calculus III (4) F,S

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 hours, problem session 2 hours.)
(CAN MATH 22)

233. Fundamental Concepts for Advanced Mathematics (3) F,S

Prerequisite: A grade of C or better in MATH 123. Fundamentals of 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) F,S

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.) Not open to students with credit in MATH 345 or 346. (CAN MATH 26)

278. Computer Applications in Mathematics for Teachers (3) F,S

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. (Lec 3 hrs.) Not open to computer science majors or non-waiver program mathematics majors.

295. Topics in Mathematics (1-3) F,S

Prerequisite: Consent of instructor. Topics in mathematics for students interested in mathematics education or in pure or applied math. Specific topics will be announced in the Schedule of Classes. May be repeated with different topics for a maximum of 6 units of credit.

297. Directed Study (1-3) F,S

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 Mathematics (3) F,S

Prerequisites: MATH 119B or 123. Designed to trace the continuous growth and development of mathematical thought and practices from the primitive origins to the present. Fundamental concepts, methods and developments are studied; evolution of areas in mathematics is traced. Introduction to number theory. Recommended for all mathematics majors and minors preparing to teach. (Lecture 3 hrs.)

311. Topics of Enrichment in Mathematics for the Elementary Teacher (3) F

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

317. Introduction to Abstract Mathematics (3) F,S

Prerequisite: MATH 123. Introduction to topics which form a background for the study of abstract mathematics with emphasis on methods of developing and writing proofs. Topics will include set theory, complex numbers and abstract algebra. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.) Not open for credit to anyone with a grade of "C" or better in MATH 444 or 444A.

323. Introduction to Numerical Analysis (4) F,S

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) F

Prerequisite: MATH 119A or 122. Symbolic methods of propositional calculus, general theory of inference, transition from formal to informal proofs, theory of definition, elementary set theory and axiomatic method. (Lecture 3 hrs.)

333. Discrete Structures and Combinatorics (3) F

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) S

Prerequisite: MATH 119B or 123. Complex numbers, general theorems on algebraic equations, the discriminant, location and approximation of roots of equations, solution of the cubic and quartic equation; determinants and their application to simultaneous linear equations, symmetric functions. (Lecture 3 hrs.)

341. Number Theory (3) F,S

Prerequisites: MATH 123 and at least one of MATH 233, 247, 310, 317; 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) S

Prerequisites: MATH 224, 233, and 247. An indepth 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) F,S

Prerequisite: MATH 119B or 123. Transformations, motions, similarities, geometric objects, congruent figures, the axioms of geometry, and selected topics in advanced Euclidean geometry. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

361A. Introduction to Mathematical Analysis I (3) F,S

Prerequisites: MATH 224 and 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) F,S

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) F,S

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) S

Prerequisite: MATH 364A. 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) F,S

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. Not open for credit to mathematics majors, (Lecture 3 hrs.)

370B. Applied Mathematics II (3) F,S

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. Not open for credit to mathematics majors. (Lecture 3 hrs.)

380. Probability and Statistics (3) F,S

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, unblasedness, and asymptotic distribution of estimators. Neyman-Pearson Lemma. Goodness-of- fit tests. Correlation and regression. Experimental design and analysis of variance. Nonparametric methods. (Lecture 3 hrs.)

*382. Random Processes (3) F

Prerequisites: MATH 247 and 380. Further topics in probability. Markov processes. Renewal theory. Random walks. Queueing theory. Poisson processes. Brownian motion. (Lecture 3 hrs.)

*423. Intermediate Numerical Analysis (3) S

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.)

*430. Mathematical Logic (3) S

Prerequisite: MATH 330. Introduction to formal logical systems. Formal proofs in propositional and first order predicate calculi. Completeness theorems and problems related to consistency and decidability. (Lecture 3 hrs.)

444A. Introduction to Higher Algebra I (3) F,S

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.)

*444B. Introduction to Higher Algebra II (3) S

Prerequisite: MATH 444A. Continuation of topics presented in MATH 444A, Unique Factorization Domains, Polynomial Rings, Modules, Finitely generated abelian groups, and elements of Galois Theory. Recommended for students planning to do graduate work in pure mathematics. Students will be asked to write valid mathematical proofs. (Lecture 3 hrs.)

*451. Differential Geometry (3) F

Prerequisite: MATH 364A or 370A (either can be taken concurrently). 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) S

Prerequisite: MATH 361A. Theory and applications of complex variables. Analytic functions, integrals, power series and applications. Not open to students with credit in MATH 562A. (Lecture 3 hrs.)

*463. Multivariable Calculus (3) F

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) F

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) S

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) S

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) S

Prerequisites: MATH 247, 380; prior or concurrent enrollment in MATH 381 recommended. Simple linear regression: estimation and inference, prediction, analysis of residuals, detection of outliers, use of transformations. Multiple linear regression: influence diagnostics, multicollinearity, selection of variables, simultaneous estimation and inference, validation techniques. Use of statistical software for data analysis. (Lecture 3 hrs.)

*485. Mathematical Optimization (3) F

Prerequisites: MATH 247 and MATH 323. 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) F,S

Prerequisite: Consent of instructor. Topics of current interest from mathematics literature.

*497. Directed Studies (1-3) F,S

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. Higher Algebra I (3) F

Prerequisite: MATH 444A. 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. Higher Algebra II (3) S

Prerequisite: 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; metrizability; 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 MATH 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)

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 and B, 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, 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. Not open to students with credit in MATH 580. (Lecture 3 hrs.)

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.

590. Theory of Approximation (3) S

Prerequisite: MATH 361B. Recommended: MATH 561A. The approximation problem. Least squares and Chebyshev approximation. Approximation with the L¹ norm. Harmonic analysis. The Weierstrass approximation theorem. Rate of convergence and computational methods. (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 for credit to a maximum of six credits.

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.

Physics and Astronomy

College of Natural Sciences and Mathematics

Department Chair: Bruce L. Scott Department Office: PH3-207 Telephone: 985-4924 or 985-7924 Faculty: Professors: M. Zahur Anwar, R. Dean Ayers, Lowell J. Eliason, Simon George, Chi-Yu Hu, Patrick F. Kenealy, Lawrence S. Lerner, Alfred Leung, Keung P. Luke, Jack H. Munsee, Sema'an I. Salem, Bruce L. Scott, Kwang Y. Shen, Edwin L. Woollett; Associate Professors: Mark W. Gross, Paul Hintzen, S. Rajpoot; Assistant Professors: Z. Hlousek, Jing Liu, Xia Qiu; Emeritus Faculty: Chia-Hwa Chen, Richard H. Chow, John E. Fredrickson, Charles A. Roberts Jr., Richard Scalettar, Cramer W. Schultz, Alva F. Yano Department Secretary: Irene Howard

Department of Physics and Astronomy Advisory Council:

The Advisory Council consists of prominent scientists and engineers from local industries who help the Department maintain its quality program by sharing their experience, expertise and resources. The list of current members is available on request.

Information

Students desiring information should contact the department office for referral to one of the faculty ad-

Undergraduate Advisor: Eliason: Graduate Advisor: Salem.

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 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 Bulletin. Courses not receiving prior approval will not be accepted for credit by the department.

Bachelor of Science in Physics

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 for the Bachelor of Science in Physics (code 3-7668):

Lower Division: PHYS 151, 152, 153; MATH 122, 123, 224; CHEM 111A, 111B; BIOL 200 or 210A.

Upper Division: ENGL 317; MATH 370A, 370B; 34 units of upper division physics including PHYS 310, 340A, 340B, 350, 360, 380, 422, 450, and one lab 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 4001.

A grade of "C" or better must be received in all courses required for the bachelor of science degree in

The following schedule is typical for an upper division major who is a full-time student.

Junior Year Fall: PHYS 310, 360, 380; MATH 370A or 370B (it is recommended that MATH 370A be taken before PHYS 310, if possible) Spring: PHYS 340A, 350; MATH 370B (if not taken previously). Senior Year: Fall: PHYS 340B, 422, 450.

Spring: Three upper division

physics electives.

Bachelor of Arts in Physics

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

Requirements for the Bachelor of Arts in Physics (code 2-7668):

Lower Division: PHYS 151, 152. 153: CHEM 111A, 111B: MATH 122. 123, 224; and BIOL 200 or 210A.

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,

Minor in Physics (code 0-7668)

A minimum of 20 units which must include:

Lower Division: PHYS 151, 152, 153.

Upper Division: A minimum of nine units which may not include PHYS 360.

Master of Science in Physics

The Department of Physics and Astronomy offers graduate study leading to the master of science degree. A student may choose to obtain the degree either with a thesis (Plan I) or, if the department graduate committee gives permission, with a comprehensive examination (Plan II). Active areas of research are: observational astronomy, laser optics, particle physics, atomic physics, quantum gravity, muon catalyzed fusion, intermediate energy physics, acoustics and condensed matter physics.

A limited number of teaching and graduate assistantships is available to students working on the master's degree. Normally graduate assistants help a faculty member conduct the laboratory sessions of lower division courses.

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.)

Advancement to Candidacy:

- (1) 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;
- (2) 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.

Requirements for the Master of Science (code 6-7668):

- (1) A minimum of 30 units of upper division and graduate courses including PHYS 540A, 540B, 550A, 550B, 560A, and 695;
- (2) A thesis (PHYS 698), 6 units.

The remaining required units, not more than 7 of which may be in related fields, are to be from courses selected in consultation with the graduate advisor and/or thesis advisor. 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 ex-

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 Metals Physics (code 6-7669)

The Option in Metals 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

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 370Aand 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.

Advancement to Candidacy:

- (1) Students must fulfill the general University requirements for advancement to candidacy and must satisfy the Department Graduate Committee as to the students' preparation by satisfactorily completing the Physics Department screening examination. This will be done in the first or second semester the students are registered for courses acceptable for credit toward the M.S., except in individual cases to be determined by the Department Graduate Committee;
- (2) 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.

Requirements:

Thirty units of upper division and graduate courses as described below.

- (1) PHYS 540A, 550A, 560A, 569, 695, and six units of 698.
- (2) Two of the following courses or combinations of courses: PHYS 502/503, 575/576, 586, and 580.
- (3) Courses selected in consultation with the Department Graduate Advisor and/or thesis advisor to complete the remaining 2 to 4 units.

Physics Courses (PHYS)

Lower Division

100A,B. General Physics (4,4)

Prerequisite: Two years of high school algebra or equivalent (a knowledge of basic trigonometry is strongly recommended). PHYS 100A is a prerequisite for PHYS 100B. Year course in introductory physics. First semester considers properties of matter, mechanics, wave motion and heat. Second semester considers electricity, light, and atomic and nuclear physics. (Lecture 3 hrs, lab 3 hrs.) A course fee may be required. (100A: CAN PHYS 2; 100B: CAN PHYS 4)

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 hours.) Course begins in the fourth week of the semester

104. Survey of General Physics (4) F,S

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 hours, laboratory 3 hours). A course fee may be required.

151. Mechanics and Heat (4) F,S

Prerequisite: MATH 122. Kinematics, Newton's Laws rotational motion, fluid statics, laws of thermodynamics. (Lecture 3 hours, laboratoryrecitation 3 hours.) A course fee may be required. (CAN PHYS SEQ B, 151+152+153)

152. Electricity and Magnetism (4) F,S

Prerequisites: PHYS 151, MATH 123. Mechanical waves, Coulomb's law, electrostatics, electric circuits, introductory electronics, magnetic fields, induction and Maxwell's equations. (Lecture 3 hours, laboratory 3 hours.) A course fee may be required. (CAN PHYS SEQ B, 151+152+153)

153. Modern Physics and Light(4) F,S

Prerequisites: PHYS 152, 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 154. (Lecture 3 hours, laboratory 3 hours.) A course fee may be required. (CAN SEQ B, 151+152+153)

154. Modern Physics and Light (3) F,S

Prerequisites: PHYS 152, 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, (Lecture 3 hours.)

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 hours.) A course fee may be required.

Upper Division

310. Mechanics I (3) F

Prerequisites: PHYS 151, MATH 370A (may be taken concurrently). 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. (Lecture 3 hours.)

311. Mechanics II (3) S, Even Yrs

Prerequisite: PHYS 310. Dynamics of rigid body, constraints, inertia tensor, gyroscopic motion, deformable media: waves on strings and in fluids, variational methods and nonlinear mechanics. (Lecture 3 hours.)

330. Experimental Optics and Spectroscopy (3) S

Prerequisite: PHYS 153. Interference, diffraction, polarization and elementary spectroscopy. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

340A. Electricity and Magnetism I (3) S

Prerequisites: PHYS 152 and 310, MATH 370A. Vector calculus, electrostatics, and magneto-statics. Formulation of Maxwell's equations in vector analytic form. (Lecture-discussion 3 hours.)

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 hours.)

350. Modern Physics (3) S

Prerequisites: PHYS 310, MATH 370A. 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 hours.)

360. Computers in Physics (3) F

Prerequisites: PHYS 152, MATH 370A (may be taken concurrently). Introduction to the use of computers in physics. The PC and DOS, fundamentals of programming, introduction to numerical analysis and computer graphics. Use of selected types of commercially available programs such as spreadsheets and symbolic analysis programs. (Lecture-discussion 3 hours.)

380. Fundamentals of Electronics (4) F

Prerequisite: PHYS 152. Network analysis and complex impedance, transistor circuits, operational amplifiers, active filters and oscillators, digital electronics, analog-digital interfacing, microprocessors. (Lecture 3 hours, lab 3 hours.) A course fee may be required.

400l. 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

402./502. Fourier Methods in Physics (3) F

Prerequisite: PHYS 310, MATH 370B. (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 hours.)

403./503. Fourier Physics Laboratory (1) F

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 hours.) A course fee may be required.

410./515. Relativity (3) F, Odd Yrs

Prerequisites: PHYS 340A and MATH 370B or permission of the instructor. (Undergraduates register in PHYS 410; graduates register in PHYS 515.) The Lorentz transformations, 4-vectors, tensors, special relativistic kinematics, differential geometry, general relativity, applications. (Lecture-discussion 3 hours.)

422./522. Thermal Physics (3) F

Prerequisites: PHYS 310, 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 hours.)

434./534. Astrophysics (3) F, Even Yrs

Prerequisite: Senior standing in physics or consent of instructor. (Undergraduates register in PHYS 434; graduates register in PHYS 534.) Review of observational data of astronomy, elementary theory of stellar structure, model stellar calculation and simple stellar systems. (Lecture 3 hours.)

444./544. Plasma Physics (3) S, Odd Yrs

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 hours.)

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. (Lec-discussion 3 bre.)

*451. Quantum Physics II (3) S

Prerequisite: PHYS 450. Measurement processes, atomic physics, identical particles, quantum statistics, numerical methods, many-body systems, density matrix, applications. (Lecture-discussion 3 hours.)

454./555. Elementary Particle Physics (3) S, Even Years

Prerequisite: PHYS 450. (Undergraduates register in PHYS 454; graduates register in PHYS 555.) Particle detectors and accelerators; ionization and radiation energy loss; invariance principles, conservation laws, particle properties, elementary scattering theory; weak, electromagnetic and strong interactions; particle models. (Lecture-discussion 3 hours.)

470./569. Introduction to Solid State Physics (3) S

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 hours.)

475./575. Modern Optics (3) F

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

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. (Lab 3 hours.) A course fee may be required.

480./580. Computer Interfacing in Experimental Physics (3) S

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 hours, laboratory 3 hours.) A course fee may be required.

486./586. Experimental Physics-Radiation (3) S, Odd Yrs

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 hours, laboratory-demonstration and/or special project 3 hours). A course fee may be required.

490./590. Special Topics in Physics (3) F,S

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 hours.) A course fee may be required.

496. Special Problems in Physics (1-3) F,S

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 max of 4 units. A course fee may be required.

Astronomy Courses (ASTR)

Lower Division

100. Astronomy (3) F,S

Introductory course in astronomy. The earth moon system and the planets, the stars and their constitution. Survey of the methods of astronomical observation.

100L. Introductory Astronomy Laboratory (1) F

Prerequisite: ASTR 100 which may be taken concurrently. Astronomical coordinates, star maps, magnitude, spectral classification, ages of stars, distance to star clusters. Not open to students with credit in ASTR 101. (Laboratory 3 hours.) Traditional grading only. A course fee may be required.

101. Astronomy II (3) F,S

Prerequisite: ASTR 100. A descriptive and observational study of the 100 finest deep sky objects. Each semester 30 or 40 of these objects are well placed for viewing. These objects will be discussed in a lecture as examples of the variety of celestial objects, and they will also be studied in color photographs taken by students on field trips. The field trips, most of them overnight to local campgrounds, are optional but strongly recommended. (Lecture 2 hours, laboratory 3 hours.) A course fee may be required.

200. Introduction to Astronomy and Astrophysics (3) F,S

Prerequisite: MATH 101 (may be taken concurrently). Newton's Laws and gravitation, the earth and the solar system, atomic radiation, spectra of stars, stellar population, stellar clusters, the galaxy and cosmology. (Lec-discussion 3 hrs.)

Upper Division

3701. 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 hours.)

Physical Science Courses (PHSC)

Lower Division

112. Introduction to the Physical Sciences (3) F,S

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 hours, lab 3 hours.) A course fee may be required.

Upper Division

331. Light, Lasers and the Visual Image (3) F

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 hours.)

Graduate Division Physics (PHYS)

500. Research Methods (1) F,S

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.

502./402. Fourier Methods in Physics (3) F

Prerequisite: PHYS 310, MATH 370B. (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 hours.)

503./403. Fourier Physics Laboratory (1) F

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 hours.) 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 hours.)

515./410. Relativity (3) F, Odd Years

Prerequisites: PHYS 340A and MATH 370B or permission of the instructor. (Undergraduates register in PHYS 410; graduates register in PHYS 515.) The Lorentz transformations, 4-vectors, tensors, special relativistic kinematics, differential geometry, general relativity, applications. (Lecture-discussion 3 hours.)

522./422. Thermal Physics (3) F

Prerequisites: PHYS 310, 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 hours.)

534./434. Astrophysics (3) F, Even Years

Prerequisite: Graduate standing in physics or consent of instructor. (Undergraduates register in PHYS 434; graduates register in PHYS 534.) Review of observational data of astronomy, elementary theory of stellar structure, model stellar calculation and simple stellar systems. (Lecture 3 hours.)

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 hours.)

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 hours.)

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 hours.)

550A. Quantum Mechanics I (3)

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 hours.)

550B. Quantum Mechanics II (3)

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 hours.)

554. Nuclear Physics (3) F

Prerequisite: PHYS 550A. Deuteron problem, nucleon-nucleon potential, shell model, nuclear models, nuclear reactions, elementary particles, weak interactions, strong interactions. (Lecture 3 hours.)

555./454. Elementary Particle Physics (3) S, Even Years

Prerequisite: PHYS 450. (Undergraduates register in PHYS 454; graduates register in PHYS 555.) Particle detectors and accelerators; ionization and radiation energy loss; invariance principles, conservation laws, particle properties, elementary scattering theory; weak, electromagnetic and strong interactions; particle models. (Lecture-discussion 3 hours.)

560A,B. Methods of Mathematical Physics (4,3) F,S

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 hours.)

569./470. Introduction to Solid State Physics (3) S

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 hours.)

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 bours.)

575./475. Modern Optics (3) F

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 hours.)

576./476. Modern Optics Laboratory (1) F

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 hours.) A course fee may be required.

580./480. Computer Interfacing in Experimental Physics (3) S

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 hours, laboratory 3 hours.) A course fee may be required.

586./486. Experimental Physics-Radiation (3) S, Odd Yrs

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 hours, laboratory-demonstration and/or special project 3 hours.) A course fee may be required.

590./490. Special Topics in Physics (3) F,S

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, 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 hours.) A course fee may be required.

599. Quantum Field Theory (3) F

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 hours.)

691. Directed Study (1) F,S,SS

Intensive study of advanced topics in physics. May be repeated once for credit.

694. Seminar in Special Topics (1) F,S

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.

695. Colloquium (1) F,S

Prerequisites: Graduate standing. Weekly of the ti meetings for presentation and discussion of current research in physics. All graduate students are expected to attend each semester they are enrolled in the University. Credit/No Credit grading only.

697. Directed Research (1-3) F.S.SS

Theoretical and experimental problems in physics requiring intensive analysis. A course fee may be required.

698. Thesis (1-6) F,S,SS

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.

Emeritus Faculty

(Number in parentheses indicates year of appointment)

Herbert L. Aarons (1965) Associate Professor Emeritus, 1991.
History

Ruth H. Afflack (1966) Professor Emeritus, 1992.

Irving F. Ahlquist (1949) Professor Emeritus, 1983.

Eugene Albert (1967) Associate Professor Emeritus, 1992.

Kamal T. Al-Chalabi (1966) Professor Emeritus, 1990.

Robert L. Alexander (1964) Professor Emeritus, 1991.

Charles A. Allen (1957) Professor Emeritus, 1978.

Ralph K. Allen (1956) Professor Emeritus, 1970.

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

Roy C. Anderson (1950) Professor Emeritus, 1974. Secondary Education

Edna Andrews (1967) Professor Emeritus, 1982.

George L. Appleton (1953) Professor Emeritus, 1986.

Blair C. Archer (1950) Professor Emeritus, 1983.

Alfonso L. Archuleta (1965) Associate Professor Emeritus, 1983.

Cecil Armour, P.E. (1968) Professor Emeritus, 1972.

Daniel D. Arnheim (1959) Professor Emeritus, 1990.

Harold Aspiz (1958) Professor

William D. Ash (1957) Professor Emeritus, 1990.

Abraham A. Avni (1964) Professor Emeritus, 1983. 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.

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

Zelpha Bates (1953) Professor Emeritus, 1967. Home Economics

Roger D. Bauer (1959) Professor Emeritus, 1992. Chemistry and Biochemistry

Phyllis Beacom (1979) Lecturer Emeritus, 1991 Home Economics

Louis L. Beck (1970) Professor Emeritus, 1989.

Charles E. Becker (1956) Professor Emeritus, 1981. Music

Edwin N. Becker (1955) Professor Emeritus, 1983. Chemistry

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

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

Stuart E. Black (1962) Associate Professor Emeritus, 1991. Computer Engineering and Computer Science

Albert G. Black (1962) Associate Professor Emeritus, 1988. English Evelyn L. Blackman (1961) Professor Emeritus, 1976. Educational Psychology

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.

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

Dean O. Bowman (1973) Dean Emeritus, 1977.

Robert E. Brasher (1956) Senior Assistant Librarian— Emeritus, 1986. J. Weeley Bratton (1950) Professor Emeritus, 1969.

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.

Robert J. Brophy (1968) Professor Emeritus, 1993.

Ruth M. Bryan (1962) Assistant Fine Arts Librarian—Emeritus, 1977.

David L. Bryant (1949) Executive Dean Emeritus, 1969.

John G. Buchanan (1968) Professor Emeritus, 1990. History

Steven M. Buck (1961) Professor Emeritus, 1990.

William E. Buckner (1970) Professor Emeritus, 1990. Home Economics

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.

Jerry D. Byrd (1982) Lecturer Emeritus, 1992.

Earl R. Cain (1959) Professor Emeritus, 1986.

Guy H. Cain, Jr. (1960) Associate Professor Emeritus, 1980.

Daniel A. Campbell (1962) Professor Emeritus, 1990. Physical Education

Earl R. Carlson (1961) Professor Emeritus, 1990. Psychology

Maude C. Carlson (1952) Head Social Science Reference Librarian—Emeritus, 1967. Ottis L. Castleberry (1956) Professor Emeritus, 1983.

Speech Communication
Shirley Cereseto (1967) Professor Emeritus, 1982.

L Lincoln Chao (1964) Professor Emeritus, 1983

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

Art
Marguerite A. Clifton (1978) Professor Emeritus, 1987.

Robert B. Clyde (1967) Counselor Emeritus, 1978.

Joan Cobin (1973) Professor Emeritus, 1988.

Robert E. Click (1962) Professor Emeritus, 1982.

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

James L. Comer (1971) Professor Emeritus, 1981.

Physical Education

Bert L. Conrey (1955) Professor Emeritus, 1983.
Geological Sciences
Joseph Contreras (1961) Professor Emeritus, 1980.

Peter A. Cortese (1973) Associate Dean and Professor Emeritus, 1991.

Edmund A. Cotta (1958) Professor Emeritus, 1991.

Hiden T. Cox (1963) Professor Emeritus, 1986. Biological Sciences

James S. Crafts (1957) Professor Emeritus, 1980.

Walter B. Crawford (1963) Professor Emeritus, 1985.

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
Murray D. Dailey (1966) Professor Emeritus, 1992.

Biological Sciences

Donald L. Dame (1965) Professor Emeritus, 1992.

Art Richard H. Darbee (1954) Professor Emeritus, 1979.

Honore E. Dash (1967) Associate Professor Emeritus, 1980.

Boyd A. Davis (1951) Professor Emeritus, 1980. Director of Academic Planning James E. Day (1955) Professor Emeritus, 1983.

English
C. Thomas Dean (1952) Professor Emeritus, 1980

Dorothy Description (1955) Professor Emeritus, 1990.

Kee K. DeBoer (1977) Librarian Emeritus, 1992. Dorls C. DeHardt (1961) Professor Emeritus, 1988.

Psychology

Beverly DeLong-Tonelli (1966) Professor Emeritus, 1993.

George D. Demos (1962) Professor Emeritus, 1983.

Robert J. DeVoe (1968) Associate Professor Emeritus, 1992.

Management/luman Resources Management

Harold R. Dilbeck (1969) Professor Emeritus, 1991.
 Finance, Real Estale 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

Dale D. Drum (1956) Professor Emeritus, 1978.

Speech Communication

Ralph W. Duckwall (1964) Professor Emeritus, 1986.
Theatre Arts

John H. Dudley (1960) Professor Emeritus, 1975.
Civil Engineering
Stacy E. Dukes (1964) Associate Professor Emeritus, 1988.

Design Elizabeth O. DuPont (1965) Professor Emeritus, 1983.

Physical Education Robert P. Durbin (1950) Professor Emeritus, 1972.

Biological Sciences
Eldon J. Dvorak (1961) Professor Emeritus, 1991.

Carol F. Eckhardt (1967) Assistant Professor Emeritus, 1980.

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 Raymond R. Farrell (1966) Professor Emeritus, 1986. Finance, Real Estate and Law

Franklin Fenenga (1965) Professor Emeritus, 1987.

Josephine B. Fiebiger (1966) Professor Emeritus, 1983.

William E. Fisher (1955) Professor Emeritus, 1973. Secondary Education

Francis J. Flynn (1950) Executive Dean, Development—Emeritus, 1971. William E. Fogg (1956) Professor Emeritus, 1981.

Dorothy L. Fornia (1965) Professor Emeritus, 1992.

Florence H. Forst (1964) Professor Emeritus, 1979. Educational Psychology and Administration

Howard E. Fradkin (1967) Associate Professor Emeritus, 1991. Sociology

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

Audrey Fuse (1966) Associate Professor Emeritus, 1977. Sociology Stanley R. Gabrielsen (1958) Professor Emeritus, 1976.

Alice A. Gabrielson (1961) Senior Assistant Librarian—Emeritus, 1987.
Dixon L. Gayer (1959) Professor Emeritus, 1980.

Olga S. Gazdik (1968) Assistant Librarian Emeritus, 1982.

George W. Genevro (1957) Professor Emeritus, 1982

Juliana T. Gensley (1962) Professor Emeritus, 1977.
 Elementary Education
 Donna D. George (1991) Professor Emeritus, 1992.

Instructional Systems Technology
Patricla Gerlach (1972) Counselor—Emeritus, 1985.
Albert C. Germann (1957) Professor Emeritus, 1983.

Norma B. Gibbs (1966) Associate Professor Emeritus, 1992. Educational Psychology and Administration Nadyne C. Gibson (1955) Professor Emeritus, 1977.

Music
Paul R. Gilon (1969) Professor Emeritus, 1992.

Alan J. Glasser (1959) Professor Emeritus, 1980

Kenneth Glenn (1956) Professor Emeritus, 1980.

John H. Good (1967) Associate Professor Emeritus, 1963.

Criminal Justice

Leo Goodman-Malamuth (1956) Professor Emeritus, 1993.

Frank F. Gorow (1953) Professor Emeritus, 1974.

Herman H. Graff (1964) Professor Emeritus, 1986. Arl Harold V. Graham (1969) Professor Emeritus, 1983.

Teacher Education
Floyd M. Grainge (1953) Professor Emeritus, 1980.

Industrial Education

Jay J. Gramlich (1956) Professor Emeritus, 1980.

David E. Gray (1954) Professor Emeritus, 1983. Recreation and Leisure Studies

John H. Green (1955) Professor Emeritus, 1980.
Theatre Arts
Beatrice M. Greer (1968) Assistant Professor Emeritus, 1985.

Betty Rose Griffith (1968) Professor Emeritus, 1988.

Calvin D. Gross (1962) Professor Emeritus, 1992. At Arthur W. Grossman (1968) Professor Emeritus, 198

Engineering Technology
Serafina Q. Gunter (1964) Professor Emeritus, 1980.

Accounting
C. Robert Guthrie (1963) Professor Emeritus, 1980.

Albert Hamel (1956) Professor Emeritus, 1988.

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.

Leroy C. Hardy (1953) Professor Emeritus, 1986.

William E. Hartman (1951) Professor Emeritus, 1980. Sociology

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.

Braxton C. Henderson (1964) Professor Emeritus, 1975.

Don A. Hennessee (1952) Assistant Humanities Librarian —

John A. Hermann (1955) Professor Emeritus, 1982.

Truman O. Hickerson, Jr. (1965) Professor Emeritus, 1992.

John E. Higgins (1964) Professor Emeritus, 1980. History

Cliff W. Hill (1967) Associate Professor Emeritus, 1987.

Biological Sciences

Howard G. Hitchcock (1958) Professor Emeritus, 1990.

Mabel J. Hoffman (1961) Professor Emeritus, 1980.

Robert T. Holmes (1961) Professor Emeritus, 1986.

Stephen Horn (1970) President Emeritus 1988

Adelore L. Houde (1965) Professor Emeritus, 1985.

Jack H. Howe (1967) Professor Emeritus, 1986.

Everett H. Hrubant (1957) Professor Emeritus, 1988.

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

Taylor T. Jackman (1963) Professor Emeritus, 1980. Educational Administration

Willard D. James (1967) Professor Emeritus, 1987 Mathematics and Computer Science

George R. Jamgochian (1967) Professor Emeritus, 1992. Teacher Education

Hilton F. Jarrett (1966) Professor Emeritus, 1983.
 Psychology
 Patricia E. Jersin (1965) Professor Emeritus, 1991.

Teacher Education

Alan W. Johnson (1968) Associate Director

Richard J. Johnson (1959) Professor Emeritus, 1992.

George V. Kacewicz (1966) Professor Emeritus, 1986.
Political Science

Irene Kanasi (1959) Humanities Catalog Librarian—Emeritus, 1977. Elizabeth S. Kaufman (1963) Professor Emeritus, 1989.

Elizabeth Kazan (1955) Professor Emeritus, 1983.

Maxine K. Keenan (1971) Associate Professor Emeritus, 1981.

Mary F. Kefgen (1958) Professor Emeritus, 1987.

L. Boyd Kendall, P.E. (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

John C. Kimura (1967) Professor Emeritus, 1991.

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.

I. Aileen Poole Koehler (1959) Professor Emeritus, 1974

Margaret L. Koehler (1970) Professor Emeritus, 1988.

Lloyd A. Kramer (1973) Associate Director Library—Emeritus, 1986. Henry J. Krauser (1970) Associate Professor Emeritus, 1992.

Ronald A. Kroman (1959) Professor Emeritus, 1990.

Stephen Kulik (1959) Professor Emeritus, 1972.

Chester R. Kyle (1959) Professor Emeritus, 1984. Mechanical Engineering

Hans Lampl (1965) Professor Emeritus, 1983.

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

Dorothy Leach (1968) Counselor—Emeritus, 1987. Richard E. Lee (1955) Professor Emeritus, 1983.

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, P.E. (1958) Professor Emeritus, 1973.

Dorothy Libby (1967) Associate Professor Emeritus, 1988.

James C. Lien (1954) Professor Emeritus, 1983.

Richard G. Lincoln (1956) Professor Emeritus, 1986.

Raymond E. Lindgren (1961) Professor Emeritus, 1980.

John R. Lindquist (1966) Career Counselor—Emeritus, 1987. Ruth D. Lindsey (1976) Professor Emeritus, 1988.

Physical Education

Alexander Lipski (1958) Professor Emeritus, 1984.

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.

Louise C. Lubbe (1956) Professor Emeritus, 1979.

W. William Lumsden, Jr. (1958) Professor Emeritus, 1983.

Walter J. Lyche (1957) Associate Professor Emeritus, 1974.
Mathematics

Michael C. Lyman (1965) Professor Emeritus, 1983.

Theatre Arts

M. Joan Lyon (1958) Professor Emeritus, 1992. Physical Education Richard E. Lyon (1958) Professor Emeritus, 1983.

David E. MacArthur (1964) Professor Emeritus, 1986.

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.

Howard S. Martin (1965) Professor Emeritus, 1991.

John M. Martin (1955) Professor Emeritus, 1982.

John T. Martinelli (1965) Professor Emeritus, 1992.

Frederic J. Masback (1964) Professor Emeritus, 1989.

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

James B. Maue (1961) Professor Emeritus, 1983.
Philosophy
Kenneth E. Maxwell (1963) Professor Emeritus, 1973.

Biological Sciences

Gloria McCullough May (1969) Professor Emeritus, 1992.

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
 H. Thomas McCorkle, Jr. (1966) Professor Emeritus, 1980

John M. McFaul (1963) Professor Emeritus, 1988.

Edward B. McLeod, Jr. (1965) Professor Emeritus, 1986.

Mathematics and Computer Science

Flora A. Meisenheimer (1973) Associate Professor Emeritus, 1991. Nursing

Halvor G. Melom (1950) Professor Emeritus, 1974.
 History
 Maxine O. Merlino (1952) Professor Emeritus, 1975.

Vernon A. Metzger (1949) Professor Emeritus, 1982.

Larry L. Meyer (1978) Professor Emeritus, 1992.

Journalism

Harold T. Miller, (1958) Associate Professor Emeritus, 1971. Civil Engineering Margaret E. Miller (1966) Professor Emeritus, 1989.

Physical Education

John Minar (1968) Professor Emeritus, 1989.

Recreation and Leisure Studies

Beth Moore (1970) Professor Emeritus, 1986.

Mabel S. Moore (1967) Associate Professor Emeritus, 1983.

Hubert P. Morehead (1955) Professor Emeritus, 1981.
Radio-TV
Frank S. Morris (1969) Associate Professor Emeritus, 1992.

Teacher Education
C. Douglas Moryl (1963) Professor Emeritus, 1991.

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

Walter A. Nagle (1951) Professor Emeritus, 1980.

Dale E. Nelson (1956) Professor Emeritus, 1986.

Doris Nelson (1967) Professor Emeritus, 1987.

John A. Nelson, Jr. (1971) Professor Emeritus, 1983. Educational Psychology and Administration Theodore E. Nichols (1956) Professor Emeritus, 1984. Robert L. Nicholson (1957) Professor Emeritus, 1983.

Herluf P. Nielsen (1958) Professor Emeritus, 1971.

Jerome A. Nielsen (1968) Associate Professor Emeritus, 1988.

Frank Noffke (1964) Counselor—Emeritus, 1981.

John E. Nygaard (1963) Professor Emeritus, 1990.

Hazel A. Oliver (1960) Senior Assistant Librarian—Emeritus, 1980.

R. Warner Olsen, Jr. (1960) Senior Assistant Librarian Emeritus, 1992.

Paul E. Opetad (1958) Counselor—Emeritus, 1983. Douglas H. Orgill (1951) Professor Emeritus, 1983.

Russel E. Orpet (1959) Professor Emeritus, 1992.

Clyde E. Osborne (1975) Assistant Professor Emeritus, 1977.

Douglas Osborne (1964) Professor Emeritus, 1977. Anthropology

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

Lyman M. Partridge (1964) Professor Emeritus, 1978.

Communicative Disorders
William Patterson (1957) Professor Emeritus, 1983.

Physical Education

Carl Payne (1968) Professor Emeritus, 1990.

Fernando Penalosa (1970) Professor Emeritus, 1990. Sociology

Wanda L. Pentecost (1963) Professor Emeritus, 1987. Nursing
Louis E. Perigut (1965) Professor Emeritus, 1982.

Leland M. Perry (1956) Professor Emeritus, 1990.

Robert A. Pestolesi (1955) Professor Emeritus, 1986 Physical Education

Donald W. Peters (1953) Professor Emeritus 1981. History Paul G. Petersen (1962) Professor Emeritus, 1985.

Psychology

Audrey Buckland Peterson (1966) Professor Emeritus, 1983.

Milton A. Petty (1969) Associate Professor Emeritus, 1977. Biological Sciences

Dora Beale Polk (1968) Professor Emeritus, 1987. English Marion B. Pollock (1964) Professor Emeritus, 1981.

Frank M. Pooler (1959) Professor Emeritus, 1988.

Donald F. Popham (1956) Professor Emeritus, 1986
 Teacher Education
 Richard C. Potter (1967) Professor Emeritus, 1963.

J. Richard Powell (1954) Professor Emeritus, 1984.

James G. Powell (1961) Professor Emeritus, 1991.

Melchior D. Powell (1973) Professor Emeritus, 1992 Public Policy and Administration Paul E. Powell (1955) Professor Emeritus, 1981.

Alan R. Probet (1968) Associate Professor Emeritus, 1980

Health Science

Jane F. Purcell (1964) Associate Professor Emeritus, 1980

Mary-Joe Purcell (1959) Professor Emeritus, 1987

Elisabeth M. Quillen (1964) Professor Emeritus, 1985.
French-Italian
Louis E. Quinones (1965) Associate Professor Emeritus, 1992.

Bonnie J. Rader (1970) Professor Emeritus, 1990. Home Economics

James F. Ragland (1955) Professor Emeritus, 1984. History
Walter J. Raine (1968) Professor Emeritus, 1983.

Walter J. Raine (1968) Professor Emeritus, 1983.
 Psychology
 Dennis G. Rainey (1956) Professor Emeritus, 1988.

Harkisan D. Raj (1962) Professor Emeritus, 1992. Biological Sciences Robert W. Ramsey (1957) Professor Emeritus, 1990.

Clare G. Rayner (1957) Professor Emeritus, 1986.

Don F. Reed (1957) Associate Professor Emeritus, 1980.

Willard H. Reed (1962) Professor Emeritus, 1983.

C. Patricia Reid (1951) Professor Emeritus, 1974. Donald J. Reish (1958) Professor Emeritus, 1988.

Henry Reyna (1970) Counselor-Emeritus, 1987. Hans P. Ridder (1964) Associate Professor Emeritus, 1991.

Charles A. Roberts, Jr. (1956) Professor Emeritus, 1986.

Delmer J. Rodabaugh (1955) Professor Emeritus, 1978.

Johanna W. Roden (1962) Professor Emeritus, 1991.

Clara G. Rodney (1968) Professor Emeritus, 1983.

Mildred S. Rodriguez (1974) Professor Emeritus, 1988.

Fred Rogers (1959) Associate Professor Emeritus, 1992.

Howard C. Rolfe (1960) Professor Emeritus, 1980.

Harry G. Romig (1966) Professor Emeritus, 1972. Operations Research and Statistics

Ailee W. Rose (1951) Professor Emeritus, 1974. Jack W. Rose (1956) Professor Emeritus, 1992.

Arlene A. Roster (1952) Professor Emeritus, 1975

Robert D. Routh (1967) Professor Emeritus, 1983.

Kenneth W. Rugg (1964) Professor Emeritus, 1989.

James E. Ryan (1954) Professor Emeritus, 1983.

Eva Sakamoto (1967) Assistant Professor Emeritus, 1982. Merna A. Samples (1967) Professor Emeritus, 1981.

Janet B. Sawyer (1957) Professor Emeritus, 1986.

Richard Scalettar (1968) Professor Emeritus, 1992.

Physics and Astrono

Frederick H. Scantling (1966) Associate Professor Emeritus, 1980.

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.

Cramer W. Schultz (1964) Professor Emeritus, 1991.

James W. Schultz (1963) Associate Professor Emeritus, 1980. Physical Education

Josephine B. Schultz (1951) Professor Emeritus, 1977.

Arnold T. Schwab (1961) Professor Emeritus, 1980.

Herman Schwartzkopf (1950) Professor Emeritus, 1979.

Frank C. Schatzlein (1959) Professor Emeritus, 1991.

Joseph F. Seewerker (1967) Professor Emeritus, 1992.

Elbert W. Segelhorst (1964) Professor Emeritus, 1992.

Thomas M. Serrett (1963) Assistant Librarian-Emeritus, 1980. Norman E. Sexauer (1967) Professor Emeritus, 1992.

John W. Shainline (1966) Vice President for Student Services Emeritus,

Alfred W. Sheets (1959) Professor Emeritus, 1975.

Donald D. Shipley (1953) Professor Emeritus, 1977. **Biological Sciences**

Gail Shoup (1969) Professor Emeritus, 1989.

Robert M. Simmons (1959) Professor Emeritus, 1983. ement/Human Resources Manageme

Donald H. Simonson (1956) Professor Emeritus, 1980.

Gene R. Simonsen (1958) Professor Emeritus, 1990.

Lorelei P. Sinclair (1966) Assistant Librarian Emeritus, 1991. A. Keith Skarsten (1956) Professor Emeritus, 1982.

Elbert L. Sleeper (1957) Professor Emeritus, 1992.

Alton H. Smith (1957) Professor Emeritus, 1992.

Donald H. Smith (1960) Professor Emeritus, 1986.

Earl M. Smith (1968) Professor Emeritus, 1991. Technology Education

Peggy J. Smith (1968) Professor Emeritus, 1992.

Robert J. Smith (1966) Professor Emeritus, 1992.

Doris S. Specht (1985) Head. Humanities Librarian-Emeritus, 1973. Graham K. Spring (1966) Associate Professor Emeritus, 1976.

Russel N. Squire (1958) Professor Emeritus, 1971.

Robert A. Steffes (1959) Professor Emeritus, 1972.

Meyer L. Stein (1974) Professor Emeritus, 1989.

Rodney W. Steiner (1956) Professor Emeritus, 1990.

George D. Stephens (1951) Professor Emeritus, 1974.

Lee B. Stephens, Jr. (1962) Professor Emeritus, 1983.

Charles E. Stetler (1967) Professor Emeritus, 1992.

Perri J. Stinson (1969) Professor Emeritus, 1988.

Harry E. Stiver, Jr. (1964) Professor Emeritus, 1983.

Lavonne L. Stock (1959) Professor Emeritus, 1980. Robert E. Strain (1956) Professor Emeritus, 1978.

Gerald B. Strickler (1958) Professor Emeritus, 1986.

Paul W. Stroud (1957) Professor Emeritus, 1980

Vivian M. Sucher (1962) Professor Emeritus, 1986

Roy A. Sugimoto (1969) Associate Professor Emeritus, 1988.

Neil V. Sullivan (1972) Professor Emeritus, 1986.

Sabri Sungu (1961) Professor Emeritus, 1983.

Robert J. Swan (1964) Professor Emeritus, 1986. Educational Psychology and Administration

Frank E. Swatek (1956) Professor Emeritus, 1992.

Frederick M. Swensen (1961) Professor Emeritus, 1990. Richard H. Swift (1958) Professor Emeritus, 1980.

Doris D. Tabor (1967) Professor Emeritus 1987

Kenneth S. Teel (1969) Professor Emeritus, 1988. Henri Temianka (1964) Professor Emeritus, 1974.

Richard J. Teweles (1967) Professor Emeritus, 1991.

Finance, Real Estate and Law A.G. Tharp (1959) Professor Emeritus, 1987.

Lindsay Thomas, Jr. (1961) Professor Emeritus, 1992.

Charles M. Thompson (1956) Professor Emeritus, 1983.

Jesse J. Thompson (1956) Professor Emeritus, 1979.

Charles H. Tilden (1952) Professor Emeritus, 1976.

Talmadge C. Tillman, Jr. (1968) Professor Emeritus, 1991.

F. Alan Timmons (1954) Professor Emeritus 1980 Instructional Media

John A. Torney, III (1957) Professor Emeritus, 1986. Leonard Torres (1956) Professor Emeritus, 1988.

Leonard W. Towner, Jr. (1955) Professor Emeritus, 1986.

William J. Traynor (1973) Professor Emeritus, 1992.

John Trevennen, Jr. (1952) Information Desk Librarian- Emeritus, 1978. Thomas Trombetas (1961) Professor Emeritus, 1989.

Robert G. Trout (1961) Professor Emeritus, 1991.

Ching H. Tsao (1965) Professor Emeritus, 1986.

Robert E. Tumelty (1974) Professor Emeritus, 1992.

Robert E. Tyndall (1955) Professor Emeritus, 1983.

Paul S. Ullman (1958) Professor Emeritus, 1994.

Alexander D. Urquhart (1953) Professor Emeritus, 1982.

Hans H. Vander Meyden (1961) Associate Professor Emeritus, 1983.

Marilyn Vanderwarf (1957) Associate Professor Emeritus, 1983.

Georgie B. Vaughn (1960) Senior Associate Librarian-Emeritus, 1981. Joseph Verdina (1959) Professor Emeritus, 1987.

Joseph A. Wagner (1952) Professor Emeritus, 1978.

Charles T. Walker (1964) Professor Emeritus, 1991.

(Milton) Glenn Walker (1964) Professor Emeritus, 1988. William J. Wallace (1963) Professor Emeritus, 1970.

Eugene C. Wallin (1956) Professor Emeritus, 1990.

Dorothy L. Walsh (1956) Professor Emeritus, 1970.

Barbara A. Ward (1968) Associate Professor Emeritus, 1980.

Virginia G. Warren (1973) Dean and Professor Emeritus, 1992.

Harold W. Washburn (1965) Professor Emeritus, 1972. Kenneth C. Weisbrod (1964) Associate Dean Emeritus, 1980.

William T. Wellhouse (1955) Professor Emeritus, 1983.

Robert G. Wells (1963) Professor Emeritus, 1985.

David B. Whitcomb (1967) Counselor Emeritus, 1987. Susanne Whitcomb (1973) Professor Emeritus, 1987. School of Business Administration

Richard H. Wilde (1951) Professor Emeritus, 1983

David A. Williams (1965) Professor Emeritus, 1980.

John B. Williams (1966) Professor Emeritus, 1992.

Luster J. Williams (1956) Professor Emeritus, 1983.

R. Ora Williams (1968) Professor Emeritus, 1988.

Stanley W. Williams (1952) Professor Emeritus, 1983. James N. Wilson (1950) Professor Emeritus, 1979.

Suzanne M. Wilson (1958) Professor Emeritus, 1980.

Robert W. Winchell (1961) Professor Emeritus, 1980.

Robert W. Winslow (1952) Professor Emeritus, 1980.

Herbert A. Winter (1959) Associate Professor Emeritus, 1988.

Marjorie E. Wood (1968) Director of Undergraduate Studies and

Charles E. Wolff (1957) Professor Emeritus, 1980.

Edward A. Wright (1966) Professor Emeritus, 1973.

Robert W. Wuesthoff (1959) Professor Emeritus, 1989.

Robert C. Wylder (1953) Professor Emeritus, 1979.

Frank W. Wylle (1988) Professor Emeritus, 1992.

Alva F. Yano (1963) Professor Emeritus, 1992.

Jo Ann R. Yates (1968) Professor Emeritus, 1986. Bing C. Yen (1964) Professor Emeritus, 1992.

Dale Yoder (1966) Professor Emeritus, 1975.

James L. Young (1963) Assistant Professor Emeritus, 1974.

L. Ward Youry (1952) Professor Emeritus, 1980.

Pierre Yperman (1963) Associate Professor Emeritus, 1992.

Faculty

Aall, Ingrid (1969)
B.A., University of Oslo, Norway, B. Litt., St. Anne's College, Oxford; Ph.D., University of Chicago.
Abels, Paul (1986)
B.A., Rutgers University; Ph.D., University of Chicago.
Abou-EI-Haj, Rifaat Ali (1964) Professor History B.A., Washington and Lee University, M.A., Ph.D., Princeton University.
B.A., Washington and Lee University; M.A., Ph.D., Princeton University.
Abrahamse, Dorothy Z. (1967) Dean College of Liberal Arts
History B.A., Mount Holyoke College; M.A., Ph.D., University of Michigan.
Abramis, David J. (1985)
Management/Human Resources Management BA, University of California, Santa Cruz; MA, Ph.D. University of Michigan.
Acey, Roger A. (1983)
B.S., Ph.D., Wayne State University.
Albright, Leonard O. (1984)
B.A., Findlay College, Ohio; M.Ed., Bowling Green State University, Ohio; Ph.D., University of Illinois, Champaign.
Alexanderson-Lee, Helen C. (1987) Assistant Professor Home Economics
B.S., Ewha Woman's University, Korea; M.S., Washington State University, Pullman; Ph.D. University of Illinois, Urbana
Ph.D., University of Illinois, Urbana. Alfieri, Frank J. (1967) Professor
Biological Sciences
D.C. M.E.A. Hallman A. and C. Harris, Davids, Dh. D. Hallman A. and M. a
Ali, M. Shafqat (1967)
B.S., Agra University, India; M.S. Muslim University, India; M.A., Ph.D., University of California, Santa Barbara. Allen, Barbara S. (1970)
Allen, Barbara S. (1970) Professor Music
B.A., M.A., Brigham Young University; D.M.A. University of Illinois.
Allen, Terre (1990)Assistant Professor
Speech Communication B.A., Louisiana Technical University; M.A., Ph.D., Louisiana State University, Baton Rouge.
Ambos, Elizabeth L. (1989) Associate Professor Geological Sciences
A.B., Smith College; M.S., Ph.D., University of Hawaii.
Amin, Isam E. (1993)
B.S., University of Kharloum, Sudan; M.S., New Mexico Institute of Mining and Technology; Ph.D., University of Nevada-Reno.
Amirkhan, James H. (1988) Associate Professor Psychology
B.A., Reed College; M.A., California State University, Northridge; Ph.D., University of California, Los Angeles.
Anand, Rajen S. (1970) Professor Biological Sciences
B.Sc., Meerut College, India; B.V.Sc A.H (D.V.M.), M.P., Veterinary College Research Institute, India; Ph.D., University of California, Davis.
Anatol, Karl (1969) Provost and Senior Vice President Academic Affairs
Speech Communication B.A., Andrews University, Michigan; M.A., Purdue University; Ph.D., University of Southern California.
Anderson, Kaye W. (1989) Associate Professor
Teacher Education
B.S., Phillips University, M.S., Ph.D., Southern Illinois University.
Anderson, Roy C. (1965)
B.S., Lehigh University; M.A., Ph.D., Tulane University.
Andre, Shane (1967) Professor
Philosophy
B.S., Johns Hopkins University; M.A., Ph.D., Claremont Graduate School.

it from (1981) disconnection of the contraction of	
Anjo, Dennis M. (1984)	
B.A., M.S., San Francisco State University; Ph.D., Arizona State University, T. Anselmo, Carl R. (1964)	rofessor
B.A., M.S., Ph.D., University of Utah. Anwar, Mohammad Z. (1965) Physics and Astronomy	Tolessor
B.S., M.S., Dacca University, Pakistan; Ph.D., University of British Columbia. Archie, James W. (1989)	
Armento, Greg (1988) Associate BA, MA, California State University, Chico; MALS, University of Wiscons	Librarian sin.
Arnheim, Daniel D. (1959)	Professor
P.E.D., Springfield College. Emeritus, 1990. Arnould, Eric J. (1991)	rofessor
BA, Bard College; MA, Ph.D., University of Arizona, Tucson Ary, James P. (1983) Electrical Engineering B.S., St. Mary's College, California; Ph.D., Ohio State University.	rofessor
Ashe, Pamela E. (1994)	University
Dominguez Hills; Ph.D., Howard University, Washington D.C. Attinasi, John J. (1993)	
B.A., University of St. Thomas, Texas; M.A., Ph.D., University of Chicago. Austin, Charles W. (1966)	rofessor
Academic Affairs (Academic Personnel) B.S., M.S., Ph.D., University of Washington.	
Axelrad, Arthur M. (1964)	
Ayers, R. Dean (1967) Physics and Astronomy B.S., M.S., Ph.D., California Institute of Technology.	
Bachar, John M., Jr. (1969)	
Bachelor, Patricia A. (1985)	Professor
California Bader, Jeanne (1992)	
Home Economics B.A., University of Delaware; M.A., University of Vermont; Ph.D., University of San Francisco.	of California
Baine, Peter (1968) Chemistry and Biochemistry GRIC, Salford University, England; M.S., California Institute of Technol University of California, Santa Barbara.	
Baker, Phillip C. (1969)	rofessor
Bao, Xiaolan (1993)	
Barber, Daniel M. (1975) Public Policy and Administration B.E., M.A., University of Miami; Ed.D., Florida Atlantic University.	rofessor
Barcellona, John (1989)	
University of Southern California.	

Comparative Literature and Classics B.A., Stanford University; M.A., University of California, Los Angeles;	Ph D. University
of Southern California.	
Physical Education	
B.S., University of Minnesota; M.A., California State University, Los A 1993.	ngeles. Emeritus,
Sates, Donald L. (1974) Management/Human Resources Management B.S., M.B.A., Indiana State University, Ph.D., University of Arkansas.	the best LER
Religious Studies BA, MA, La Salle College; Ph.D., Princeton University.	Professor
Baum, Alwin L. (1989)	ant Professor
A.B., Indiana University, Bloomington; Ph.D., University of California, S.	San Diego.
Communicative Disorders B.S., Northern Illinois University, M.S., University of Illinois, Ph.	D., University of
Seaumont, Marion S. (1967)	Professor
Economics B.S., Ohio State University; M.A., Duke University; Ph.D., Claremont G Becker, Harold K. (1963)	raduate School.
Criminal Justice B.A., M.S., University of Southern California; D. Crim., University of Ca	
Becker, Kurt H. (1988)	ate Professor
Technology Education B.S., Southeast Missouri State University; M.A., Sam Houston State Texas A & M University.	University: Ph.D.,
Beckman, Alexander L. (1986)	Professor
Psychology B.A., University of California, Los Angeles; Ph.D., University of Barbara.	California, Santa
Beckwith, Howard B. (1969)	
B.A., University of California, Berkeley, Ph.D., University of California,	Professor
Finance, Real Estate and Law RA University of Utah: M.R.A. Ph.D. University of California, Los Ar	igeles.
Behm, Robert J. (1971) Occupational Studies	
University Extension Services B.S., Merchant Marine Academy; M.S., Ph.D., University of Washingto	
Bell, A. Robert (1969)	Professor
B.A., M.A., University of Miami, Ph.D., University of Maryland.	
Bennish, Joseph (1988)	iate Professor
Berdan, Robert H. (1985)	Professor
BA, California State University, Long Beach; MLS, University	stant Librarian of California, Los
Angeles. Berk, Stephen E. (1970)	Professor
History B.A. Lehigh University: M.A. University of Massachusetts; Ph.D., Uni	versity of Iowa.
Bernstein, David A. (1967) History	
History BA, Muhlenberg College, Allentown, Pennsylvania; M.A., Ph.D., Rutg Berryhill, Stuart R. (1979) Berryhill, Stuart R. (1979)	Professor
Chemistry and Diocrientistry	Berkeley
Bersi, Robert M. (1987) Public Policy and Administration	the President
for Deferred Giving BA, University of the Pacific; M.A., Stanford University; Ph.D., Stanford	crevinU .A.B
Biological Sciences BE MS University of Southern California; Ph.D., University	of California, Los
Angeles. Bielefelt, Lynn D. (1989)	iate Professor
Music BA, University of California, Los Angeles; M.M., University of S.	

Bilici, Han	ndi (1988)e, Real Estate and Law	. Professor
B.S., Ista	anbul University, Turkey; M.B.A., Louisiana State University; D.	B.A., Louisiana
	irginia L. (1967)	. Professor
Psycho	ology Iliam Jewell College, Liberty, Missouri; Ph.D., Indiana University.	
Birkemele	er, Richard P. (1985)Acting Ass	
College	of the Arts	. Professor
Music B.M.E.,	University of Wisconsin, Madison: M.M., Memphis State U	niversity; D.M.,
Birmele,	stern University. Jutta G. (1990)	te Professor
Germa	n and Russian alifornia State University, San Francisco; Ph.D., The Clare	
Black, Jan Social		Professor
		Professor
B.S., M.S	S., University of Southern Mississippi; Ph.D., University of Wisco	ensin.
Womer	Elyse M. (1986)	
Blazey, M	lichael A. (1990)	te Professor
Recrea BA II	tion and Leisure Studies Iniversity of Oregon; M.S., South Dakota State University	ty; Ph.D. The
Pennsyl	vania State University.	
Public	Policy and Administration	Professor
B.A., Of Southern	hio State University; M.A., Roosevelt University; M.P.A., Ph.D. n California.), University o
Radio,	nal, Sharyn C. (1988)	te Professor
Bordeaux	x, Valerie (1986)	Director
Borowied English	c, Edward J. (1969)	Professor
	Iniversity of Detroit; M.A., Ph.D., University of Southern California	Professor
Art	Chouinard Art Institute; M.A., University of Southern California.	
	I A. (1976)	, . Professo
B.A., Ca	national Studies alifornia State University, Los Angeles; M.A., Ed.D., University of s.	of California, Lo
History		Professo
	A, Ph.D., University of California, Berkeley. argaret A. (1976)	Professo
Nursin		
Californ	nia, Los Angeles.	
Nursin	g and the state of	
Beach;	niversity of California, San Francisco; M.S., California State Ph.D., University of Southern California.	
Biolog	chard N. (1979)ical Sciences	Professo
	an Diego State University; M.A., Ph.D., University of California, S mes R. (1977)	anta BarbaraDirecto
and the Parket	Office University Research and Curricular Ac	
BA, U	Iniversity of Virginia; M.A., California State University, Longity of California, Los Angeles.	Beach; Ph.D
Briggs, N	Nancy E. (1970)	Professo
Brophy,		Professo
	h ionzaga University; M.A., Loyola University; Ph.D., University of us. 1993.	
Broughto	on, Jeffrey L. (1976) Associations Studies	ate Professo
	I.A., Ph.D., Columbia University.	

A.B., A.M., Ph.D., University of Chicago.	A.B., University of California, Riverside; M.A., University of California, Santa Barbara
Bunte, Pamela A. (1987)	Ph.D., University of California, Santa Barbara.
Anthropology B.A., Immaculata College, Pennsylvania; M.A., Indiana University, Bloomington; Ph.D., Indiana University, Bloomington.	Caveness, Jeane Relieve (1981)
Burke, Albie D. (1967) Professor	B.A., Scripps College; M.A. and Ph.D., Claremont Graduate School. Cebeci, Tuncer (1977)
History and Audito equico	Aerospace Engineering
B.M., American Conservatory of Music; B.A., M.A., Ph.D., University of Chicago.	B.S., Robert College; M.S., Duke University, Ph.D., North Carolina State University.
Burman, Howard V. (1988) Professor Theatre Arts B.A., Ph.D., The Ohio State University.	Celsi, Richard L. (1989) Professo Marketing BA, Mansfield University, Pennsylvania; M.B.A., Ph.D., Pennsylvania State University.
Bush, Roland E. (1969)	Cerillo, Augustus, Jr. (1967)
Comparative Literature B.A., California State University, Long Beach; M.A., Ph.D., University of Southern	History B.S., Evangel College, Springfield, Missouri; M.A., University of Omaha; Ph.D.
California. Byun, Hyeja (1984)	Northwestern University. Cerny, Kay (1982)
B.A., University of Hawaii; M.A., Ph.D., University of Wisconsin, Madison.	Physical Therapy B.S., Miami University, Ohio; M.S., University of Southern California; Ph.D., University
Caine, Randy M. (1983)	of Southern California, Registered Physical Therapist. Chaderjian, Bruce J. (1989)
B.S., University of Miami, Coral Gables; M.S., Hunter College; Ed.D., Pepperdine University.	Mathematics B.S. Cal Poly San Luis Obispo: M.S. University of California Los Angeles: Ph.D.
Caldwell, John T. (1989) Associate Professor Radio, Television, and Film	University of California, Los Angeles. Chan, Kwan M. (1969) Professo
B.A., Wheaton College; M.A., University California, Los Angeles; M.F.A., California Institute of the Arts, Ph.D., Northwestern University.	Geological Sciences B.Sc., University of Hong Kong; Ph.D., University of Liverpool, England.
Callison, George L. (1969)	Chapman, Mayer (1991) Trustee Professo
Biological Sciences	Accountancy And Advantage Control of the Accountance of the Accountanc
B.S., Kansas State University, M.A., Ph.D., University of Kansas. Camburn, Herbert L. (1960)	B.S., J.D., University of California, Los Angeles. Chase, Michael D. (1983)
Theatre Arts	Accountancy BA, Roanoke College; MA, San Diego State University; Ph.D., University of Souther
B.A., M.A., Michigan State University. Campbell, Carole A. (1989)	California.
Sociology	Chassiakos, Anastassios (1989) Professo Engineering Technology
B.A., University of Albuquerque; M.A., Ph.D., University of Colorado. Campbell, Janet (1965) Senior Assistant Librarian B.A., California State University, Long Beach; M.S. in L.S., University of California, Los	Engineering Diploma, National Technical University, Greece; M.S., Purdue; M.S., Ph.D. University of Southern California.
Angeles. Campbell, Joyce M. (1988)	Chau, Kenneth K. (1984)
Physical Therapy B.S., M.S., Ph.D., University of Southern California' Registered Physical Therapist.	B.A., Hwa Kiu College, Hong Kong; M.S.W., McGill University, Canada; D.S.W. University of Southern California. Chavez, Marcela (1972)
Campo-Flores, Filemon C. (1972)	Women's Resource Center
B.S., University of the Philippines; M.B.A., Ph.D., University of California, Los Angeles.	B.A., California State University, Los Angeles; M.P.A., California State University, Lon Beach.
Cannon, Harold L. (1968) Professor Spanish/Portuguese B.A., B.S., M.A., Ph.D., University of Minnesota.	Chawla, Sudershan (1962) Professo Political Science
Cantey Richard E. (1972) Psychologiet	B.S., Delhi University, India; M.A., Ph.D., Ohio State University. Chelapati, Chunduri V. (1965) Professo Chil Engineering
Cantey, Richard E. (1972) Psychologist University Counseling Center B.S., Louisiana State University; M.A., California State University, Los Angeles; Ph.D.,	Civil Engineering
University of Southern California.	B.S., College of Engineering, Kakinada, India; M.S., Ph.D., University of Illinois.
Carissimo, Joel W. (1969)	Chelian, Michael P. (1988) Professo Electrical Engineering B.S., University of Madras, India; M.S., University of Calcutta, India; Ph.D., Univer
B.S., Case Institute of Technology; M.S., E.E., University of Southern California. Cariberg, David (1966)	Southampton, England.
Biological Sciences	Chen, Hain-Piao (1986)
B.A., Ph.D., University of California, Los Angeles. Carnahan, John A. (1990)	B.S., National Cheng Kung University, Taiwan; M.S., National Tsing Hua University Taiwan; Ph.D., Georgia Institute of Technology. Chen, Hsun Hu (1985)
B.S., Duquesne University, Pittsburgh; M.A., University of San Francisco.	Aerospace Engineering
Carney, Michael R. (1981)	B.S., National Cheng Kung University, Taiwan; M.S., National Tsing Hua University Taiwan; Ph.D., Georgia Institute of Technology. Chi, Robert H. (1991)
D.M., Cast Carolina University, M.M., Castman School of Music, D.M.A., North Texas State University. Carr, Ashley B. (1984)	Information Systems B.S., National Chiao Tung University, Taiwan; M.S., University of Wisconsin, Madisor
Theatre Arts B.A., Hendrix College, Arkansas; M.F.A., Yale School of Drama, Connecticut.	Ph.D., University of Texas, Austin Chinchilla, Norma S. (1983)
Carter, Charles L. (1985)	Women's Studies/Sociology B.A., University of Pacific; M.A., Ph.D., University of Wisconsin, Madison.
B.A., Cornell College; M.A., University of Northern Iowa; Ph.D., University of Iowa, Registered Physical Therapist.	Chong, Philip S. (1986) Professo Management/Human Resources Management
Casey, Jean Marie (1987)	B.E., University of Singapore; M.S., Ph.D., University of Massachusetts, Amherst.
Teacher Education	Chu, Heiao-Ling, (1972) Professo
B.S., University of Illinois Champaign; M.A., California State University, Long Beach; Ph.D., University of Southern California. Cash, Robert W. (1970)	Civil Engineering B.S.C.E., M.S., National Cheng-Kung University, Taiwan, Ph.D., North Carolina Stat University.
Educational Psychology and Administration	Huses, BA, University of Caldonnia, Los Augales; 1234. University of Scathera Cationnia; D.M.A. University of Scathera Caldonnia.

В	sian and Asian American Studies A., Cornell University, New York; M.A., Union Theological Seminary, New York; Ph.D.
	niversity of California, Berkeley. k, Cheryl (1969)
P	hilosophy
Clar	k, Patricia J. (1990)Professor
	rt S., Bemidji State University; M.F.A., Cranbrook Academy of Art.
	ry, Patricia Ann (1989) Assistant Professor
	istory A., Rice University; Ph.D., Northwestern.
Coa	n, Donald L. (1989) Director
В	A, M.A., Clark University; Ph.D., University of Michigan.
C	Iberg, Jeffrey A. (1975)
	A, Cornell University; Ph.D., University of California, Berkeley. Charles L. (1967)
E	Conomics A. University of Southern California; M.B.A., Stanford University, Ph.D., University of
S	outhern California.
P	iological Sciences
	A., Amherst College, M.S., University of Michigan; Ph.D., University of Florida. Ins., Keith E. (1969)
1001	listory A., M.S., Indiana University, Ph.D., University of California, San Diego.
Col	nan, Keith R. (1970)
В	sychology A., California State University, Long Beach; M.A., Ph.D., University of California, Longeles.
Con	nor, Michael E. (1971)
P	A., California Western University, M.A., California State University, Long Beach h.D., University of Hawaii.
٨	roy, Jean L. (1961)
Con	treras, Armando N. (1993) Executive Assistant office of the President
	A, Harvard University. per, Gene R. (1969)Professo
A	rt - The commence of the comme
Coo	A, M.A., University of Hawaii. per, Ralph (1987)
P	erospace Engineering .Ch.E., Cooper Union; M.S., University of Illinois, Urbana; Ph.D., University of Illinois.
Cou	ncilman, Samuel G. (1968)
	A, MA, Ph.D., University of California, Los Angeles. Professo
-	ran, Peter A. (1981) Evil Engineering B., University of California, Berkeley, M.S., Ph.D., Utah State University, Logan.
Cox	B. University of California, Berkeley, M.S., Ph.D., Oran State University, Cognit. Carole (1988)
- 7	eacher Education A., University of California, Los Angeles; M.A., Ph.D., University of Minnesota
N	Inneapolis. ven, Duane C. (1967)
1000	Communicative Disorders Communicative Disorders College: Ph.D. University of Southern California.
-	Co Etta F (1972)
O F	lecreation and Leisure Studies Clark College: M.S. California State University, Los Angeles.
Cre	A, Lews and Clark College, M.S. Called College, M.S
Cre	ssy. David A. (1984)Professo
B	listory A., M.S., Ph.D., University of Cambridge, England. Professo
Cre	ara, Domenic (1966)
B	FA, MFA, Boston University. wther, Simeon J. (1968)
	conomics S. University of Oregon; Ph.D., University of Pennsylvania.

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, Kenneth R. (1990)
B.A., Lawrence University, M.A., University of Wisconsin; Ph.D., University of Wisconsin.
Curtis, Larry G. (1969)
B.M., East Texas State University; M.A., Adams State College, Alamosa, Colorado.
Cynar, Sandra J. (1986)
Irvine. D'Amicantonio, A. John (1988) Senior Assistant Librarian
B.A., Siena College; M.S.Ed., State University of New York, New Paltz; M.S.L.S., The Catholic University of America.
Dank, Barry M. (1968)
B.A., Holfstra University, M.A., Ph.D., University of Wisconsin. Danson, Carl M. (1965)
Psychology
BA, MA, Ph.D., Ohio State University. Das, Mihir K. (1981)
Mechanical Engineering Associate Dean of Instruction
College of 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.
Davidson, David B. (1983)
B.S., California State University, Los Angeles; M.A., Ph.D., University of Northern Colorado; CPA Certificate, Colorado.
Davis, Liza R. (1989) Psychologist University Counseling Center
B.S., Virginia Polytechnic Institute and State University, Blacksburg; M.S., Ph.D., Virginia Commonwealth University, Richmond.
Davis, James A. (1985) Professor Physical Education
B.A., M.A., San Diego State University: Ph.D., University of California, Davis. Davis, Steven W. (1990)
Philosophy B.A., M.A., California Stale University, Long Beach; Ph.D., Duquesne University, Otto-burst-state.
Pittsburgh. Deans, Robert H. (1988)
M.A., Ph.D., University of Pittsburgh.
Debysingh, Molly (1972) Professor Geography
M.A., St. Andrew's College, Scotland; Ph.D., Syracuse University. Deeds, Sigrid G. (1988)
Health Science B.A., University of Chicago; M.P.H., University of California, Berkeley; Dr.P.H.,
University of Pittsburgh. DeGuire, Linda J. (1990)
Mathematics BA, Fontbonne College, St. Louis; A.M., Stanford University; M.A., Ed.D., University of
Georgia, Alhens. de Heras, John (1967)
AND
BA, MA, University of California, Los Angeles. de la Torre, Adela (1988) Professor Health Care Administration/Chicano Latino Studies
B.S., M.S., Ph.D., University of California, Berkeley. Delgado, Bettina M. (1993)
University Counseling Center BA, Wheaton College, Wheaton, IL; M.A., Psy.D., Biola University, La Mirada, CA
Delorme, Robert L. (1966)
Political Science B.A., St. John's University, Collegeville, Minnesota; M.A., Ph.D., University of
Minnesota. Demirdjian, Zohrab (1979)
Marketing B.S., M.B.A., Arizona State University, Ph.D., Louisiana State University.
Demos, George D. (1962)
B.S., Northern Illinois State College; M.S., University of Illinois; Ph.D., University of Southern California. Emeritus, 1983.

Dennis, Christopher D. (1985)	Eshett, Ali (1966)
Political Science	Civil Engineering subset necessary resides been neces
B.A., M.A., California State University, Long Beach; Ph.D. University of Georgia. DeSoto, Simon (1969) Professor Mechanical Engineering	B.S. Technion, I.I.T., Haifa, Israel; M.S., Ph.D., Colorado State University. Evans, Dale W. (1988) Professor Health Science
B.M.E., City College of New York; M.M.E., Syracuse University, Ph.D., University of	B.S., M.S., George Williams College; H.S.D., Indiana University, Bloomington.
California, Los Angeles. Devore, Jeraid A. (1969)	Evans, Edward N. (1970) Professor
Chemistry and Biochemistry B.A. California State University Chico; M.S. San Dioco State University, Ph.D.	Computer Engineering and Computer Science B.S., University of California, Berkeley; M.S., E.E., California Institute of Technolog Ph.D., University of California, Irvine.
University of California, San Diego.	Evashwick, Connie J. (1993) FHP Foundation Endowed Cha
Dick, Wayne E. (1981)	Center for Health and Behavior Studies
Dinielli, Gene L. (1968)	Health Science Professor
English B.A., M.A., University of Connecticut.	A.B., M.A., Stanford University; M.Sc., Sc.D., Harvard School of Public Healt
Domingo-Foraste, Douglas (1990)	Massachusetts. Eveland, Vern K. (1984)
Comparative Literature and Classics A.B., University of California, Davis; M.A., Ph.D., University of California, Santa Barbara.	Biological Sciences
Donato, Clorinda (1989)	B.S., State University of Iowa, Iowa City; M.S., Ph.D., University of Iowa, Iowa City.
French/Italian B.A., University of California, Berkeley; M.A., Ph.D., University of California, Los	Eylar, Harry D. (1963)
Angeles. Dorn, Carl H. (1968)	Farber, Stuart (1960)
Mathematics B.A., University of California, Berkeley; Ph.D., University of California, Los Angeles.	Student Life and Development M.S., California State University, Long Beach; B.A., Ph.D., University of California, Lo
Dowell, David A. (1977)	Angeles Farmer, Gail (1985)
College of Liberal Arts	Health Science/Sociology
Psychology	B.A., M.A., California State University, Long Beach; D.P.H. University of California, L. Angeles.
B.S., Middle Tennessee State University; M.A., Ph.D., University of Tennessee. Downey, Sharon D. (1987)	Farrell, Michael J. (1969) Professor
Speech Communication	B.A., Pomona College; M.A., Ph.D., Stanford University.
B.S., Florida State University, Tallahassee; M.A., University of Nevada, Las Vegas; Ph.D., University of Colorado.	Fata, Frank J. (1986) Professo
Downs, Valerie C. (1988) Associate Professor	Comparative Literature and Classics A.B., Columbia College, New York; Ph.D., The Johns Hopkins University,
Speech Communication B.A., Humboldt State University; M.A., West Virginia University; Ph.D., University of Oklahoma.	Fatt, Milton J. (1963)
Druzgalski, Christopher (1970)	B.A., M.A., University of California, Los Angeles; Doktor der Mathematik, Swiss Feder Institute of Technology.
Electrical Engineering B.S., M.S., Technical University, Poland; M.S., Ph.D., Ohio State University, Columbus.	Fayek, Mamdouh M. (1989) Associate Professo
DuBois, Henry J., Jr. (1967)Librarian	Design B.F.A., College of Fine Arts, Cairo, M.A., California State University, Long Beach.
B.A., M.P.A., California State University, Long Beach; M.L.S. University of California, Berkeley.	Ferreira, Armando T. (1957)
Ducharme, Catherine C. (1990)	B.A., M.A., University of California, Los Angeles. Fiebert, Martin S. (1965)
B.A., California Polytechnic University, San Luis Obispo, M.S., California State University, Fullerton, Ph.D., The Claremont Graduate School.	Psychology B.S., Queens College, Flushing, New York; Ph.D., University of Rochester,
Ebneshahrashoob, Morteza (1990)Associate Professor Mathematics	Fine, David M. (1968) Professo
B.S., University of Tehran; M.S., Ph.D., Oklahoma State University.	B.A., M.A., University of California, Los Angeles; M.A., California State University Los Angeles; Ph.D., University of California, Los Angeles.
Echevarria-Ratleff, Jana (1993) Associate Professor Educational Psychology and Administration	Finney, Robert G. (1977)
B.A., M.A., California State University, Long Beach; Ph.D., University of California, Los Angeles.	AB, Marietta College; MA, Ph.D., Ohio State University.
Edelman, Walter E., Jr. (1967) Professor Mechanical Engineering	Finney, Stanley C. (1986)
B.M.E., M.S. in M.E., University of Minnesota; Ph.D., Oregon State University. Edmondson, Betty V. (1964)	Finot, Patricia (1977) Professo
Physical Education B.S. University of Nevada; M.A., San Jose State University.	Dance BA, Occidental College; MA, University of Southern California.
Edwards, Alejandra C. (1986)	Fischer, David W. (1986)
Licenciado En Economia, Ingeniero Comercial, Universidad Catolica de Chile, M.A.,	B.S., Trinity University, M.S., Michigan State University, Ph.D., Colorado Stat University.
Eisenman, Robert H. (1973)	Fisher, Janet M. (1989) Associate Professor Physical Education B.S., Ohio University, M.Ed., Ph.D., University of Toledo.
B.A., Cornell University; M.A., New York University; Ph.D., Columbia University.	Fisher, Steven A. (1990)
Physics and Astronomy B.S., Stanford University; Ph.D., University of Utah.	Accountancy B.S., M.S., University of Akron; D.B.A., Kent State University; CPA Certificate, Colorado
Emmons, Timothy D. (1980) Psychologist	Fleck, Stephen H. (1993)
University Counseling Center B.S., Lewis and Clark College; M.A. Ph.D., Vanderbilt University.	Romance, German, Russian Languages and Literatures BA, Sonoma State University; Ph.D., University of California, Davis.
Esfandiari, Ramin S. (1991) Associate Professor	Piores de Apodaca, Roberto (1978) Professo
Mechanical Engineering B.S., M.A., Ph.D., University of California, Santa Barbara	Psychology B.A., Sarah Lawrence College; Ph.D., University of Rochester.
, and the same second	

Fo	BA, San Jose State University; M.B.A., D.B.A., University of Southern California. rney, Kristine K. (1978)
	Music B.M., Southern Illinois University; M.A., Ph.D., University of Kentucky, Lexington.
Fo	rouzesh, 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.
Fo	ster, L. Sheila (1967)
Fra	ancis, Robert D. (1987)
	Geological Sciences B.A., University of California, San Diego; Ph.D., University of California, San Diego
	(Scripps). Professor
FI	Ank, Gail C. (1989)
Fra	anklin, Barbara J. (1967)
	B.S., Memphis State University; M.S., University of Washington.
	essemann, Keith W. (1979)
	B.S., Upper Iowa University; M.A., University of Northern Iowa. Professor
Fri	English
	B.A., M.A., California State University, Long Beach, M.F.A., University of California Irvine. is, Robert H. (1988)
Fr	Health Science A.B., University of California, Berkeley; A.M., Ph.D., Columbia University.
F	ng, Henry C., Jr. (1966)
	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.
G	iit, Charles F. (1973)
	Biological Sciences B.A., University of California, Santa Barbara; M.S., Ph.D., University of Washington.
Ga	rhammer, John J. (1985)Professor
	B.S., Pennsylvania State University, M.S., Lehigh University, Pennsylvania, M.S., Ph.D. University of California, Los Angeles.
G	arrott, Roy C. (1969) Assistant Professor English
	BA, MA, Western Kentucky University
Gı	Journalism
0	B.A., Harvard College; M.A., Ph.D., Stanford University. L., Yihnan D. (1988)
GI	Mathematics B.S., National Taiwan University; Ph.D., Purdue University.
Ge	Porge, Barbara C. (1961) Interim Associate Dean
	College of Business Administration Professor
	Finance, Real Estate and Law B.A., Bennett College, Greensboro, North Carolina; J.D., State University of Iowa
G	B.A., Bennett College, Greenscool, Arthur Callon and Bar. W.S. Supreme Court Bar. Member, low State Bar, California State Bar, U.S. Supreme Court Bar. Associate Professor
	Political Science B.A. University of California, Irvine; M.A., Ph.D., Princeton.
Ge	eorge, Simon (1961) Professor
	B.Sc., University of Travancore, India; M.Sc., University of Saugar, India; Ph.D. University of British Columbia.
Ge	essford, John E. (1990)Associate Professor
	DO LLC DED Stanford University
GI	narakhanian, Editte (1990)
	B.A., George Mason University; Ph.D., University of California, Los Angeles.
Gi	arratano, Susan C. (1988)

Gibson, J. William (1991)	e Professor
B.A., University of Texas, Austin; M.A., Ph.D., Yale University.	
Gilde, Helen C. (1959) English	. Professor
B.A., M.A., University of Colorado; Ph.D., University of Chicago.	Deefeese
Gilpin, C. Barclay, (1966) Mechanical Engineering	. Professor
B.S., University of Wisconsin; M.S., Ph.D., Carnegie Institute of Technolo	. Professor
Gilsdorf, Jeanette W. (1989) Information Systems B.A., Creighton University; M.A., Ph.D., University of Nebraska.	Professor
	Head Coach
Women's Volleyball BA, California State University, Long Beach.	divigoly, to
Gittleman, Arthur P. (1966)	. Professor
Computer Engineering and Computer Science BA, MA, Ph.D., University of California, Los Angeles.	
Glazer-Danay, Richard (1985)	Professor
American Indian Studies/Art B.A., California State University, Northridge; M.A., California State University, Northrid	iversity, Chico;
M.F.A., University of California, Davis. Glenn, Constance W. (1973)	. Professor
Art (1973)	Director
University Art Museum	
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 C	
Goddard, Kathryn E. (1969)	Director
Student Life and Development	University
B.A., University of California, Berkeley; M.S., Indiana University; Ed.D. Southern California Codfort P. Michael (1990)	nt Professor
Information Systems	in Professor
B.A., Amherst College; M.P.A., Ph.D., University of Southern California. Goitom, Tesfai (1983)	Professor
Engineering Technology B.S., National University, Ethiopia; B.S., University of Wisconsin, Plattev Michigan State University.	ille; M.S., Ph.D.,
Teacher Education	Professor
B.A., M.A., California State University, Long Beach; Ed.D., University California.	ity of Southern
Goldish, Dorothy M. (1958) Chemistry and Biochemistry	Professor
B.S., Stanford University; Ph.D., University of California, Berkeley.	
Home Economics	nt Professor
B.A., University of California, Los Angeles; M.A., University of the Pacific University.	
Physical Education	te Professor
DA MA California State University Long Boach	modulping()
Social Work	Professor
B.A., University of California, Berkeley; M.S.W., D.S.W., University of Angeles. Gordon, Joanne L. (1989)	
Theatre Arts	
B.A., M.A., University of Witwatersrand, South Africa; Ph.D., University of Angeles. Gosselin, Edward A. (1969)	
History	
B.A., Yale University, M.A., Ph.D., Columbia University.	to Professor
Gossette, Franklin E. (1987)	
B.A., University of Oregon, Eugene; M.A., University of Oregon; Ph.I. California, Los Angeles. Granger, Jean M. (1972)	inthoutin
Social Work	
B.A., Fisk University; M.S.W., Fordham University; Ph.D., University of C Grannell, Roswitha B. (1967)	Professor
Geological Sciences B.A. Pomona College; Ph.D., University of California, Riverside.	
Green, Jack (1970)	
Geological Sciences B.S., Virginia Polytechnic Institute; Ph.D., Columbia University.	
transport of the control of the cont	

Breen, Kenneth F. (1968) Professor	Hall, Darwin C. (1986)
Psychology B.A., Brown University; M.S., Ph.D., University of Massachusetts.	B.A. University of California, Santa Barbara; M.S., M.A., Ph.D., University of California,
Breenberg, Seth (1990)	Berkeley. Hall, Thomas E. (1981) Professor
Basketball BA, Fairleigh Dickinson University.	Art
Breene, Gary M. (1993) Associate Professor	B.F.A. Kansas City Art Institute; M.F.A. Drake University.
Educational Psychology and Administration	Halliwell, Michael J. (1968) Professor
B.A., University of California, Los Angeles; M.A., University of Southern California; Ph.D., University of California, Riverside.	Sociology BA, MA, Ph.D., University of California, Los Angeles.
Gregory, James R. (1970) Professor	Hamano, Fumio (1989)
Anthropology B.A., University of Southern California; Ph.D., University of Pittsburgh.	Electrical Engineering B.E., M.S.E., Tokyo Institute of Technology; Ph.D., University of Florida.
Bregory, Kenneth M. (1973)	Hamburger, Charles D. (1965) Professor
Biological Sciences BA, Ph.D., University of California, Berkeley.	Management/Human Resources Management B.A. M.A. University of California, Los Angeles; Ph.D., University of Southern
Grenot-Scheyer, Marquita (1988) Associate Professor	California.
Educational Psychology and Administration B.A., M.A., California State University, Los Angeles; Ph.D., University of California, Los	Hanley, Gerard L. (1984)
Angeles/California State University, Los Angeles. 3rey, Jennifer Jen (1975)	Hansen, Eric L. (1989)
Art B.F.A., Bradley University; M.F.A., Hoffberger School of Painting of the Maryland	Management/Human Resourses Management B.A., Rutgers University, M.B.A., University of Chicago; Ph.D., University of Tennessee,
Institute.	Knoxville.
Griffin, Peter (1990)	Haralson, Sally A. (1966)
B.A., San Diego State University; M.A., Ph.D., University of California, Santa Barbara. Griffith, William H. (1989)	Ph.D., University of California, Los Angeles. Emeritus, 1989.
Administration and Finance BS, University of Illinois; MS, National College of Education.	Harbinger, Holly (1986)
Grimmett, Dixie Ann (1965)	B.A., University of California, Santa Cruz; M.F.A., New York University.
Physical Education B.S. Brigham Young University, M.A., Washington State University, Ed.D., Brigham	Harding, Forrest E. (1971)
Young University. Grobar, Lisa M. (1989)	B.S., Southern Illinois University; M.S., Northern Illinois University; Ph.D., Arizona State University.
Economics BA, Smith; Ph.D., University of Michigan, Ann Arbor.	Harlow, Charles V. (1968) Professor Finance, Real Estate and Law
Gross, Mark W. (1988)	B.A., Stanford University, M.B.A., D.B.A., University of Southern California.
Physics and Astronomy B.S., Washington University, St. Louis; M.S., Ph.D., University of Chicago.	Harman, Marsha S. (1966) Professor
Grote, Karl-Heinrich (1984-1986, 1990) Associate Professor	B.A., M.A., Ph.D., University of California, Los Angeles.
Mechanical Engineering DrIng., Technical University Berlin, Germany.	Harman, Robert C. (1969)
Guerriere, Daniel (1969)	B.A., University of California, Santa Barbara; M.A., Ph.D., University of Arizona.
Philosophy B.A., M.A., Ph.D., Duquesne University.	Harris, Alice M. (1969) Professor Educational Psychology and Administration
Quest North (1990)	B.A., Idaho State University, M.S., Ph.D., University of Oregon. Harris, Edwin R. (1959)
Engineering Technology B.S., M.S., California State University, Long Beach; Ph.D. Candidate, University of	Chemistry and Biochemistry
Southern California. Gunatilake, Sarath (1987) Professor	B.S., M.S., University of Oklahoma; Ph.D., University of California, Berkeley. Harris, Nap (1968) Director
Health Science	Student Life and Development
B., Medicine & Surgery, University of Colombo, Sri Lanka, M.P.H., University of Hawaii, Manoa; D.P.H., University of Hawaii, Manoa.	Hartley, Joellen T. (1981) Professor
Gunderson, Emma Jean (1971)	Psychology B.S., M.S., University of California, Davis; Ph.D., University of California, Irvine.
B.A., University of Arizona; M.S., Ed.D., University of Southern California.	Hartung, Elisabeth S. (1988) Associate Professo
Gunns, Albert F. (1967) Professor History	Art B.S., Iowa Wesleyan College; M.A., University of Northern Iowa; Ph.D., Arizona State
B.A., University of Puget Sound; M.A., Ph.D., University of Washington. Guthrie, Sharon R. (1990)	University. Harvey, Bernard N. (1967)
Physical Education BA, University of California, Los Angeles; BA, MA, California State University,	Mathematics B.S., University of Ottawa; M.A., University of Minnesota; Ph.D., University of California
Northridge; M.A., California State University, Long Beach; Ph.D., The Ohio State University.	Hassul, Michael (1981) Professo Electrical Engineering
Hadlock, David A. (1985)	B.A., Polytechnic Institute of Brooklyn, New York, M.S., Ph.D., University of California
B.F.A., California State University, Long Beach; M.F.A., California Institute of the Arts.	Berkeley.
Haglund, Elaine J. (1972)	Career Development Center
B.A., University of California, Los Angeles; M.A., Ph.D., Michigan State University.	B.A., University of California, Riverside; M.S., California State University, Long Beach
Halberg, Kathleen J. (1988) Associate Professor	Hayes, Robert E. (1961) Professor
Recreation and Leisure Studies	D.A. M.A. University of Minnesota: Dh.D. University of Colorado
Recreation and Leisure Studies BA (two), University of Iowa; M.S., Ph.D., University of Illinois. Hale, Cynthia M. (1984)	B.A., M.A., University of Minnesota; Ph.D., University of Colorado. Hefazi-Torghabeh, Hamid (1985)

	alth Science , University of California, Santa Barbara; M.S., Dr. P.H., University of California, Los
Ang	eles.
Mu	
	" Duke University; M.A., University of Pennsylvania; Ph.D., University of California, keley.
Sp	ndez, Juan R. (1989)
	, Lawrence University; M.A., Ph.D., Texas Christian. John F. (1980) Professor
Ma	nagement/Human Resources Management
	, M.B.A., University of Arizona, Tucson; M.S., D.B.A., University of Southern Ifornia.
	Robert M. (1969) Professor
B.A	, Rulgers University, M.A., Syracuse University, Ph.D., University of Southern fornia.
	nan, Roger C. (1988)
B.A	., University of California, Irvine; M.A., Ph.D., University of California, Berkeley. an, William J. (1989)
The	eatre Arts
	, Bucknell University; M.A., San Jose State University; M.F.A., University of New pans.
Ch	Lloyd R. (1968)
B.S	, University of California, Berkeley; M.A., Ph.D., Princeton University.
Ter	hnology Education
	d., University of Alberta, Canada; M.S., Ph.D., Texas A & M University John E. (1981)
Ac	countancy , M.B.A., California State University, Long Beach; D.B.A., University of Southern
Cal	on, Paul M. N. (1992)
Ph	vsics/Astronomy
	University of Minnesota, Minneapolis; Ph.D., University of Arizona. Professor Professor
Fn	glish , San Jose State University; M.A., Ph.D., University of California, Los Angeles.
Hirsh	tal, Edith H. (1984)Professor
BA	isic I., M.M., Juilliard School of Music, New York and Temple University, Pennsylvania;
Hlous	st Diploma, Peabody Conservatory. sek, Zvonimir (1990)
Ph	ysics and Astronomy c., University of Zagreb, Yugoslavia; M.S., Ph.D., Brown University.
Ho, J	u-Shey (1970)Professor
Bio B.S	logical Sciences , National Tawan University; M.A., Ph.D., Boston University.
Hobg	ood, E. Wade (1993)
	llege of the Arts
Art	A, M.F.A., East Carolina University, North Carolina.
	Joan C. (1957)Professor
De B.S	sign , George Pepperdine College; M.S., University of Southern California.
Home	r, Pamela M. (1991)Associate Professor
BA	, Michigan State University; M.A., M.B.A., University of Colorado, Boulder; Ph.D.,
Hood	, David C. (1966)
B.A	tory L. University of California, Santa Barbara; Ph.D., University of Southern California. Trustee Professor
Horn, Po	Stephen (1970) Trustee Professor Itical Science
В.А	Conford University: M.P.A. Harvard University: Ph.D., Stanford University.
Horne	, David A. (1988)Associate Professor
B.S	, M.B.A., Ph.D., University of Michigan, Ann Arbor.
Fo	onomics
	, National Taiwan University; M.A., Ph.D., Yale.

Houck, Jean (1990)
College of Education Associate Dean
B.A., Kentucky Wesleyan College; M.A., Western Kentucky University, Bowling Green;
Ed.D., Indiana University. Hotchkiss, Wilhelmina L. (1990)
English BA, California State University, Fullerton; Ph.D., University of California, Los Angeles.
Hu, Chi-yu Yang (1953)
Physics and Astronomy
B.S., National Taiwan University, Taipei, Taiwan; Ph.D., Massachusetts Institute of Technology.
Hubbard, Harold G. (1970)
B.A., University of California, Los Angeles; M.A., Southern Methodist University; Ph.D., University of Southern California.
Huckabay, Loucine (1984)
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)
B.A., Manhattan College, New York City; M.Div., Pitfsburgh Theological Seminary; M.A., Ph.D., The Claremont Graduate School.
Hunter, Harold R. (1987)
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)
Psychology BA, MA, San Francisco State University; Ph.D., University of Massachusetts.
Husak, William S. (1980)
Physical Education B.S., State University of New York, Cortland; M.S., Ph.D., Texas A & M University.
Ishimine, Tomotaka (1967)
B.A., Kobe University, Japan; M.A., M.S., Ph.D., University of Wisconsin. Itatani, Carol A. (1975)
Biological Sciences BA, University of California, Los Angeles; M.S., California State University, Long
Beach; Ph.D., University of Southern California.
Jacob, Mary (1980) Professor Home Economics
B.S., M.S., Women's Christian College, India; M.S., University of London; Ph.D. University of Illinois, Urbana.
Jacobs, Mary (1991)
D.A. and M.C.D. Halamain, of Morth Carolina Chanal Ltill
B.A. and M.E.P., University of North Carolina, Chapel Hill.
Jahn, Min-Ten (1986) Professor Mechanical Engineering
Jahn, Min-Ten (1986)
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
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.
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S., Tahwan 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
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S., Tahwan 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.
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S., Talwan 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
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.
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S., Tahwan 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
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) Senior Assistant Librarian B.A., Western Michigan University, M.L.S., University of Pittsburgh. Jarasunas, Emanuel (1976) Professor
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S., Tahvan 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) Senior Assistant Librarian B.A., Western Michigan University; M.L.S., University of Pittsburgh. Jaraunas, Emanuel (1976) Professor
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) Senior Assistant 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 Jenkins, Kenneth D. (1970) Professor
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S., Tahwan 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 B.S., Case Institute of Technology; M.S., California State University, Fullerton; Ph.D. University of California, Irvine. Jang, Long-Kuan (1984) Professor B.S., M.S., National Taiwan University, Ph.D., University of Southern California. Janousek, Kelly S. (1988) Senior Assistant 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, Jenkins, Kenneth D. (1970) Professor Biological Sciences B.A., California State University, Northridge; Ph.D., University of California, Longer Ph
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S. Tahwan 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) Senior Assistant 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, Jenkins, Kenneth D. (1970) Professor Biological Sciences B.A., California State University, Northridge; Ph.D., University of California, Lot Angeles. Jensen, James L. (1968) Acting Dear
Jahn, Min-Ten (1986) Professor Mechanical Engineering B.S., Tahvan 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) Senior Assistant 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. Jenkins, Kenneth D. (1970) Professor Biological Sciences B.A., California State University, Northridge; Ph.D., University of California, Lot Angeles.

	Desferes
Recreation and Leisure Studies	
B.A., San Jose State University; M.A., Ph.D., University of Southern	Professor
Jenson, Owen O. (1966) Speech Communication	Professor
B.S., Brigham Young University; M.S., Ph.D., Purdue University.	
Jernigan, John C. (1970) Comparative Literature and Classics	
B.A., Southwestern University; M.A., Purdue University; Ph.D., India	ina University.
Social Work	
B.A., Immaculate Heart College; M.A., University of California, L. San Diego State University; Ph.D., Brandeis University.	Drofessor
San Diego State University; Ph.D., Brandeis University. Johnson, Cynthia S. (1989) Educational Psychology and Administration	
B.A., California State University, Los Angeles; Ph.D., Michigan Stat	e University.
Johnson, Gretchen A. (1969)	
Information Programs, Library R.A. St. Olaf College: M.A., University of Denver.	
Johnson, Henry S. (1966) Asian and Asian American Studies	Professor
B.A., University of Hawaii; M.Ed., Ph.D., University of Southern Cal	ifornia.
Johnson, Leayn (1981)	
B.S., Wright State University; M.S., Ohio State University; International University. Johnson, Thomas G. (1989)	Ph.D., United States
Electrical Engineering	
B.A., Oberlin College; M.S., Youngstown State University; California Davis.	
Johnson, William M. (1965)	
B.A., University of California, Berkeley.	
Johnston, Michael W. (1987) University Counseling Center B.A. Missouri Southern State College; M.S., University of Kr	
University, Bloomington. Jones, Ira (1969)	
Biological Sciences B.S., Benedict College, Columbia, South Carolina; M.S., Atlai	
Wayne State University. Jones, Irene (1990)	
French/Italian Ph.D., University of Florence, Italy. Jones, Kristi S. (1968)	
Jones, Kristi S. (1968)	Professor
Art	
BA, Lindenwood College; M.A., Case Western Reserve Universit Jones, Rita H. (1964)	y. Professor
Teacher Education B.S., Northern Michigan University; M.A., University of Michigan	
California, Berkeley. Jones, F. Stanley (1988)	
Religious Studies B.A., Yale University; B.A., M.A., Oxford University; Dr.T.	
Goetlingen, Federal Republic of Germany. Jordanides, Thimios J. (1964)	
Electrical Engineering B.S., Wayne State University, M.S., San Jose State University	
California Irvine	
Jorgenson, Dale O. (1972) Psychology	Professor
Lung John P. (1962)	Drofessor
Psychology BA, Ph.D., University of Minnesota. Jung, John R. (1968) Psychology BA, 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 Southwestern University; LL.M., New York University.	ty, Long Beach; J.D.
Kahan, Stanley (1961)	
Theatre Arts B.A., City College of New York; M.A., Ph.D., University of Wiscon	nsin.
Kalbus, Gene E. (1957)	Professo

Kaminsky, Arno	Id P. (1986) Professor an American Studies/History
B.A., M.A., Ph.D.	University of California, Los Angeles.
Design	Michael J. (1968) Professor
B.S., University	of Southern California; M.A., California State University, Long Beach.
Educational F	mas J. (1971) Professor Psychology and Administration
B.S., University	of Illinois; M.A., DePaul University; Ph.D., University of Illinois. g C. (1989)
Asian and Asi	an American Studies awan University; M.A., University of Saskatchewan; Ph.D., University of
Cartham Califor	mia
Psychology	W. (1966) Associate Professor
B.S., Loyola Un	versity; M.S., Ph.D., Northwestern University. ward (1959)
Geography	
B.A., M.A., Way	ne State University; Ph.D., University of Michigan.
Black Studies	na N. (1989)
University.	to be a second of the second of the Colombia (Ph.C. Decompton approximate)
Katz, Steve M. Judicial Affai	'S
College of Law	ifornia State University, Long Beach; J.D., Western State University, Fullerton.
Chemical En	nid R. (1984) Professor
B.S., Shirza Un Kearney, Micha	versity, Iran; M.S., Ph.D., Colorado School of Mines.
B.S. University	al Estate and Law of California, Los Angeles; J.D., Loyola School of Law.
Kearney, Patrio	cia (1987) Professor
Speech Com B.S., Illinois S Virginia University	tate University, M.A., University of Oklahoma, Norman, Ed.D., West
Keller, Kathlee	
Nursing	THE RESERVE AND ADDRESS OF THE PARTY OF THE
Angeles; Ph.D. Kellett, Carol I	a State University, Long Beach; M.N., University of California, Los , University of Southern California. E. (1987) Professor omics
Home Econo B.S., Kansas S	omics tate University; M.Ed., University of Missouri, Columbia; Ph.D., University
	ie E. (1989) Associate Professor
Nursing B.A., Mount St	Mary's College; M.S., California State University, Los Angeles.
Kelly James J. Social Work	4 이렇게 2 (1 1 1 1 1 1 1
B.S., Edinboro Kelly, Wayne I	College; M.S.S.W., University of Tennessee; Ph.D., Brandeis University. F. (1976) Professor
Journalism	F. (1976) Professor inversity; M.S., University of California, Los Angeles.
Kenealy, Patri	
Physics and	Astronomy-Science Education
Kerr, Rowland Student Life	niversity, Chicago, Ph.D., University of Notre Dame. 1 (1968)
B.A., Califiorn	and Development is State University, Long Beach. med B. (1984) Professor
Information B.S., Banglad	
University. Khatra, Balwa	nt S. (1987) Professor
Biological S B.V. Sc., Vete	ciences rinary College, Hissar, India; B.S., Punjab University, India; M.S., Punjab lia; Ph.D., University of Leeds, England.
Khoiny, Faride	eh (1990)
Nursing B.S., Boston	University; M.P.A., California State University, Long Beach; M.N.
Kim, Juhee(19	California, Los Angeles. Professor
Biological S	ciences ational University; M.S., Ph.D., Cornell University.
Kimura, John	C. (1967) Professor
Geography B.A., Californ	ia State University, Los Angeles; M.A., University of Wisconsin; Sc.D. University, Japan. Emeritus, 1991.

Kingsford, Laura (1980)	Lass, Mary J. (1966) Teacher Education
B.S., Boise State University; Ph.D., University of Utah.	B.A., Pepperdine College; M.A., California State
Kleinfelder, Karen L. (1993) Assistant Professor	University of Southern California. Lathrop, Ann (1989)
Art B.A., M.A., Ph.D., University of Michigan.	Instructional Systems Technology
Klig, Lisa S. (1990)	B.A., Eastern New Mexico University; M.L.S., Rutgers;
Biological Sciences	Lau, Beth (1990) English
B.A., University of Massachusetts, Amherst; M.S., Oberlin College; Ph.D., Albert Einstein College of Medicine.	B.A., M.A., Ph.D., University of Illinois, Urbana.
Klink, Eileen S. (1990)	Lauda, Donald P. (1983)
B.A., University of California, Los Angeles, M.A., California State University, Long Beach, Ph.D., University of Southern California. Knafel, Stephen R. (1962)	Industrial Education College of Health and Human Services
English BA, Union College Schenectady, New York; MA, Columbia University; Ph.D., Brown	B.A., M.S., Wayne State College; Ph.D., lowa State Uni Lavay, Barry (1989)
University, M.A., California State University, Long Beach. Kochan, Roman V. (1969)	Physical Education B.S., Plymouth State College; M.S., Eastern Illinois Ur Mexico.
Librarian	Lax, Melvin (1977)
BA, MA, University of Manitoba; M.L.S., University of British Columbia. Kokaska, Charles J. (1969) Professor	Mathematics B.S., M.S., Ph.D., Rensselaer Polytechnic Institute.
Kokaska, Charles J. (1969) Educational Psychology and Administration B.A., Valparaiso University, M.A., Northwestern University, Ed.D., Boston University.	Le, Son V. (1986)
Koppenhaver, Albert H. (1969)Professor	Finance, Real Estate and Law B.S., M.S., Ph.D., Iowa State University.
Teacher Education	Lea, Joseph A. (1968)
B.S., State Teachers College, Pennsylvania; M.S., California State University, Los Angeles; Ed.D., University of Southern California.	Instructional Systems Technology
Koval, James E. (1985)	B.A., University of California, Los Angeles; M.S., University of C
Home Economics B.S., Creighton University, Nebraska; M.S., Texas Technological University; Ph.D.,	Physical Education
Oregon State University.	B.S., Florida State University; M.A., University of Califo
Krause, Joseph H. (1955)Professor	Lee, Isaiah C. (1972) Social Work
Art BA, M.S., Ed.D., University of Southern California.	B.A., Taiwan Chung-Hsing University; M.S.W., University of California, Los Angeles.
Krause, Marina C. (1968)Professor	Lee, Jacqueline D. (1989)
Teacher Education BA, University of Arizona; MA, Ed.D., Arizona State University.	Home Economics
Kroman, Ronald A. (1959)Professor	B.A., San Diego State University; M.S., California Sta University of California, Los Angeles.
Biological Sciences B.A., M.A., Ph.D., University of Minnesota. Emeritus, 1990.	Lee, Ronald A. (1970)
Krumpak, Thomas J. (1986)Associate Professor	B.A., University of Houston; M.S., Ph.D., University of Leiter, William M. (1966)
Art B.F.A., San Francisco Art Institute; M.F.A., California State University, Long Beach.	Political Science
Kukalis, Salah M. (1986)Professor	B.A., University of Massachusetts; M.A., Ph.D., Univer-
Management/Human Resources Management B.S., M.B.A., The American University, Cairo; Ph.D., University of Arizona.	Physics and Astronomy
Kumar, Rajendra (1983)Professor	B.A., M.S., Ph.D., University of Chicago.
Electrical Engineering B. Tech., M. Tech., Indian Institute of Technology; Ph.D., University of Newcastle,	Leung, Alfred F. (1989)
Australia	B.A., M.S., and Ph.D., University of California, Los Ang
Kumpf, Lorraine E. (1987)	Levine, Arthur M. (1974)
California Los Angeles.	B.A., Princeton University; L.L.B., Yale University.
Kunst, Robert J. (1969)	Levis, Jone (1990) Student Health Center R.N., Fullerton Junior College; B.S., Chapman College
B.S., Northern Illinois University; M.S., Kansas State College of Pittsburg; Ed.D., Arizona State University.	Lewis, Ralph J. (1972)
Kvapil, James A. (1988)Associate Professor	Management/Human Resources Managemen B.S., Northwestern University, M.S., University of Cal
D.A. Heinereity of the Pacific: M.A. M.F.A., San Jose State University.	California, Los Angeles. Li, San Pao (1976)
Lacey, John M. (1989)	Asian and Asian American Studies B.A., Tunghai University, Taiwan; M.A., Harvard
BS., MBA, University of Southern California; Ph.D., University of California, Los Angeles.	California, Davis. Lieberman, Neil (1975)
Angeles Lacourse, Michael G. (1990)	Art M.A., Pennsylvania State University.
Physical Education B.S., Springfield College, Massachusetts, M.S., Ph.D., Indiana University, Bloomington. Lam, Shui F. (1985) Professor	Lieu, Van T. (1967)
Lam, Shui F. (1985) Computer Engineering and Computer Science B.S., Chinese University of Hong Kong; M.S., Ph.D., Pennsylvania State University.	Chemistry and Biochemistry B.S., University of California, Berkeley, M.S., Ph.D., U
Laber (1963)	Lim, Paulino M., Jr. (1967)
Computer Engineering and Computer Science BS., Gonzaga University, M.S., University of Washington, Ph.D., University of	English B.S., M.A., University of Santo Tomas, Philippines; F. Angeles.
California, Los Angeles. Larson, Daniel O. (1988)	Lincoln, John R. (1968)
	Art B.A., M.A., California State University, Long Beach.
Anthropology B.A., M.A., University of Nevada, Las Vegas; Ph.D., University of California, Santa	

-	1004-1000/140411
	Lass, Mary J. (1966)
	B.A., Pepperdine College, M.A., California State University, Long Beach; Ed.D., University of Southern California.
	Lathrop, Ann (1989)
	B.A., Eastern New Mexico University; M.L.S., Rutgers; Ph.D., University of Oregon.
	Lau, Beth (1990)
	B.A., M.A., Ph.D., University of Illinois, Urbana.
	Lauda, Donald P. (1983)
	Industrial Education Professor
	College of Health and Human Services
	B.A., M.S., Wayne State College; Ph.D., lowa State University. Lavay, Barry (1989)
	Physical Education B.S., Plymouth State College; M.S., Eastern Illinois University, Ph.D., University of New
	Mexico.
	Mathematics
	B.S., M.S., Ph.D., Rensselaer Polytechnic Institute. Le, Son V. (1986)
	Finance, Real Estate and Law
	B.S., M.S., Ph.D., lowa State University. Lea, Joseph A. (1968)
	Instructional Systems Technology BA, University of California, Los Angeles; M.S., University of Southern California.
	Leach, Mary Ellen (1968)
	Physical Education B.S., Florida State University, M.A., University of California, Santa Barbara.
	Lee, Isaiah C. (1972)
	Social Work B.A., Talwan Chung-Hsing University; M.S.W., University of Nebraska; M.P.H., Dr. P.H., University of California, Los Angeles.
	Lee, Jacqueline D. (1989)
	Home Economics B.A., San Diego State University, M.S., California State University Los Angeles; Ph.D.,
	University of California, Los Angeles. Lee, Ronald A. (1970)
	Information Management and Analysis B.A., University of Houston; M.S., Ph.D., University of Oklahoma.
	Leiter, William M. (1966)
	Political Science B.A., University of Massachusetts; M.A., Ph.D., University of Chicago.
	Lerner, Lawrence S. (1969)
	Physics and Astronomy B.A., M.S., Ph.D., University of Chicago.
	Leung, Alfred F. (1989)
	Physics and Astronomy B.A., M.S., and Ph.D., University of California, Los Angeles.
	Levine, Arthur M. (1974)
1	B.A. Princeton University: L.B. Yale University.
	Levis, Jone (1990) Director Student Health Center
	R.N., Fullerton Junior College; B.S., Chapman College; M.P.H., Loma Linda University.
	Lewis, Ralph J. (1972)
	B.S., Northwestern University; M.S., University of California, Irvine; Ph.D., University of
	California, Los Angeles. Li, San Pao (1976)
	Asian and Asian American Studies B.A., Tunghai University, Taiwan; M.A., Harvard University, Ph.D., University of California, Davis.
	California, Davis. Lieberman, Neil (1975)
	M.A., Pennsylvania State University.
	Lieu, Van T. (1967)
	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)

Biological :	ard G. (1956) Professor Sciences
B.S., Oregon	State University; Ph.D., University of California, Los Angeles. Emeritus,
Powsholog	es I. (1968) Professor
B.A. Univers	sity of Michigan; M.A., Ph.D., Michigan State University.
Lindgren, Ke	nneth (1985) Head Coach
B.S., M.A., C	alifornia State University, Long Beach.
	Alifornia State University, Long Beach. oda (1969)
Little, Gary (1966)Director
BA MA	California State University, Long Beach.
Hittaiohn A	lice C. (1986)
Liu, Dar-Bian	u (1986) Professor
B.S., Taiwa	Engineering and Computer Science n Normal University; M.A., Wayne State University; Ph.D., University of
Wisconsin,	Madison. 192)Assistant Professor
Physic/As	
Lobodzinsk	i, Slawomir M. (1983) Professor
BC MS	Engineering Technical University of Warsaw, Poland; Ph.D., Technical University of
Locklin, Ger	stria. Professor
English	ha Figher College Rochester New York: M.A. Ph.D. Haiversity of Arizona
College o	Robert L. (1969)
Chemistry	y and Biochemistry
	rsity of Illinois; Ph.D., University of Chicago. A. Bruce (1968)
BA Bethe	Communication I College; M.A., University of Kansas; Ph.D., Michigan State University.
Lopez, Jose Chicano	e (1970) Professor
BA, MA, Lopez, Mar	California State University, Fullerton; Ph.D., Claremont Graduate School. co A. (1987)
B.S., Califo	ornia State University, Los Angeles; M.S., Ph.D., University of California, Sar
Lopez, Reb Social W	ecca A. (1990)Assistant Professor
B.A., Unive	ersity of California, Santa Cruz; M.S.W. and Ph.D., Brandeis University.
Psycholo	Alan S. (1969)
Lowentrout	Peter M. (1984) Professor
Religious A.B. Unive	s Studies ersity of California, Riverside; Ph.D., University of Southern California.
Lozano, Wo Women's	endy G. (1991)Assistant Professor
B.A., M.A.	Ph.D., University of California, Irvine.
Mathema	(1968)
Luke, Keur	ng P. (1966) Professo
B.S., M.S.	Ph.D., Massachusetts Institute of Technology. H, Kevin B. (1985)
Peychol	
MacDonald	d. Pam (1979)
B.A., Calif	welopment Center fornia State University, Long Beach. Dan L. (1983)
Manage	Dan L. (1983) Management/Human Resources Management A. California State University, Long Beach; Ph.D., University of California
Andrew .	o, Joseph P. (1973)
Econom	

Mahapatra, Sitikantha (1983)
B.S., Regional Engineering College, India; M.B.A., Indian Institute of Management, India; Ph.D., Case Western Reserve University.
Maher, Kathleen M. (1987) Assistant Professor
Psychology B.A., San Francisco State University; M.A., University of California, Irvine; Ph.D.,
University of California, Irvine. Mahoney, Michael K. (1980)
College of Engineering
Computer Engineering and Computer Science B.A., M.A., Ph.D., University of California, Santa Barbara.
Computer Engineering and Computer Science
B.S., California Institute of Technology; M.S., Ph.D., University of California, Los Angeles. Mandel, Jerry E. (1989)
Mandel, Jerry E. (1989)
Information Systems/Speech Communication
BA, MA, California State University, Long Beach; Ph.D., Purdue. Mandel, Whitney S. (1989)
lournalism
B.A., M.A., and PhD., University of Tennessee, Knoxville.
Mangini, Shirley (1987) Professor Spanish/Portuguese
B.A., University of New Mexico, Albuquerque; M.A., University of Texas, Austin; Ph.D., University of New Mexico, Albuquerque. Manley, Steven L. (1988)
Biological Sciences
B.A., California State University, Northridge; Ph.D., University of California, Los
Angeles. Maples, Tracy B. (1992)
B.S. and M.S., University of California, Riverside; Ph.D., University of California, Irvine.
Margulies, William G. (1969)
B.S., State University College, Long Island; M.A., Ph.D., Brandeis University.
Maricich, Tom J. (1975)
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.
Marrs, Richard F. (1968)
B.A., M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles. Marsh, Anthony (1989)
Art - Land Carlotte Control Co
B.F.A., California State University, Long Beach; M.F.A., Alfred University.
Chemistry and Biochemistry
B.A., San Jose State University, Ph.D., University of Kansas. Marsot, Alain-Gerard (1968) Professor
Political Science Licence en Droit, Certificat d'Aptitude a la Profession d'Avocat; Diplone 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
B.A., College of New Rochelle; M.A., Boston University.
Martin, Claire E. (1988) Associate Professor Spanish/Portuguese
B.A., M.A., University of Massachusetts, Amherst; Ph.D., Yale University. Martin, Rose D. (1970) Associate Professor
Martin, Ross D. (1970)
Martinez, Daneil G. (1964) Professor
BA MA University of California Riverside: Ph.D. University of California, Lo.
Angeles. Martinez Larry F (1989) Assistant Professor
Political Science
B A M A Ph D University of California Santa Barbara
BA, MA, PhD, University of California, Santa Barbara. Mason, Andrew Z. (1989) Biological Sciences

	Physical Education
B	3.S., Brooklyn College; M.S., University of Illinois; Maitre d' Escrime, Institulationaledes Sports, Paris; Ph.D., State University of Iowa.
Mat	kin, Ralph E. (1987)Professor
	Educational Psychology and Administration A.A. Kansas Wesleyan University, M.Ed., University of Missouri, Columbia; Ph.D.
S	Southern Illinois University, Carbondale.
Mat	suoka, Jim (1972) Director
	B.A. and M.A., California State University, Los Angeles. thews, Justus F. (1971)
1	Music Communication Communicat
E	8.A., M.A., California State University, Northridge, Ph.D., State University of New York 8uffalo.
1	tson, Susan D. (1987)
1	3.S., California State University, Los Angeles; M.S., California State University, Los Angeles; M.A., California State University, Los Angeles; Ph.D., Claremont Graduatischool.
	urer, Donald L. (1981)
E	Biological Sciences 3.S., University of Illinois, Champaign; M.S., University of Washington, Seattle; Ph.D. University of Chicago.
Max	cson, Robert C
May	Mississippi State University. /, Charles E. (1967)Professo
100	English A.B., Morehead State College; M.A., Ph.D., Ohio University.
May	/berry, M. Adrienne (1975)
· E	3.S., Tuskegee Institute; M.A., New York University; Dr. P.A., University of Souther
1	Anlis, John A. (1969)Director of Instructional Support
O E	 California State Polytechnic College, Pomona; M.P.A., California State University ong Beach: Ed.D., United States International University.
	Cauley, Joan E. (1969)
Mc	Clanahan, Jr., Lon (1993) Directo
	3.S., University of Redlands; Ph.D., University of California, Riverside. Culloch, Wendell H., Jr. (1974)
- 4	Finance Deal Fetate and Law
ool.	B.A., George Washington University; J.D., Yale University. Cullough, Thomas A. (1969)
-	Mathematics BA, MA, Ph.D., University of California, Los Angeles.
	Head Coac
100	Women's Basketball
1	B.A., California State University, Long Beach.
1	Philosophy
Mol	B.A., Kenyon College; Ph.D., Johns Propins University. Associate Professo
-10	Mechanical Engineering BS, California State University, Long Beach, M.S., Ph.D., University of California, Lo
	Angeles.
1	Dance Da
	Associate Professo
- 1	Instructional Systems Technology
Mc	Millan, Saundra (1972)Associate Professo
osi	B.A., University of Missouri; M.A., California State University, Los Angeles, File
Me	doff, Marshall H. (1979)Professo
osi	Economics R.S. Illinois Institute of Technology; M.S., University of Illinois, Champaign; Ph.I.
	University of California, Berkeley. dora, Nilufer P. (1989)
1000	Home Economics B.A., St. Xavier's College, India; M.S., Maharaja Sayajirao University, India; M.S. University of Arkansas; Ph.D., University of Nebraska.
Me	na, Roberto A. (1988)Professo
	Mathematics B.S., M.S., Ph.D., University of Houston.

Mendez, Peter J	. (1976) Associate Professor
Art B.A., M.A., Califo Angeles.	rnia State University, Long Beach; M.F.A., University of California, Los
Merryfield, Kent Mathematics	G. (1988) Associate Professor
	sity, M.S., Ph.D., University of Chicago.
	Biochemistry
Mijares, Ernest I	
Mechanical Er B.S., New York U	Iniversity, M.S.M.E., M.S.A.E., University of Southern California.
Miller, Alan C. (1 Biological Scie	• Line of the control
B.A., Stanford Ur Miller, Edward (niversity; M.A., Ph.D., University of Oregon
Mechanical Er	ogineering lege of New York; M.S., D. Engr. Sci., New York University.
Miller, Julia I. (1: Art	988) Associate Professor
	Ilege, M.A., University of Virginia; Ph.D., Columbia University. (1979) Director
University Stuce	
Mittleman, Lesli English	e B. (1957)
B.A., M.A., Unive	rsity of California, Los Angeles; Ph.D., University of Chicago.
	(1969) Associate Professor an American Studies ge; M.A., University of Hawaii.
	Hassan I. (1988)
Electrical Engi	neering LUniversity, Egypt; Ph.D., University of Southern California.
Monat, Jonathan	S. (1978) Professor
B.S., University	Human Resources Management of California, Los Angeles; M.S., San Diego State University; Ph.D., nesota, Minneapolis.
Moore, Walter H Communicativ	I., Jr. (1979) Professor
A.S., Mitchell C University.	college; B.A., M.S., University of South Florida; Ph.D., Kent State
Morgan, Tom D. Physical Educ	ation
B.A., M.A., Cali California.	fornia State University, Los Angeles; Ed.D., University of Southern
Morley, Harvey Criminal Justic	e la principa d'unio, Paris, l'employee-sales a pour
California State	State University, Northridge; M.S., Austin Peay State University; M.P.H. University, Northridge; Ed.D., University of Alabama.
	Estate and Law
B.A., California I Morris, Raymon	Vestern University, M.A., University of California, Los Angeles.
Physical Thera	[18] [18] [18] [18] [18] [18] [18] [18]
University of So	tuthern California, Registered Physical Therapist, California.
Information S	ystems Technical University, Iran; M.S., Stanford University, Ph.D., University
of California, Lo	s Angeles. med E. (1969)
Accountancy	
Muller Stach D	ersity of Cairo, Egypt; M.S., Ph.D., University of Illinois.
Art Dioloma Acade	my of Fine Arts, Munich, Germany.
Journalism	A. (1900) A. MARINE M.
Missouri Colum	college; M.S., T.S.C.T., Murray State University; Ph.D., University obia.
Nursing	. (1973)
	a State University, Long Beach, M.S.N., University of California, London
Munsee, Jack H Physics and A	I. (1968) Professor
	f Wooster, M.S., Case Institute of Technology; Ph.D., Case Westernity.

540

Muraoka, Dennis D. (1982)	or
B.A., M.A., Ph.D., University of California, Santa Barbara.	
Murdock, Everett E. (1988)	or
Musafia, Julien (1959) Professor	or
B.A., M.A., University of California, Los Angeles. Emeritus, 1983.	
Naidus, Beverly E. (1987) Associate Professional Art	or
B.A., Carleton College; M.F.A., Nova Scotia College of Art and Design.	
Naimpally, Ashok V. (1978) Profess Chemical Engineering	or
B.S., Indiana Institute of Technology; M.S., Ph.D., Syracuse University.	
Nakayama, Kensaku (1987) Associate Profess Chemistry and Biochemistry	
B.S., University of California, Los Angeles; Ph.D., University of California, Los Angeles	or.
Naples, Caesar J. (1992)	Oi
A.B., Yale University; J.D., State University of New York, at Buffalo.	
Neal, James (1979)	O
B.A., M.A., California State University, Long Beach.	
Nelms, Barbara J. (1974)	IOI
B.S.N., University of Iowa; M.N., Ph.D., University of California, Los Angeles. Nelson, Donald R. (1965) Profess	юг
Biological Sciences	
B.A., Rutgers University; M.S., Ph.D., University of Miami. Newcastle, Helen P. (1969) Profess	nor
Teacher Education	
B.S., M.A., University of Detroit; Ph.D., University of Arizona. Newman, J. Robert (1967)	POF
Newman, J. Robert (1967) Profess Psychology B.A., M.S., University of Massachusetts, Ph.D., University of Illinois.	
Nguyen, Loc T. (1989)	зог
Accountancy B.A., Saigon University; B.A., National Institute of Public Administration; LL.M., M.E. San Diego State University; M.B.A., Fairleigh Dickinson.	B.A.,
Nguyen, Richard P. (1984)	вог
Civil Engineering B.S., National Institute of Technology, Taiwan; M.S., Ph.D., University of Missouri-Ro	olla.
Nguyen, Thinh V. (1986)	
Nieto, Consuelo (1975)	
Teacher Education B.A., Immaculate Heart College; M.A., Ph.D., Claremont Graduate School.	
Nishio, Alan T. (1972) Associate Vice Presid Student Services	ent
B.A., University of California, Berkeley; M.P.A., University of Southern California.	
Noble, Charles (1987)	sor
B.A., Cornell University; M.A., University of California, Los Angeles; Ph.D., University California, Berkeley.	
Noble, Vicente N. (1974)	
B.A., M.A., California State University, Los Angeles; Ph.D., Claremont Graduate Sch Nummedal, Susan G. (1972) Profes	sor
Acting Direction	
Faculty Development Center B.A., University of California, Berkeley, Ph.D., University of Minnesota.	
O'Brien, David P. (1991)	ctor
Ohta, Kaoru (1992)	sor
Ohta, Kaoru (1992) Asian and Asian American Studies B.A. and M.A., Meiji Gakuin University, Japan; M.A., University of California,	Los
Angeles.	
Ohtmer, Ortwin A. (1986)	
Dr. Ing., Technical University of Braunschweig, West Germany. Olguin, Leonard (1974)	ssor
Teacher Education BA, MA, California State University, Los Angeles; Ph.D., University of Sou	
California.	

Oliv	er, John (1988)
В	A. California State University, Los Angeles; M.S.W., University of California, Los
Oliv	er, Nancy Rainville (1988)
В	lursing S.N., Alverno College; M.S., University of Wisconsin, Milwaukee; Ph.D., New York inversity.
Om	et, Russel E. (1959) Professor ducational Psychology and Administration
E	A, MS, MEd, Ed.D., University of Southern California. Emeritus, 1992. z, Elizabeth T. (1983)
0	Social Work A.A., Barnard College; M.S., D.S.W., Columbia University.
Osh	orne, Cynthia A. (1975)
,	TO THE PERSON NAMED IN COLUMN
	Associate Professor Public Policy and Administration
Out	A.A., Youngstown State University, M.A., Ph.D., Kent State University, Water, Richard A. (1969) Seography
	A California State University Chico: M.A. University of Oklahoma: Ph.D., University
0	of Minnesota.
TEC	Educational Psychology and Administration B.S., M.A., Western Michigan University; Ed.D., University of Southern California.
	Emeritus, 1986. nagiotacopulos, Nick D. (1980)
	Electrical Engineering B.S., University of Athens, Greece; M.S., California Institute of Technology; Ph.D., Free
Par	University of Brussels, Belgium. a, Donald J. (1988) Professor
	Music
	B.M., M.M., Western Michigan University; Ph.D., Michigan State University. ker, Douglas A. (1968)
	Sociology B.A., San Francisco State University; M.A., Ph.D., University of California, Berkeley.
Par	rker, Joan M. (1986)
Da	sion-Gonzales, Lori (1992)
	B.A., U.C. Santa Barbara; M.S., San Francisco State University; Ph.D., Pacific Graduate School of Psychology, Palo Alto.
Pa	strana, David E. (1973)
	B.A., California State University, Los Angeles, J.D., University of California Berkeley. tchs, John C. (1963) Professor
	Technology Education BA, University of California Santa Barbara; M.S., California State University, Long
Pe	Beach; Ed.D., University of California, Los Angeles. ck, David R. (1967)
	English B.A., Colgate University, Ph.D., Temple University,
Pe	Illisier, Bron (1984) Director Learning Alliance Program
De	BA, Willamette University University, M.Ed., M.BA, Oregon Stale University. Iters, Wilm (1970)
100	German, Russian and Classics (COPP) HALLS ARREST ALLS AMA, Ph.D. Syracuse University.
Pe	rez Laura E. (1993)
	Chicano and Latino Studies B.A., M.A., University of Chicago; Ph.D., Harvard University, Massachusetts.
Pe	rez y Perez, Leonardo (1980) Professor Mechanical Engineering
D.	B.S., M.S., Ph.D., University of California, Berkeley.
	Geography B.A., California State University, Chico; M.S., Ph.D., Pennsylvania State University.
Pe	etray, Clayre K. (1987) Professor
	Physical Education B.A., Arizona State University, Tempe; M.A., Arizona State University, Tempe; Ph.D., Arizona State University, Tempe.
Pi	ar, Carlos (1990)
	B.S., Biola College; M.Div., Th.M., Talbot Theological Seminary; Ph.D., University of Southern California

Information	
B.S., Indiana University.	a State University; M.A., Ball State University; Ed.D., Northern Illinois
Pierre, Vivica	D. (1993) Assistant Professor eal Estate, and Law
	in College, Georgia; J.D., Southern University, Louisiana; LL.M., University
Pine, Alvin A. Art	Physical Education
	illege of New York; M.F.A., Cranbrook Academy of Art.
The second second second	ommunication
Beach; Ph.D.	nia State University, Long Beach; M.A., California State University, Long , University of Southern California.
Civil Engine	
Company of the second s	town State University; M.S., Ph.D., Ohio State University. dinand J., Jr. (1966)
	h.D., University of Minnesota.
Po, Henry N.	
B.S., Mapua	and Biochemistry Institute of Technology, Manita, Philippines; M.S., University of Wisconsin; ristly of California, Davis.
Polakoff, Keit	
	Dean of Graduate Studies
History	
	Iniversity; M.A., Ph.D., Northwestern University.
Polk, Dora Be English	Schlatch, Jones W. (1983)
M.A., Univers	sity of Wales, Cardiff; M.A., M.F.A., Ph.D., University of California, Irvine; sity of Colorado, Emeritus, 1987.
English	aries W. (1970)
B.A., Occider Porter, Richa	ntal College; A.M., Ph.D., University of Southern California.
Speech Co	ommunication nia State University, Long Beach; M.A., San Diego State University, Ph.D.,
University of	Southern California.
Potts, Marilyr Sociology	
B.S., Purdue University.	University, M.S.W., Indinana University, Indianapolis, Ph.D., Purdue
Radio Tele	heal C. (1989)
	ity of Maryland, Baltimore; M.A., Ph.D., New York University.
Preston, Loui University	Counseling Center
Prieto-Bayaro	M. Ed., Texas Southern University. d, Mary (1988)
Psychology B.A., Univers	eity of California Santa Barbara: Ph.D., University of California, Los
Prince, John	H. (1974)
Music B.M., Univers	sity of Redlands; M.A., California State University, Los Angeles.
Pusavat, Yok	Acian American Studies
Qlu, Xia (1992	Women's University, Japan; M.A., California State University, Fresno. 2)
Physics/Asi B.S., Nanjing	University, China; Ph.D., University of Pennsylvania.
Philosophy B A Duke Ur	niversity: Ph.D. Claremont Graduate School.
Quinn, Micha	el T. (1970)
BA, M.B.A.	Cornell University, Ph.D., Ohio State University. R. (1989)
A de a la maior	J Engineering Californal State University, Long Beach; Ph.D., University of California,
An Assert	(1970)Associate Professor
Dinal Chid	ies ia State University, Long Beach; M.A., Azusa Pacific College.

Physics an	hash (1990) nd Astronomy	
B.Sc., Ph.D.,	Imperial College, Londo	E.S., Sun Yose State University; 12 St. Ag Physical
Ramirez, Ger Chicano Li	atino Studies	Profess
	ssistance Center	
Ramirez, J. D	David (1993)	h.D., University of California, Los Angeles
		& Research
	ry's College, California;	ninistration/Teacher Education M.S., California State University, Hayward; Pt
Rasmussen,		Associate Profess
B.A., Dakota Boulder.	Wesleyan; M.A., Unive	ersity of Wyoming; Ph.D., University of Colora
Reddy, Harn Electrical 8	atha C. (1987)	Profess
B.E., Sri Ve Osmania Un	nkateswara University, iversity, India.	India; M.S., University of Baroda, India; Ph
Physical E	A. (1964)	Profesi
Reiboldt, We	niversity of California, Londy L. (1992)	
	University, Ohio; M.S. ar	d Ph.D Ohio State University.
Psycholog	Y	Profesi
	se State University; Ph.I. n, Richard L. (1978)). University of Oregon. Profess
Occupatio	nal Studies	, Los Angeles; Ed.D., University of Maryland.
Rhee, Thoma	as A. (1988)	Profesi
DA Hanku	k University of Eoreign	Seoul, Korea; M.A., Kent State University; M. State University.
Rhoads, Tho	mas J. (1976)	Profes
B.S., M.B.A.,	University of Southern (California; J.D., Western State University.
Psycholog	У	on a Maria Control of the Control of
State Univer	sity. Susan (1987)	y, M.S., George Washington University; Ph.D., C
B.A., State U	100	Albany, M.S.W., Hunter College; D.S.W., Unive
Riposa, Gerr	y (1989)	Associate Profes
Political Sc B.A., Old do		, University of California, Riverside.
Ritz, William Science E		Profes
		D., State University of New York at Buffalo.
Political Sc	cience	h.D., University of California, Riverside.
Roberts, Jud	lith A. (1986)	Associate Profes
Roberts, Par	nela K. (1989)	ersity of Michigan. Assistant Profes
B.A., Univer	evelopment sity of California, San D resity of Wisconsin.	Niego; M.A., Notre Dame; M.A., Western Michie
D-L OL-	1 (4074)	Profes
B.S., M.S.,	University of California	a, San Francisco; Ph.D., University of Sout
Robinson, B. Physical T	herapy	Associate Profes
Physical The Los Angeles	erapy Diploma, Universit	y of Alberta, Canada; M.S., University of Califo
Student Se	ervices	
B.S., M.S., k	wa State University, Am	es Associate Profes
Black Stud	ties	y, Long Beach; M.A., Ph.D., Stanford University.
DA, MA, C	Amornia state University	r, cong beach, M.A., Ph.D., Stanford University.

B.S., San Jose State University; M.B.A., Pepperdine.	
Roderick, Roger D. (1986)	
Rojo, Grinor (1989)	
Rooney, Robert F. (1970)	
Rose, Madeleine P. (1989) Associate Professor	
B.A., M.A., D.S.W., University of California, Los Angeles. Roskam, Kay L. (1974) Music Music	r
B.M.E., Southern Methodist University, M.M., Wichita State University, Registered Music Therapist; Ph.D., University of Kansas.	
Ross, Ruth A. (1980)	
Ross, Stephen B. (1968) Professor English	г
B.A., George Fox College, Newberg, Oregon; M.A., Ph.D., University of Southern	
Roth, Robert A. (1987)	
B.A., Hiram College; M.Ed., Pennsylvania State University; Ph.D., Kent State University Roussos, Van (1960)	n
Rowe, Daryl M. (1988)	r
B.A., Hampton Institute; M.A., Ph.D., The Ohio State University. Rozee, Patricia D. Associate Professo Psychology/Women's Studies B.A., California State University, Long Beach; M.A., Ph.D., University of California	r
Davis. Rozenek, Ralph (1988)	or
B.S., M.S., University of California, Los Angeles, Ph.D., Auburn University. Rueda, Alfonso (1989) Professo 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	эг
B.S., University of Colorado; M.B.A., D.B.A., University of Southern California. Rush, George E. (1973)	or
B.S., M.S., California State University, Long Beach; Ph.D., Claremont Graduate School Russell, Ruth L. (1963) Biological Sciences	
B.A., Ph.D., University of California, Los Angeles. Russo, Albert C. (1988)	or
B.S., M.S., Ph.D., Louisiana State University, Baton Rouge. Ruyle, Eugene E. (1976)	or
Anthropology B.A., University of California, Berkeley; M.A., Yale University, Ph.D., Columb University.	
Ryan, Bruce (1978)	
B.S., Southern Oregon College; M.S., Western Michigan University; Ph.D., University Pittsburgh. Sachdeva, Darshan (1973)	
Sachdeva, Darshan (1973)	
Sachs, Andrew A. (1992) Assistant Profession	ог
B.A., University of Alabama; M.A., Memphis State University. Salem, Sema'an I. (1961)	ОГ
Physics and Astronomy	
Physics and Astronomy B.Sc., American University, Cairo, Egypt; Ph.D., University of Texas.	OL
Physics and Astronomy	

	Anchez, Federico A. (1969) Professor Chicano Latino Studies
	California
	anchez-H., Jose (1988) Associate Professor Radio, Television and Film
	B.A., Universidad Autonoma de Guadalajara, Mexico; M.A., Ph.D., University of Michigan.
3	andefur, Charles R. (1964)
	B.A., M.A., California State University, Long Beach.
	anders, Brenda M. (1986)
	B.A., Wesleyan University; Ph.D., University of Delaware.
	B.A., Wesleyan University; Ph.D., University of Delaware. sanfilippo, David (1978) Disabled Student Services B.A. San Jose State University.
653	sater, William F. (1967) Professor
	B.A., Stanford University; M.A., Ph.D., University of California, Los Angeles.
S	Speech Communication Associate Professor
	B.A., M.A., California State University, Long Beach; Ph.D., University of Southern California.
- Car	California. Scepanski, Jordan M. (1984) Librarian Director
	Library and Learning Resources
	B.S., Manhattan College, New York; Master of Librarianship, Emory University, Georgia; M.B.A., University of Tennessee, Nashville.
	Schefski, Harold K. (1986) Professor German, Russian and Classics
	B.A. University of California, Davis: M.A., Ph.D., Stanford University.
4	Schlaich, Joan M. (1965) Professor
,	B.S., Boston University; M.A., Columbia University; Ph.D., U.S. International University.
44	Schmidt, Paul C. (1968)
	B.A., Hamline University, St. Paul, Minnesota, M.A., University of Camorna, Berkeley, Ph.D., University of Washington.
**	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.
	Schugart, Kimberly A. (1989)
-	Schwartz, Donald (1987)
	History Coordinator Secondary Education Single Subject Credential Program—College of
	Liberal Arts. B.A., City College of New York; M.A., Indiana University; Ph.D., New York University.
	Schwartz, Howard J. (1969)
	B.S., M.S., Ph.D., University of Toledo.
	Schwartz, Morton D. (1970) Professor Computer Engineering and Computer Science (AVEY) Heard Learning B.S., M.S., Ph.D., University of California, Los Angeles.
	Scott, Bruce L. (1965) Professor
	B.S., California Institute of Technology, M.A., University of Illinois; Ph.D., University of California, Los Angeles.
	Scott, George M. (1990) Associate Professor Anthropology
	B.A., University of Texas, Austin; M.A., Ph.D., University of California, San Diego. Senozan, Nail M. (1968) Professor
	Chemistry and Biochemistry B.S., Brown University; Ph.D., University of California, Berkeley.
	Sexauer, Roxanne D. (1990)
	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 (2004) manual industrial
	B.S., University of Texas, Austin; M.S., Stanford University, Ph.D., University of

Dance B.A., Bennington College.	
Shaw-Sutton, Carol (1989)	
Art	
B.A., M.A., San Diego State University. Shaw, Peter L. (1974)	Desference
Shaw, Peter L. (1974)	Professor
B.A., Occidental College; M.P.A., Ph.D., New York	University.
Shen, Kwang Y. (1961)	Professor
Physics and Astronomy	
B.S., Ph.D., University of Maryland. Sherman, Lawrence F. (1989)	Associate Professor
Finance, Real Estate and Law B.S., Eastern Illinois, M.S., Ph.D., University of Illin	
Shim, Jae K. (1981)	Professor
Accountancy B.S., Seoul National University, Korea; M.B.A., Ph.	D. University of California Berkeley
Shuster, Terrence A. (1989)	Associate Professor
Biological Sciences B.A., California State University, Northridge; Ph.D.	
	Professor
Nursing	
B.S., University of Minnesota; M.S., University of C	California, Los Angeles.
Sievers, Sharon L. (1968)	
B.A., Augustana College; M.A., University of Nebr	aska; Ph.D., Stanford University.
Sikula, John P. (1984)	Dean
College of Education	Professor
Educational Psychology and Administratio B.A., Hiram College, Ohio; M.A., Ph.D., Case Wes	n yestelegy
B.A., Hiram College, Ohio, M.A., Ph.D., Case Wes Sims, Sidney B., Jr. (1960)	Senior Assistant Librarian
B.A., Baylor University; M.A., University of Denver	A STATE OF THE STA
Sinclair, Lorelei P. (1966)	Assistant Librarian
Sinclair, William A. (1970)	Associate Dean
	Professor
Physical Education B.S., M.A., Ph.D., University of New Mexico.	
Singh, Davinder (1983)	Professor
B.S., Benedict College; M.A., Duke University; Ph.	D., University of South Carolina.
Singhal, Bhupendra K. (1980)	Professor
B.A., School of Planning and Architecture, New D Eugene.	elhi, India; M.A., University of Oregon
Singhal, Satish P. (1990) Engineering Technology	Associate Professor
B.S., University of Roorkee, India; M.S., Indian University of New York, Stony Brook.	Institute of Technology, Ph.D., State
Skalka, Bernard J. (1967)	Professor
Theatre Arts	
	Professor
Skov, Iva L. (1972)	Professor
Economics B.S., M.A., South Dakota State College; Ph.D., Uni	iversity of Southern California.
Slawski, Carl J. (1970)	Professor
Sociology 8.A., University of Southern California; M.A., Un Ph.D., University of Illinois.	iversity of California, Santa Barbara,
Slayton, Jeffrey C. (1986)	Associate Professor
Morce Cunningham Dance Studio, New York; Viol	a Farber Dance Studio, New York.
Sleeper, Elbert L. (1957)	Professor
Biological Sciences B.S., M.S., Ph.D., Ohio State University. Emeritus,	1992.
Smith, Craig R. (1988)	Professor
B.A., University of California, Santa Barbara;	M.A., City University of New York
Smith, Judy E. (1980)	Professor
Nursing B.A., M.A., University of California, Los Angeles; F	Ph.D., Claremont Graduate School.
	Professor
Theatre Arts	

Home Economics	Psychology
Bennington College.	B.A., Wheaton College; Ph.D., University of Illinois.
utton, Carol (1989)Associate Professor	Snidecor, John C. (1969)
M.A., San Diego State University.	B.A., M.A., California State University, Long Beach.
eter L. (1974)	Snider, Larry (1970)Librarian B.A., M.S.L.S., University of Southern California.
Occidental College; M.P.A., Ph.D., New York University. wang Y. (1961)	Snow, David A. (1988)
ics and Astronomy h.D., University of Maryland.	B.A., California Polytechnic State University, San Luis Obispo; M.A., California State University, Fullerton.
n, Lawrence F. (1989)Associate Professor	Snyder, Lynn S. (1988) Professor Communicative Disorders
nce, Real Estate and Law Eastern Illinois; M.S., Ph.D., University of Illinois.	BA., College of New Rochelle; M.A., Seton Hall University, Ph.D., University of Colorado.
ae K. (1981)	Soe, Christian (1967) Professor Political Science
, Terrence A. (1989)	B.A., University of British Columbia; Doktor der Philosophie, Free University of Berlin. Soltz, David L. (1988)
gical Sciences California State University, Northridge; Ph.D., University of Minnesota, Twin Cities.	Biological Sciences
Martha A. (1975)Professor	B.A., University of California, Berkeley; Ph.D., University of California, Los Angeles. Sondhi, Lydia E. (1985)
ng Jniversity of Minnesota; M.S., University of California, Los Angeles.	Design
, Sharon L. (1968) Professor	B.S., University of Missouri, Columbia; M.S., Oklahoma State University, Ph.D., University of Missouri, Columbia.
Augustana College; M.A., University of Nebraska; Ph.D., Stanford University.	Soni, Praveen K. (1991)
John P. (1984) Dean ge of Education	B.T., Indian Institute of Technology, M.B.A., Indian Institute of Management; Ph.D., Pennsylvania State University.
ational Psychology and Administration	Souter, Edward B. (1965)
Hiram College, Ohio; M.A., Ph.D., Case Western Reserve University, Ohio. Idney B., Jr. (1960)	B.A., M.A., California State University, Long Beach. Spangler, George A. (1971)
Saylor University; M.A., University of Denver. Lorelel P. (1966)	Philosophy B.A., Pennsylvania State University; M.A., University of Nebraska; Ph.D., University of
Moorhead State College; M.A., University of Minnesota. Emeritus, 1991.	Alberta. Sparks, Colleen (1978)
, William A. (1970)	Nursing RS University of Washington Scattle, MS University of California, San Francisco
ical Education M.A., Ph.D., University of New Mexico.	Ph.D., University of California, Los Angeles. Spiese, Richard D. (1967)
Davinder (1983)Professor	English B.A., M.A., Pennsylvania State University, Ph.D., University of New Mexico.
omics Benedict College; M.A., Duke University, Ph.D., University of South Carolina. Bhupendra K. (1980)	Spiller, Richard (1969) Professor Marketing
	B.S., Syracuse University; M.B.A., Ph.D., University of California, Los Angeles. Splansky, Joel B. (1969)
school of Planning and Architecture, New Delhi, India; M.A., University of Oregon, ie.	Geography
, Satish P. (1990)	B.A., M.A., Ph.D., University of California, Los Angeles. Springer, Arnold R. (1968)
University of Roorkee, India; M.S., Indian Institute of Technology; Ph.D., State	History B.A., Ph.D., University of California, Los Angeles.
Bernard J. (1967)Professor	Ssensalo, Bede (1977)
tre Arts MA, University of Nebraska. Professor	B.A., Makerere University, Uganda; M.A., Ph.D., University of California, Los Angeles.
amica	Stanley, M. Sue (1986)
omics M.A., South Dakota State College; Ph.D., University of Southern California. Professor	B.A., California State University, Chico, M.S., University of Arizona; Ph.D., Oklahoma State University.
, Carl J. (1970)	Stanton, Roger R. (1966)
University of Southern California; M.A., University of California, Santa Barbara; University of Illinois. , Jeffrey C. (1986)	B.A., San Jose State University; M.B.A., California State University, Long Beach; D.B.A. University of Southern California.
Control of the Contro	Stanton, Toni L. (1987)
Cunningham Dance Studio, New York; Viola Farber Dance Studio, New York. , Elbert L. (1957)	Biological Sciences, Women's Studies B.S., M.S., University of Maryland; Ph.D., Thomas Jefferson University, Pennsylvania.
, Elbert L. (1957) gical Sciences	Stefani, Raymond T. (1971)
A.S., Ph.D., Onio State University. Emerius, 1992.	B.S., Notre Dame University; M.S., Ph.D., University of Arizona.
gical Sciences M.S., Ph.D., Ohio State University. Emeritus, 1992. Craig R. (1988)	Stein, James D. (1989)
University of Camorina, Salina Dandara, in S. Sh.) Ph.D. Pennsylvania State University. udy E. (1980)	BA, Yale; MA, Ph.D., University of California, Berkeley. Steiner, Barry H. (1968) Professor
udy E. (1980)	Political Science
	B.A., University of Southern California, Ph.D., Columbia University. Steiner, W. Rodney (1956)

tern, Andrew (1967) Professor Economics	Toma, Ramses B. (1984) Home Economics
B.A., M.A., New York University; Ph.D., Columbia University.	B.S., M.S., Ain Shams Univer- Ph.D., Louisiana State Univer-
tetler, Charles E. (1967)	Toohey, Dale P. (1972) Physical Education
Stevens, A. Jay (1968)	B.S., Washington State Univer
Political Science B.S., Brigham Young University; M.A., Ph.D., University of Maryland.	Toohey-Costa, D. Margare Physical Education
Stevens, Thomas G. (1973) Psychologist	B.S., M.Ed., University of Mas
University Counseling Center B.A., University of Oklahoma; M.Th., Claremont School of Theg; M.A., California State University, Fullerton; Ph.D., University of Hawaii.	Toossi, Reza (1991) Mechanical Engineering B.S., University of Technolog
Stone, Herbert L. (1958)	Topalian, Teny (1989)
B.S., University of California, Los Angeles; M.S., Arizona State University; C.P.A. Certificate, California-Arizona; D.B.A., University of Southern California.	B.Sc., McGill University; M.I. Mary.
Strahl, Ronald J. (1986)	Torabzadeh, Jalal (1986) Mechanical Engineering
B.A., DePauw University; M.A., Ph.D., Indiana University, Bloomington.	B.S., Abadan Institute of California.
Strybel, Thomas Z. (1987)	Torby, Bruce J. (1961) Mechanical Engineering
University of Arizona, Tucson. Stuart, Jack M. (1967)	B.M.E., City College of New University of Southern Califo
History	Torres, Rodolfo D. (1989)
BA, Brooklyn College; Ph.D., Columbia University. Sullivan, Gerald L. (1968)	Chicano Latino Studies a Public Policy and Admin B.A., University of Californi
English B.S., General Beadle State College, Madison, South Dakota; M.A., South Dakota University; Ed.D., Colorado State College.	School. Towner, Leonard W., Jr. (
Sullivan, Maureen (1990)	Psychology B.A., M.A., Ph.D., University
B.S., B. Arch., University of Southern California.	Trippi, Robert R. (1989)
Sun, Dee Bruce (1990)	Finance, Real Estate and B.A., City University of New Technology.
M.A., The Ohio State University; Ph.D., The University of Texas, Austin.	Tsai, Chan-Feng (1982)
Swan, James H. (1989)	Civil Engineering B.S., Cheng Kung University
Swigart, Leslie K. (1971)Librarian	University of California, Berk Tsai, Shirley C. (1983)
B.A., University of Southern California; M.L.S., University of California, Los Angeles.	Chemical Engineering B.S., National Taiwan Univer
Talmadge, Mary Christine (1993)	Tsang, Chit-Sang (1988) Electrical Engineering
Nursing B.S.N., University of Dayton, Ohio; M.P.H., Ph.D., University of Hawaii.	B.S., Louisiana State Univ Southern California.
Tang, Paul C. L. (1986)	Turban, Efraim (1991) . Information Systems
B.S., University of British Columbia; M.A., Simon Fraser University, Canada; M.A., Ph.D., Washington University, Missouri.	B.S., Technion, Haifa, Israel, Turk, Theresa G. (1970)
Tarrow, Norma Bernstein (1968)	Sociology B.S., D'Youville College; M California, Los Angeles.
B.A., Brooklyn College; M.S., Queens College; Ph.D., New York University. Tartre, Lindsay A. (1985)	Turner, M. Barbara (1966 Mathematics
Mathematics BA, MA, San Diego State University; Ph.D., University of Wisconsin, Madison.	B.A., Cornell University; M.A.
Taylor Schmidt, Rosemary (1965)	Tuveson, Richard V. (198 Home Economics
B.A., California State University, Long Beach.	B.A., St. Cloud State University Tyner, Judith A. (1970)
Teng, Robert K. F. (1989) Professor Electrical Engineering B.S., Mississippi State University, M.S., Ph.D., Purdue.	Geography BA, MA, Ph.D., University
Thayer, Robert E. (1963)	Tyrnauer, Herbert H. (19
Psychology B.A., University of Redlands; Ph.D., University of Rochester.	Design B.F.A., Carnegie Institute of
Thibeault, Marie C. (1989)	Udy, Ralph David (1994) Health Science
B.F.A., Rhode Island School of Design; M.A., San Francisco State University; M.F.A.,	B.S., M.S., University of Uta Uku-Wertimer, Skyne R.
Thomas, Cher (1982) Professor Psychology	Black Studies B.A., Livingstone College; N
B.A., University of Illinois; M.A., Ph.D., University of California, Davis.	Uliman, Paul S. (1958)
Thomas, Joy E. (1981) Associate Librarian B.A., California State University, Fullerton; M.S., University of Southern California; M.A., California State University, Long Beach.	Sociology B.A., M.A., University of S 1994.
Tjioe, Djoe T. (1970)	Unt, Hillar, (1960)

Foma, Ramses B. (19 Home Economics	84) Professor
RS MS Ain Shame	University, Egypt; M.P.H., University of Minnesota, Minneapolis; University, Balon Rouge.
Physical Education	2) Professor
B.S., Washington State	University; M.Ed., Ed., D., University of Massachusetts.
Physical Education	of Massachusetts; Ph.D., Ohio State University.
Toossi, Reza (1991) Mechanical Engine	Professor
B.S., University of Teci	hnology, Iran; M.S., Ph.D., University of California, Berkeley. Assistant Professor
Science Education B.Sc., McGill Univers	ity; M.Ed., University of Ottowa; Ph.D., College of William and
Mary. Torabzadeh, Jalal (1	986) Associate Professor
Mechanical Engine B.S., Abadan Institut	
California. Torby, Bruce J. (196	1) Professor
Mechanical Engine B.M.E., City College	pering of New York; M.S., University of California, Los Angeles; Ph.D.,
University of Southern Torres, Rodolfo D. (California. 1989) Associate Professor
Chicano Latino Stu Public Policy and A	udies and Administration
BA University of C	alifornia, Irvine; MAP.P. and Ph.D., The Claremont Graduate , Jr. (1955)
Psychology	
B.A., M.A., Ph.D., Univ	versity of California, Berkeley. Emeritus, 1986. 189)
Finance, Real Esta	ite and Law of New York, New York; S.M., Ph.D., Massachussetts Institute of
Technology.	82) Professor
Civil Engineering B.S., Cheng Kung Uni	iversity, Taiwan; M.S., University of Rhode Island, Kingston; Ph.D.,
University of Californi Tsai, Shirley C. (198	a, Berkeley. 3)
RS National Taiwan	University: Ph.D. California Institute of Technology.
Tsang, Chit-Sang (1 Electrical Engineer	988)
Couthorn California	1) Professor
Information System	
Turk, Theresa G. (19 Sociology	970) Professor
B.S., D'Youville Colle California, Los Angel	age; M.S., University of North Carolina; M.A., Ph.D., University of es.
Mathematics	(1966) Professor
B.A., Cornell Universi	ity; M.A., Columbia University.
Home Economice	. (1983) Associate Professor University, M.S., Ph.D., Iowa State University, Ames.
Tyner, Judith A. (19 Geography	Professor versity of California, Los Angeles,
Tyrnauer, Herbert H Design	f. (1961) Professor
B.F.A., Carnegie Insti	itute of Technology; M.F.A., Cranbrook Academy of Art. 1994)
Health Science	of Utah; Ph.D., University of California, Los Angeles.
Uku-Wertimer, Skyr	ne R. (1970)
B.A., Livingstone Co.	llege; M.A., Ph.D., Howard University.
Sociology	58) Professor
B.A., M.A., Universit 1994.	ty of Southern California; Ph.D., University of Oregon, Emeritus Professor
	Professor

	lellon; M.S., Ph.D., Ohio State University.
	t W. (1987)Professor
	h.D., University of Minnesota, Minneapolis.
Van Camp, Julie Philosophy	Versey the head of the feloward Challe Constants
	oke College; J.D., Georgetown University
Ph.D., Temple Un Van Eimeren, Ja	
Art	of Wisconsin; M.S., Florida State University.
Van Giffen, Kath Human Devek	
Viera, John Davi Radio, Televisi	id (1983)Professor
B.A., University University of Sou	of Illinois, Urbana; M.A., San Francisco State University; Ph.D., J.D. thern California.
Viera, Maria L. (Radio, Televisi	1989)Associate Professor
B.A., University of Southern Calif	TA BOURS AND
Viet, Ngo N. P. (Mathematics	
B.S., University of Vipond, Dianne	of Minnesota; Ph.D., University of California, Berkeley. L. (1988)
English B.S., McGill Uni	iversity, Montreal; M.A., Concordia University, Montreal; Ph.D., York
University, Toron Vogel, Ronald E	. (1991) Professor
	be b
Vogt, MaryEllen	(1989)Associate Professor
B.A. Colorado	State University, M.A., California State University, Stanislaus, Ed.D. ifornia, Berkeley.
Computer Eng B.A. University	J. (1988)
University of Cal Vu, Hung Viet (1	ifornia, San Diego.
Machanical Fr	
Ph.D. University	of Michigan.
Wagdy, Mahmor Electrical Engi	Ju F. (1909)
Wakiji, Eileen (1	OI AI-t-nt I Ibrasian
RA Universit	y of California, Los Angeles sity of Southern California
Walter, C.J. (199	Dean Siness Administration
Information Sy	ystems
B.A., M.S., Ph.D.	University of Iowa.
Wang, Derming Mathematics	Chung Hsing University, Taiwan; M.A., Ph.D., University of Georgia
Athens.	Df
Wang, Rei-Tung Engineering To B.Ed., National	echnology Nermal University M.Ed. University of Wisconsin-Stout
National Taiwar	Normal University; Ed.S., University of Wisconsin Globi, Ph.S. inessee, Knoxville.
Communicativ	Disorders/Linguistics of Redlands; M.A., Ph.D., Stanford University.
Warner, Kennet	h K. (1968)Professor
Mathematics	ersity of California, Los Angeles.
Warter, Stuart L.	. (1965)Professor
Distaniani Sci	ences rsity of Miami; Ph.D., Louisiana State University.
Watson, Saleem	rsity of Miami; Ph.D., Louisiana Sale Griverary. H. (1986)
Mathematics	niversity; M.S., Ph.D., McMaster University, Canada.

1994-1995 / Fac	
Wayman, Arthur K. (1976)	0880
Mathematics B.A., California State University, Long Beach; Ph.D., University of California	
Angeles. Webb, Charles H. (1987)Prof	ess
English B.A., Rice University; M.A., University of Washington, Seattle; M.F.A., Ph.D., Ur	ivers
of Southern California. Weber, William A. (1968)	ess
Webster, Jay L. (1967)	088
Engineering Technology B.A., M.A., California State University, Long Beach; Ed.D., University of Califor Angeles.	nia, I
Angeles. Weinstock, Donald J. (1969)	088
B.A., M.A., Ph.D., University of California, Los Angeles.	
Welch, William H. (1983)	ess
A.B., M.A., California State University, Long Beach, Ph.D., University of Califor	
Werlick, Stephen G. (1964)	
MFA, Tulane University. Werthelmer, Roger (1989)	
Philosophy	
A.B., Brandeis; M.A., Ph.D., Harvard. Wheeler, Jean D. (1966)	ess
Geography B.S., M.S., Illinois State University; Ph.D., University of California, Los Angeles.	
Whisenand, Paul M. (1965)	089
B.S., M.S., Ph.D., University of Southern California. White, Barbara (1990)	000
Nursing	
B.S.N., Loyola University, Chicago; M.S., California State University, Long Beact White, Elaine E. (1974) Prof	
Nursing B.S.N., California State University, Long Beach, M.N., University of California	nia,
Angeles; Ed.D., University of Southern California. Wilcox, Richard P. (1967)	rari
Wiley, Juniper (1990)Assistant Pro	less
Sociology B.A., University of California, Santa Cruz; M.A., Ph.D., Ph	nia, S
Wiley, Terrence G. (1989)	
B.A., M.A., California State University, Long Beach; Ph.D., University of S California.	South
Williams, Betty (1989) Pro	fess
B.S., Howard University, M.N., Case Western Reserve University, M.S., University of California, Los Angeles.	
Williams, J. Richard (1983) College of Engineering	De
Aerospace Engineering/Mechanical Engineering	ess
B.S., M.S., Ph.D., Georgia Institute of Technology.	
Wilson, Robert R. (1966)	less
B.A., M.A., Ph.D., University of California, Los Angeles. Winchell, Robert E. (1966) Pro	fess
Geological Sciences B.S., Stanford University; M.S., Michigan Technological University; Ph.D., Oh University.	io S
Wines, Melvin M. (1989)	fess
B.A., East Stroudsburg Univeristy, Pennsylvania; M.S., Ph.D., University of M Postdoctoral Fellowship, University of California, Los Angeles.	aryla
Witkowski, Terrence H. (1982)	fess
B.A., Northwestern University, Illinois; M.S., University of California, Los Angele University of California, Berkeley.	s; Ph
Wittich, William V. (1967)	fess
Occupational Studies	ty, Lo

Wolf, Stanley (1979) Professor Electrical Engineering	Yeh, Hsien-Yang (1988) Mechanical Engineering
B.S., M.S., Polytechnic Institute of Brooklyn; Ph.D., University of California, Santa Barbara.	B.S., Cheng-Kung University, Taiwan; M.S., Brown University; Ph.D., University of Southern California.
Wolfinbarger, Mary F. (1990)Assistant Professor Marketing	Ying, William H. (1964) Civil Engineering
B.S., Vanderbilt University; M.B.P.A., Ph.D., University of California, Irvine.	B.S., Taiwan Provincial Chenkung University; M.S., University Mines and Metallurgy; Ph.D., Oklahoma State University.
Wollmer, Richard D. (1970) Professor Information Systems	Young, Douglas E. (1988)
B.A., Pomona College; M.A., Columbia University; Ph.D., University of California, Berkeley.	B.A., M.S., Ph.D., University of California, Los Angeles.
Woollett, Edwin L. (1966)	Young, Elizabeth V. (1989)
B.S., University of Missouri; Ph.D., Kansas State University.	B.A., Cornell; M.A., Ph.D., University of Michigan.
Wright, Alice A. (1990)	Young Owl, Marcus (1989)
B.A., Wheaton College, IL; M.B.A., Florida State University, Tallahassee; Ph.D., University of Florida.	B.A., California State University, Long Beach; M.A., Ph.D., Ph.D.
Wright, Claudia R. (1988)	Yousef, Fathi S. (1972) Speech Communication B.A., Ain Shams University, Egypt; M.A., Ph.D., University of Min
B.A., M.A., California State University, Los Angeles; Ph.D., University of Southern California.	to the state of th
Wright, Rebecca (1987)	Zagustin, Elena (1967) Civil Engineering Civil Engineer, Central University, Venezuela; M.S., Ph.D., Stanf
Joffrey Ballet American Ballet Theatre.	Zarn, Randall (1984)
Wurzer, David J. (1972) Professor Physical Education	Student Life and Development BA, MS, Western Illinois University.
B.S., M.A., Northern Michigan University; Ph.D., University of Utah.	Zarrillo, James J. (1988)
Wynston, Leslie K. (1965)	Teacher Education
B.S., San Diego State University; M.S., Ph.D., University of California, Los Angeles.	B.A., University of Redlands, M.A., California State Univer Claremont Graduate School.
Yang, T. L. (1991)	Zepeda, Rafael J. (1987) English
B.Arch., Tung-Hai University, Taiwan; M. Arch., M.S., Ph.D., University of Illinois, Urbana.	B.A., California State University, Long Beach; M.F.A., University
Urbana. Yates, Jerry W. (1974) Professor Design	Ziemer, William K. (1989) Mathematics B.S., Purdue; M.S., Carnegie Mellon; Ph.D., Carnegie Mellon.
B.A., California Polytechnic State University, San Luis Obispo; M.A., Indiana State University.	Zimmerman, Donald E. (1987)
Yeh, Hen-Geul (1983) Professor Electrical Engineering	Electrical Engineering B.S., M.S., Massachusetts Institute of Technology, M.D., W. Louis.
B.S., Cheng Kung University, Taiwan; M.S., Ph.D., University of California, Irvine.	

ang (1988) Professor	Inc
Kung University, Taiwan; M.S., Brown University; M.S., Columbia h.D., University of Southern California.	0.000
H. (1964) Professor	A Acader
Provincial Chenkung University; M.S., University of Missouri School of letallurgy; Ph.D., Oklahoma State University.	adv
las E. (1988) Associate Professor	app
h D. University of California Los Angeles	crec
h.D., University of California, Los Angeles. beth V. (1989)	disc
M.A. Ph.D. University of Michigan	orga
MA, Ph.D., University of Michigan. Marcus (1989)	prol
xgy nia State University, Long Beach; M.A., Ph.D., University of California, Los	rene
S. (1972) Professor	Sen unit
ommunication	Accele
ams University, Egypt; M.A., Ph.D., University of Minnesota.	Accour
ering Professor	Accred
er, Central University, Venezuela; M.S., Ph.D., Stanford University.	Activity
l (1984)Director	See
fe and Development Vestern Illinois University.	Adding Additio
es J. (1988) Associate Professor	Adjunc
ducation	Admini
rsity of Redlands, M.A., California State University, Northridge; Ph.D., graduate School.	Admiss
sel J. (1987) Professor	app
nia State University Long Beach: M.E.A. Haivarnity of Orogan Eugene	eligi
nia State University, Long Beach; M.F.A., University of Oregon, Eugene. am K. (1989)	grad
ics and an area of the second and area of the second area of the second and area of the second and area of the second area of the second and area of the second and area of the second area of the second and area of the second area of the second area of the second area of the second area of the seco	inte
y, M.S., Carnegie Mellon; Ph.D., Carnegie Mellon.	pos
Donald E. (1987) Professor	pos
Engineering	prep
Massachusetts Institute of Technology; M.D., Washington University, St.	prov
	requ
	sup
Universe, of California Colors, National Values (1988) National Engineers	test
	und
	Advanc
	Advanc
	Advise
	Advisor
	Aerosp
	Aerosp
	Afro-Ar
	AFROT
	Aging

Index
A Constitution of the International Control o
The state of the s
Academic yndomosTumptay2 landauthin as2
advising center
appeals
calendar
credit
disqualification
integrity committee
organizations
probation
reinstatement
renewal
Senate
unit load
Accountancy
Accreditation
Activity courses
See also Physical Education
Adding classes
Additional (sub degree) baccalaureate degree
Adjunct enrollment
Administration
Admission
advanced placement
application
eligibility
graduate
international (foreign) students
post- baccalaureate
postbaccalaureate
preparation
provisional
requirements
supplementary criteria
test requirements
undergraduate
Advanced placement
Advancement to candidacy
Advisement
Advisory boards (see appropriate departments)
Aerospace Engineering
Aerospace Studies
Afro-American studies
AFROTC
Aging
See Gerontology Program
Aid, financial
Alan Pattee Scholarship
Alcoholic beverages
Alien students
Alumni Association
American College Test (ACT)
American Indian Studies
American Language Institute
American Studies
Anatomy and Physiology (Biological Sciences) 480
Anthropology
Annal
academic
admission 86
grievance
seknowledgment 33
Army Reserve Officers Training Corps (AHOTC)
Art
Aut Museum

Arts, College of	121
Asian American Studies	
Asian and Asian American Studies	
Associated Students (student government)	
Asterisk (*)	52
Athletics	
See Physical Education	
See Sports, Athletics, and Recreation	
Attendance	51.52
AU (audit) grade	50
Audiologist/audiology	278
Audiovisual media	
See Instructional Systems Technology	
See Radio, Television, and Film	
Auditing classes	35, 43, 56
Automotive	
Automotivo 111111111111111111111111111111111111	of an annual
В	
Baccalaureate degrees	79
See also appropriate subject department	
Bad checks	45
Basic teaching credential	05
Biochemistry	
Biology (Biological Sciences)	480
Biomedical and clinical engineering	
Biomedical art	123
See Art	
Black Studies	366
Bookstore	16
Botany	
	400
Broadcasting	
See Journalism	
See Radio, Television, and Film	
Business Administration	167
•	
CA Basic Educational Skills Test (CBEST)	207
CAD/CAM	266
Calendar, academic	51
	51
California Articualtion Number (CAN)	51
California Articualtion Number (CAN)	51
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach	51
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization	5154480
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration	5154480126, 12
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs	5154480126, 1228
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs	5154480126, 122828
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs	5154480126, 122828
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs	51 54 480 12 6, 12 28 12
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty	51 54 480 12 6, 12 28 12 117
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation	51 54 480 12 6, 12 28 12 117 12 12
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements	51 54 480 12 6, 12 28 12 117 12 18 83
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history	51 54 480 12 6, 12 28 12 117 12 18 83
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission	51 54 480 12 6, 12 28 12 117 18 83 9
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting	51 54 480 12 6, 12 28 12 117 12 18 83 9 10
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The	51 54 480 12 6, 12 28 12 117 12 18 83 9 10
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The	51 54 480 12 6, 12 28 12 117 12 18 83 9 10
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The	51 54 480 12 6, 12 28 12 117 12 18 83 9 10 10
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees	51 54 480 12 6, 12 28 12 117 12 18 83 9 10 10 9
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number)	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement Cartography	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement Cartography CBEST (CA Basic Educational Skills Test)	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement Cartography CBEST (CA Basic Educational Skills Test) Center for Environmental Studies	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement Cartography CBEST (CA Basic Educational Skills Test) Center for International Education	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement Cartography CBEST (CA Basic Educational Skills Test) Center for International Education Centers	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Cartegraphy CBEST (CA Basic Educational Skills Test) Center for International Education Centers academic advising	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement Cartography CBEST (CA Basic Educational Skills Test) Center for International Education Centers academic advising career development	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Career Placement Cartography CBEST (CA Basic Educational Skills Test) Center for International Education Centers academic advising career development	
California Articualtion Number (CAN) California Desert Studies California State University, Long Beach academic organization administration campus organizations and clubs departments and programs exchange programs faculty Foundation general education requirements history mission setting University, The California State University, The Chancellor trustees Campus organizations CAN (California Articulation Number) CAN Listing Candidacy Career Development Center Cartegraphy CBEST (CA Basic Educational Skills Test) Center for International Education Centers academic advising	

counseling	
disabled student services	
Educational Equity Services	
Educational Opportunity Program	82
EPIC	25
human corps	25
learning assistance	23
South Coast Professional Training/Development	
student health services	
television	
Upward Bound	
women's resource	27
Ceramics1	
Certificate programs	
See also appropriate subject department	
general	
graduate study	90
Change	
grade	58
major	
objective	
rules and policies	
Charges	
Cheating	61
Checks, bad	
Chemical Engineering	232
Chemistry and Biochemistry	
Chicano and Latino Studies	
Child care	27
Child development	
See Educational Psychology and Administration	
See Home Economics	
See Social Work Program	
Children and Youth	
See Social Work Program	
Children's theatre	159
Children's theatre Chinese	159 359
Children's theatre Chinese Choral music	159 359 146
Children's theatre Chinese Choral music Cinema	159 359 146 156
Children's theatre Chinese Choral music Cinema Civil Engineering	159 359 146 156 235
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance 51	159 359 146 156 235 -52
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance 51 Classics	159 359 146 156 235 -52 372
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Children's theatre Children's theatre Children's theatre Classified status Children's theatre Children's theatre Children's theatre Children's theatre Children's theatre Classified status Classified status Classified status	159 359 146 156 235 -52 372 , 90
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology	159 359 146 156 235 -52 372 , 90 433
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist	159 359 146 156 235 -52 372 , 90 433 278
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles)	159 359 146 156 235 -52 372 , 90 433 278 301
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clubs Clubs Clubs	159 359 146 156 235 -52 372 , 90 433 278 301 . 28
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) 48,	159 359 146 156 235 -52 372 , 90 433 278 301 . 28 113
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clubs Clubs Clubs	159 359 146 156 235 -52 372 , 90 433 278 301 . 28 113
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) 48, Coaching College of:	159 359 146 156 235 -52 372 , 90 433 278 301 . 28 113 322
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) College of: Arts	159 359 146 156 235 -52 372 , 90 433 278 301 . 28 113 322
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) College of: Arts Business Administration	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 221
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 221
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classified status Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts	159 359 146 156 235 -52 372 , 90 433 278 301 . 28 113 322 121 167 189 221 275 349
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classified status Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics	159 359 146 156 235 -52 372 , 90 433 278 301 . 28 113 322 121 167 189 221 275 349 477
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 221 275 349 477 .29
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study	159 359 146 156 235 -52 372 ,90 433 278 301 .28 111 322 121 167 189 221 275 349 477 .29
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs	159 359 146 156 235 -52 372 ,90 433 278 301 .28 3113 322 121 167 189 221 275 349 477 .29 .47
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 221 127 5 447 .29 447 .29 .47 .41
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication Communication handicapped	159 359 146 156 235 -52 372 , 90 4278 301 . 28 113 322 121 167 189 221 275 349 477 . 29 . 47 . 41 466 278
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication handicapped Communication handicapped Communicative Disorders	159 359 146 156 235 -52 372 , 90 433 3278 301 . 28 113 322 121 167 189 221 275 349 477 . 29 477 47 4466 278 278
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication Communication Communication handicapped Communicative Disorders	159 359 146 156 235 -52 372 , 90 433 278 301 . 28 113 322 121 167 189 221 275 349 477 . 29 . 44 466 278 278 295
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication Communication Communicative Disorders Communicative Disorders Community physical fitness	159 359 146 156 235 -52 372 , 90 433 327 8 301 . 28 113 322 121 167 189 221 275 349 477 . 29 477 47 466 278 295 332
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classified status Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication handicapped Communication handicapped Communicative Disorders Community physical fitness Comparative Literature and Classics	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 221 275 349 477 .47 .41 466 278 278 322 322 322 322 323 323 322 323 322 323 322 323 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication Communication Communication handicapped Communicative Disorders Community physical fitness Comparative Literature and Classics Computer and Information Technology	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 275 349 477 .29 .47 .41 466 278 278 278 278 278 278 278 278
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication Communication Communication handicapped Communicative Disorders Community physical fitness Comparative Literature and Classics Computer and Information Technology Computer Engineering and Computer Science	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 275 349 477 .29 .47 .41 466 278 278 278 278 278 278 278 278
Children's theatre Chinese Choral music Cinema Civil Engineering Class attendance Classics Classified status Clinical psychology Clinical-rehabilitative services audiologist Clothing (textiles) Clubs Co-Op (Cooperative Education) Coaching College of: Arts Business Administration Education Engineering Health and Human Services Liberal Arts Natural Sciences and Mathematics College organizations College work-study College-based Programs Communication Communication Communication handicapped Communicative Disorders Community physical fitness Comparative Literature and Classics Computer and Information Technology	159 359 146 156 235 -52 372 ,90 433 278 301 .28 113 322 121 167 189 275 349 477 .29 .47 .41 466 278 278 278 278 301 28 113 302 105 105 105 105 105 105 105 105

Computer-related curriculum See Computer Engineering and Computer Science	
See Computer Studies (Liberal Arts)	
See Information Systems	
See Instructional Systems Technology Concerts	
Concurrent enrollment	}
Conditionally classified status	
Construction management	
Consumer affairs	
Cooperative Education (Co-Op)	
Corrections	
Corrective therapy	
Correspondence credit	
Counseling	
advisement	3
Educational Psychology and Administration	
activity courses	5
adding classes	3
cross-listed	
double-numbered	
grade policy	
graduate level	
interdisciplinary	
listings	
lower-division	
numbering52	
repeating54	
substitution	
undergraduate in graduate courses	3
waiver of requirements	
withdrawal	
Crafts, art	3
Crafts, industrial	5
Crafts, industrial	5
Creative writing	5 4 3
Crafts, industrial	5 4 3
Crafts, industrial	3
Crafts, industrial	5 4 3 5 5
Crafts, industrial	5 4 3 5 6
Crafts, industrial	5 4 3 5 6 9
Crafts, industrial	5 4 3 5 5 6 9 5
Crafts, industrial	5 4 3 5 5 6 9 5 5
Crafts, industrial	5 4 3 5 5 6 9 5 4
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 51 Credit 59 by examination 39, 50 correspondence 55 extension 54, 90 for noncollegiate instruction 36 international program 55 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 285	5 6 9 5 4 6 3
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 53 by examination 39, 53 correspondence 55 extension 54, 96 for noncollegiate instruction 33 international program 55 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 28 Cross-listed courses 56	5 4 3 5 5 6 9 5 5 4 6 3 3
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 51 Credit 59 by examination 39, 50 correspondence 55 extension 54, 90 for noncollegiate instruction 36 international program 55 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 285	5 4 3 5 5 6 9 5 5 4 6 3 3
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 53 by examination 39, 53 correspondence 58 extension 54, 96 for noncollegiate instruction 53 international program 55 non-collegiate instruction 56 transfer 56 Credit/No Credit 56 Criminal Justice 285 Cross-listed courses 55 Curriculum and instruction (teaching) 213	5 4 3 5 5 6 9 5 4 6 3 3 2
Crafts, industrial .348 Creative writing .384 Credential programs .85, 195, 213 See also College of Education Credit .39, 58 by examination .39, 58 correspondence .54, 96 extension .54, 96 for noncollegiate instruction .38 international program .58 non-collegiate instruction .58 transfer .56 Credit/No Credit .56 Criminal Justice .283 Cross-listed courses .55 Curriculum and instruction (teaching) .213	5 4 3 5 5 6 9 5 4 6 3 3 2
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 58 by examination 39, 58 correspondence 58 extension 54, 96 for noncollegiate instruction 36 international program 56 non-collegiate instruction 56 transfer 56 Credit/No Credit 56 Criminal Justice 280 Cross-listed courses 55 Curriculum and instruction (teaching) 213 D Dance 13 Deans' list 60, 9	5 4 3 5 5 6 9 5 5 4 6 3 3 2 7 7
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 53 by examination 39, 53 correspondence 53 extension 54, 96 for noncollegiate instruction 33 international program 55 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 285 Curriculum and instruction (teaching) 213 D Dance 13 Deans' list 60, 9 Debts 45, 4	5 4 3 5 5 6 6 9 5 5 4 6 3 3 2 7 7 7 7
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 53 by examination 39, 53 correspondence 53 extension 54, 96 for noncollegiate instruction 36 international program 55 non-collegiate instruction 56 transfer 56 Credit/No Credit 56 Criminal Justice 28 Cross-listed courses 56 Curriculum and instruction (teaching) 213 D Dance 13 Deans' list 60, 9 Debts 45, 4 Degrees 7	5 4 3 5 5 6 9 5 5 4 6 3 3 2 7 7 7 7 7 9
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 53 by examination 39, 53 correspondence 53 extension 54, 96 for noncollegiate instruction 36 international program 55 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 280 Cross-listed courses 55 Curriculum and instruction (teaching) 213 Deans' list 60, 9 Debts 45, 4 Degrees 7 baccalaureate 86	5 4 3 5 5 6 9 5 5 4 6 3 3 2 7 7 7 7 9 9 0
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 53 by examination 39, 53 correspondence 53 extension 54, 96 for noncollegiate instruction 36 international program 55 non-collegiate instruction 56 transfer 56 Credit/No Credit 56 Criminal Justice 28 Cross-listed courses 56 Curriculum and instruction (teaching) 213 D Dance 13 Deans' list 60, 9 Debts 45, 4 Degrees 7	5 4 4 3 5 5 6 9 5 5 4 6 3 3 2 7 7 7 9 9 9 9 9 9 9 9 9 9 9 9 9
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education Credit 39, 53 by examination 39, 53 correspondence 58 extension 54, 96 for noncollegiate instruction 38 international program 50 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 28 Cross-listed courses 55 Curriculum and instruction (teaching) 213 D Dance 13 Deans' list 60, 9 Debts 45, 4 Degrees 7 baccalaureate 8 graduate 8	5 4 3 5 5 6 9 5 5 4 6 3 3 2 7 7 7 7 9 9 9 9 9
Crafts, industrial 345 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 51 Credit 39, 55 by examination 39, 55 correspondence 55 extension 54, 96 for noncollegiate instruction 38 international program 55 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 28 Cross-listed courses 55 Curriculum and instruction (teaching) 213 D 20 Dance 13 Deans' list 60, 9 Debts 45, 4 Degrees 7 baccalaureate 8 graduate admission requirements 9 graduate advancement to candidacy 9 offered 79, 8	5 6 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9
Crafts, industrial 345 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 513 Credit 52 by examination 39, 53 correspondence 53 extension 54, 96 for noncollegiate instruction 36 international program 53 non-collegiate instruction 53 transfer 56 Credit/No Credit 56 Criminal Justice 285 Cross-listed courses 55 Curriculum and instruction (teaching) 213 Deans' list 60, 9 Debts 45, 4 Degrees 7 baccalaureate 8 graduate 8 graduate admission requirements 9 offered 79, 8 post-baccalaureate 8 graduate advancement to candidacy 9 offered 79, 8 post-baccalaureate 8	5 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9 9
Crafts, industrial 348 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 51 Credit 39, 53 by examination 39, 53 correspondence 53 extension 54, 96 for noncollegiate instruction 36 international program 55 non-collegiate instruction 55 transfer 56 Credit/No Credit 56 Criminal Justice 28 Cross-listed courses 55 Curriculum and instruction (teaching) 213 Deans' list 60, 9 Deats 45, 4 Degrees 7 baccalaureate 86 graduate 88 graduate admission requirements 9 graduate advancement to candidacy 9 offered 79, 8 post-baccalaureate 8 second master's degree 9	5 4 3 5 5 6 6 9 5 5 5 4 6 3 3 2 7 7 7 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Crafts, industrial 345 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 515 Credit by examination 39, 55 correspondence 55 extension 54, 96 for noncollegiate instruction 36 international program 55 non-collegiate instruction 56 transfer 56 Credit/No Credit 56 Criminal Justice 285 Cross-listed courses 55 Curriculum and instruction (teaching) 215 D 20 Dance 13 Deans' list 60, 9 Debts 45, 4 Degrees 7 baccalaureate 86 graduate admission requirements 99 graduate advancement to candidacy 99 offered 79, 8 post-baccalaureate 80 second master's degree 9 See also appropriate subject department <td>5 6 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9 9 1</td>	5 6 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9 9 1
Crafts, industrial 345 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 515 Credit by examination 39, 55 correspondence 56 extension 54, 96 for noncollegiate instruction 36 international program 56 non-collegiate instruction 56 transfer 56 Credit/No Credit 56 Criminal Justice 285 Cross-listed courses 55 Curriculum and instruction (teaching) 215 D 20 Dance 13 Deans' list 60, 9 Debts 45, 4 Degrees 7 baccalaureate 86 graduate admission requirements 99 graduate advancement to candidacy 99 offered 79, 8 post-baccalaureate 86 second master's degree 9 See also appropriate subject department <td>5 5 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9 9 1 2</td>	5 5 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9 9 1 2
Crafts, industrial 345 Creative writing 384 Credential programs 85, 195, 213 See also College of Education 515 Credit by examination 39, 55 correspondence 55 extension 54, 96 for noncollegiate instruction 36 international program 55 non-collegiate instruction 56 transfer 56 Credit/No Credit 56 Criminal Justice 285 Cross-listed courses 55 Curriculum and instruction (teaching) 215 D 20 Dance 13 Deans' list 60, 9 Debts 45, 4 Degrees 7 baccalaureate 86 graduate admission requirements 99 graduate advancement to candidacy 99 offered 79, 8 post-baccalaureate 80 second master's degree 9 See also appropriate subject department <td>5 5 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9 9 1 2 2</td>	5 5 6 9 5 5 4 6 3 3 2 7 7 7 9 0 9 0 3 9 9 1 2 2
Crafts, industrial	5 4 4 3 5 5 5 6 6 9 9 5 5 5 4 4 6 6 3 3 2 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

Discrimination	
Disqualification	
See academic disqualification	
Donations 17 Dormitories 24	
Double major (sub degree)	
Drama	
Drawing	
See Technology Education	
Dropping classes	
Drugs 63, 65	
Economic Center for	
Early childhood advection	
See Home Economics	
Can Tanahar Education	
Earth sciences	
East European Studies	
Economics	
Education, College of	
Educational	
Educational administration	
career services (ECS)	
Equity Services (EES)	
Information Services	
leave	
Opportunity Program (EOP) 23, 82 Participation in Communities (EPIC) 25, 114	
Psychology and Administration	
psychology clinic	
records	
Educational Administration	
Educational Psychology	
Educational Psychology and Administration	
FEST nobeogmos one apaughtu	
Examination in English as a Second Language 119	
Electrical Engineering	
Electricity/electronics	
See Flectrical Engineering	
See Electrical Engineering	
See Electrical Engineering	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Flementary education 212	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education Elementary Education (EDEL) ELM (Entry Level Mathematics) Test Emergencies health services parking call: 985-4146 public safety dial: 911 others 54 Exercise Conversion/Power Systems Engineering 266	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education Elementary Education (EDEL) ELM (Entry Level Mathematics) Test Emergencies health services parking call: 985-4146 public safety dial: 911 others Energy Conversion/Power Systems Engineering 266 Engineering 221 Engineering pollogy 504	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education 212 Elementary education 216 ELM (Entry Level Mathematics) Test 36, 82 Emergencies 26 health services 26 parking call: 985-4146 1 public safety dial: 911 1 others 64 Energy Conversion/Power Systems Engineering 266 Engineering 221 Engineering geology 504 Engineering Technology 256 English 384	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education (EDEL) 216 ELM (Entry Level Mathematics) Test 36, 82 Emergencies health services parking call: 985-4146 1 public safety dial: 911 1 others 64 Energy Conversion/Power Systems Engineering 266 Engineering 221 Engineering geology 504 Engineering Technology 256 English 384 as a Second Language 118 EESL 119 English Placement Test (EPT) 36, 81 Test of English as Foreign Language (TOEFL) 37 Enrollment 38 adjunct 38 continuous 51	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education (EDEL) 216 ELM (Entry Level Mathematics) Test 36, 82 Emergencies health services parking call: 985-4146 1 public safety dial: 911 1 others 64 Energy Conversion/Power Systems Engineering 266 Engineering 221 Engineering geology 504 Engineering Technology 256 English 384 as a Second Language 118 EESL 119 English Placement Test (EPT) 36, 81 Test of English as Foreign Language (TOEFL) 37 Enrollment 38 adjunct 38 adjunct 38 concurrent 38 continuous 51	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	
See Electrical Engineering See Engineering and Industrial Technology See Technology Education Elementary education	

Exchange programs	
Expenses	
Experiential Learning Center	
Expulsion	
Extended Education	
Extension credit	
PfBacy rights	
Faculty	í
Family and child development301	
Family and child development	
Fashion merchandising	
Fees	
nonresident tuition	
parking	
Fellowships47	
Feminist studies473	
See Women's Studies	
See Social Work Program	
See student teaching	
Film	
Radio, Television, and Film156	,
Final examinations	
Finance, Real Estate, and Law	
Financial aid	,
Financial Aid Administration	,
Financial assistance 46-48	
Fine Arts	
public performances and exhibitions	ï
Fitness	
Food and nutrition	
Food service administration and dietetics	
Foreign (international) students	
Foreign Languages French	
French444	,
German447	
Italian444	1
Russian447	7
Spanish)
Foreign study programs	,
Forty-Niner Shops	
fraternities	3
housing	1
French	1
General Education (GE)82	2
U.S. Constitution83	3
U.S. History	3
Geography393	3
Geological Sciences	1
German	
Gerontology Program	3
The state of the s	
Grade abbreviations	2
appeals	
AU (audit)	
change of	
final report	
grade point average (GPA)	
I (incomplete)	
policy	5
RD (report delayed)	7
SP (satisfactory progress)57	7
symbols	6
U (unauthorized incomplete)	7
W (withdrawal)	
Graduate remarks processed and an arms of the control of the contr	
admission	0
classified	
comprehensive examination	
conditionally classified	ņ
Conditionally classified	9

courses	53
credit	
dean's list	
degrees	89
fellowships	
grievance	
international programs	
project	94
Public Policy and Administration	
second degree	
seven-year rule	
Studies 700	
thesis	
withdrawal from program	
Graduation	
graduation check	
honors	
Grants	
Design	42
See Technology Education	
See Technology Education Graphic design	42
Greek	72
H	
Handicapped	
Disabled student services	27
Harassment	67
Hardship petitions	38
Health and Human Services	75
Health Care Administration	91
Health Science	95
Health screening	
Health services	
High school students	
History	197
general education requirement	197
Home Economics	801
Honor Societies Mortar Board	10
Phi Beta Kappa	10
Phi Kappa Phi	18
others	18
Honors	
courses	
deans' list	
English	386
general	108
president's list	60
Housing	
Housing Administration	42
Human Corps	
Human Development	
Human resources management	183
Late and the second second second	
I (incomplete) grade	57
Illustration	
Impacted programs	60
Independent study courses	
Inderdisciplinary Studies	
graduate programs	
Industrial arts	
Industrial design	
Industrial plastics processing and design	
See Mechanical Engineering	
See Technology Education	
Industrial psychology	433
Industrial security	283
Industrial technology	200
Industrial-Management Engineering	200

nformation Systems
nstructional hour
nstructional Systems Technology (EDST)
nterdisciplinary courses
nterdisciplinary Studies (special major)
(special major)
nterior Design
Design142
Home Economics
nternational services and a service principle.
admission
Education, Center for
program credit
programs
student
nternational business
nternational Education
nternational Studies
nternships
nterpersonal communication
sabel Patterson Child Development Center
talian
Los described notarionalist
Japanese
Japanese Garden
Jewelry
Journalism
Judicial affairs64
K
KLON-FM
Let Date of Perchapty and Reinforstation
anguage and composition
Language, Literacy and Culture
Language, speech, and hearing
Latin
Latin American Studies
Latino Studies
Law enforcement
Leave, educational
Legal Studies (Liberal Arts)
Leisure studies
Liberal Arts
Liberal Arts Program
Liberal Studies Program
Library
Library Education
Linguistics416
Loans
LOST AND FOUND DIAL: 985-4101
Magazine journalism
Majors (degrees)
Management and Human Resources Management 183
Manufacturing
Marine Biology
Marine geology
Marriage, Family, Child Counseling
Con toward for
See Radio, Television, and Film
Master's degree
See degrees
See also appropriate subject department
Materials engineering
Mathematics

Mechanical Engineering 265 Media See Instructional Systems Technology See Radio, Television, and Film Medical services Medical services 26, 42 Medieval and Renaissance Studies 420 Microbiology (Biological Sciences) 480 Military Officer training programs See Aerospace Studies See Military Science 312 Millor Japanese Garden 15 Milority Engineering Program 222 Minors 80 Mortar Board 19 Multiple subjects teaching credential 58, 213 professional clear 215 Museum Studies 15, 125 Museum Studies 15, 125 Museum Studies 35, 189 National Teachers Examination (NTE) waiver programs Natural Sciences and Mathematics 477 Newspaper journalsim 408 No redit 56 Non-resident students 38 Non-resident students 38 Non-resident students 38 Nondiscrimination	Mathematics examination (ELM)	. 36, 82
See Instructional Systems Technology See Radio, Television, and Film Medical services 26, 42 Medieval and Renaissance Studies 420 MFCC 194 Microbiology (Biological Sciences) 480 Military Officer training programs See Aerospace Studies See Military Science Military Science Military Science Military Science Military Science 312 Military Science 410 Military Engineering Program 222 Minors 80 Mortar Board 19 Multiple subjects teaching credential 85, 213 professional clear 215 Museic 146 Music 15, 125 Museic 146 Music 146 Military Science 146 Military Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nondiscrimination 67 Nondiscrimination 67 Nondiscrimination 67 Nondiscrimination 67 Military Sciences 301 Occupational Studies 319 Occan Engineering 266 Occan Studies Institute 114 480 Open university See adjunct enrollment 167 Oral history program 398 Organizations 290 Overseas study 117 Parking 43 45 46 47 480 47 480 48 48 48 48 48 48 4	Mechanical Engineering	265
See Radio, Television, and Film 26, 42 Medical services 26, 42 Medieval and Renaissance Studies 420 MFCC 194 Microbiology (Biological Sciences) 194 Military Glicer training programs See Aerospace Studies See Military Science 312 Miller Japanese Garden 15 Miller Japanese Garden 15 Milority Engineering Program 222 Minority Engineering Program 222 Mortar Board 19 Multiple subjects teaching credential 85, 213 professional clear 215 Museum Studies 15, 125 Museum Studies 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Nature American studies 351 Nature American studies 477 Newspaper journalisim 408 Non-resident students 38 Non-resident students 38 Non-resident students 38 <td></td> <td></td>		
See Radio, Television, and Film 26, 42 Medical services 26, 42 Medieval and Renaissance Studies 420 MFCC 194 Microbiology (Biological Sciences) 194 Military Glicer training programs See Aerospace Studies See Military Science 312 Miller Japanese Garden 15 Miller Japanese Garden 15 Milority Engineering Program 222 Minority Engineering Program 222 Mortar Board 19 Multiple subjects teaching credential 85, 213 professional clear 215 Museum Studies 15, 125 Museum Studies 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Nature American studies 351 Nature American studies 477 Newspaper journalisim 408 Non-resident students 38 Non-resident students 38 Non-resident students 38 <td>See Instructional Systems Technology</td> <td></td>	See Instructional Systems Technology	
Medieval and Renaissance Studies 420 MFCC 194 Microbiology (Biological Sciences) 480 Military officer training programs See Aerospace Studies See Military Science 312 Miller Japanese Garden 15 Milority Engineering Program 222 Minors 80 Mortar Board 19 Multiple subjects teaching credential professional clear 215 Museum Studies 15, 125 Museum Studies 15, 125 Museum Studies 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Non-resident studies 31<	See Radio, Television, and Film	
MFCC 194 Microbiology (Biological Sciences) 480 Military Officer training programs 32 See Aerospace Studies 3 See Military Science 312 Miller Japanese Garden 15 Minors 80 Mortar Board 19 Multiple subjects teaching credential 85, 213 professional clear 215 Museum Studies 15, 125 Museum Studies 15, 125 Museum Studies 15, 125 Music 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-clegidate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 0 Occupational Studies 319 Ocean Engineering		
Microbiology (Biological Sciences) 480 Military officer training programs See Aerospace Studies See Aerospace Studies 312 Miller Japanese Garden 15 Minority Engineering Program 222 Minors 80 Mortar Board 19 Multiple subjects teaching credential professional clear 215 Museic 15, 125 Museic 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 391 Occupational Studies 392 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 398 See		
Military officer training programs See Aerospace Studies See Military Science 312 Miller Japanese Garden 15 Minority Engineering Program 222 Minors 80 Mottar Board 19 Multiple subjects teaching credential professional clear 215 Museum Studies 15, 125 Music 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Origanizations	MFCC	194
See Aerospace Studies See Military Science Milliary Science 312 Milliary Science 15 Milliary Science 15 Millors 80 Mortar Board 19 Multiple subjects teaching credential professional clear 215 Museum Studies 15, 125 Museic 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 58 See adjunct enrollment 67 Oper university 58 See adjunct enrollment		480
See Military Science 312	Military officer training programs	
Millet Japanese Garden 15 Miller Japanese Garden 15 Minority Engineering Program 222 Minors 80 Mottar Board 19 Multiple subjects teaching credential professional clear 215 Museum Studies 15, 125 Museic 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 266 Organizations 29 Organizations management 167 Organizations management 167 Orga		
Miller Japanese Garden 15 Minority Engineering Program 225 Minors 80 Mortar Board 19 Multiple subjects teaching credential 85, 213 professional clear 215 Museum Studies 15, 125 Museur Studies 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 301 Occan Engineering 266 Ocean Studies Institute 114, 480 Open university 5ee adjunct enrollment Oper university 5ee adjunct enrollment Oper university 5e See adjunct and communication 466	See Military Science	3 69 268
Minority Engineering Program 222 Minors 80 Mortar Board 19 Multiple subjects teaching credential professional clear 215 Museum Studies 15, 125 Music 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 Occupational Studies 319 Occan Engineering 266 Ocean Studies Institute 114, 480 Open university 398 Open university 398 Organizations management 167 Organizations communication 466 Organizations 29 Overseas study 117 P	Military Science	312
Minors 80 Mortar Board 19 Multiple subjects teaching credential professional clear 215 Museum Studies 15, 125 Music 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 314 Nutritional sciences 301 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Open university See adjunct enrollment Open university 167 Overseas study 117 P Parking 43 fee 43 Pass/Fail <t< td=""><td>Miller Japanese Garden</td><td> 15</td></t<>	Miller Japanese Garden	15
Mottar Board 19 Multiple subjects teaching credential professional clear 215 Museum Studies 15, 125 Music 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 398 See adjunct enrollment 167 Open university 398 See adjunct enrollment 167 Organizational communication 466 Organizational communication 466 Organizations 29 Overseas study 117 P <td< td=""><td></td><td></td></td<>		
Multiple subjects teaching credential professional clear 85, 213 professional clear 215 professional clear 215 professional clear 215 professional clear 15, 125 professional clear 146 professional clear 147 professional clear 148 professional clea	Minors	80
professional clear	Mortar Board	05 010
Museum Studies 15, 125 Music 146 N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O Cocupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance	Multiple subjects teaching credential	85, 213
National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 398 See adjunct enrollment 398 Open university 398 See adjunct enrollment 398 Organizations 29 Organizational communication 466 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pestroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi	professional clear	4F 40F
N National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 319 Occan Engineering 266 Ocean Studies Institute 114, 480 Open university 398 See adjunct enrollment 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi	Museum Studies	15, 125
National Teachers Examination (NTE) waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 302 Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petrioleum geology 504 Phi Beta Kappa 18 Phi Rappa Phi 19 <t< td=""><td>Music</td><td> 140</td></t<>	Music	140
waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 0 Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizational communication 466 Organizational communication 467 Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504	N sa spoloid	
waiver programs 85, 189 Native American studies 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 0 Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizational communication 466 Organizational communication 467 Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504	National Teachers Examination (NTE)	
Natural Sciences and Mathematics 351 Natural Sciences and Mathematics 477 Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O Cocupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Open university See adjunct enrollment Open university 398 Organizations 29 Organizational communication 466 Organizational communication 466 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Phi Rappa Phi 19	waiver programs	85, 189
Newspaper journalsim 408 No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 319 Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 28 See adjunct enrollment 398 Open university 398 See adjunct enrollment 466 Oral history program 398 Organizational communication 466 Organizational communication 466 Organizational communication 466 Organizational communication 43 Perking 43 fee 43 Pass/Fail 56 Perking 43 Petroleum geology 504 Phi Kappa Phi 19 Philosophy 123 Photojourna	Native American studies	351
No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O Cocupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Petrolorance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Kappa Phi 19 Philosophy 123 Photojournalism 408 Physical Education 322 P	Natural Sciences and Mathematics	477
No credit 56 Non-resident students 38 Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O Cocupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Petrolorance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Kappa Phi 19 Philosophy 123 Photojournalism 408 Physical Education 322 P	Newspaper journalsim	408
Noncollegiate instruction 55 Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 398 See adjunct enrollment 398 Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Phitography 123 Photography 123 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Poli	No credit	56
Nondiscrimination 67 Nursing 314 Nutritional sciences 301 O 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university 28e adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Photography 123 Photography 123 Physical Education 322 Physical Education 322 Plagiarism 61 See also cheating 345 Policies 51 Political Science	Non-resident students	38
Nursing 314 Nutritional sciences 301 O 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Open university see adjunct enrollment 167 Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 123 Photography 123 Photography 123 Physical Education 322 Physical Therapy 331 Pastices 51 Political Science 4	Noncollegiate instruction	55
Nutritional sciences 301 O Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photography 123 Phosical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post-baccalaureate admi	Nondiscrimination	67
Occupational Studies	Nursing	314
O Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Open university 398 See adjunct enrollment 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P 117 Peraking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Kappa Phi 19 Philosophy 422 Photography 422 Photography 123 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Plastics 51 Political Science 427	Nutritional sciences	
Occupational Studies 319 Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post-baccalaureate 427 admission 90	0	
Ocean Engineering 266 Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photography 123 Physical Education 322 Physical Therapy 331 See also cheating 345 Plastics 51 Political Science 427 Post- baccalaureate admission Post-baccalaureate admission Post-baccalaureate<		319
Ocean Studies Institute 114, 480 Open university See adjunct enrollment Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plastics 51 Policies 51 Political Science 427 Post-baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37, 90 <td>Ocean Engineering</td> <td> 266</td>	Ocean Engineering	266
Open university See adjunct enrollment Operations management Oral history program Organizational communication Organizations Overseas study Parking fee Parking Performance (acting/directing) Petitions (contact Admissions and Records) Petroleum geology Phi Beta Kappa Phi Kappa Phi Philosophy Photography Photography Photojournalism Physical Education Physical Education Physical Therapy Plagiarism See also cheating Plastics Political Science Post- baccalaureate admission Post-baccalaureate admission Post-baccalaureate classified unclassified 167 167 167 167 167 167 167 167 167 167	Ocean Studies Institute	114, 480
See adjunct enrollment 167 Operations management 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Political Science 427 Post- baccalaureate admission Post-baccalaureate admission Post-baccalaureate classified unclassified 37, 90		
Operations management 167 Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Political Science 427 Post- baccalaureate 36 admission 90 Post-baccalaureate 37, 90 unclassified 37, 90		
Oral history program 398 Organizational communication 466 Organizations 29 Overseas study 117 P Parking 43 fee 43 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Political Science 427 Post-baccalaureate 427 Post-baccalaureate 37, 90 unclassified 37, 90	Operations management	167
Organizational communication 466 Organizations 29 Overseas study 117 P 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photography 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37, 90	Oral history program	398
Overseas study 117 p 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photography 408 Physical Education 322 Physical Therapy 331 See also cheating 345 Plastics 51 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37	Organizational communication	466
P 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Philosophy 422 Photography 123 Photography 408 Physical Education 322 Physical Therapy 331 See also cheating 345 Plastics 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37,90	Organizations	29
Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 See also cheating 345 Plastics 51 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Overseas study	117
Parking 43 fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photogiournalism 408 Physical Education 322 Physical Therapy 331 See also cheating 345 Plastics 51 Policies 51 Political Science 427 Post-baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	S7d	
fee 43 Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 See also cheating 345 Plastics 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Porking author by	43
Pass/Fail 56 Performance (acting/directing) 159 Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 See also cheating 345 Plastics 51 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37	foo	43
Petitions (contact Admissions and Records) Petroleum geology Phi Beta Kappa Phi Kappa Phi Philosophy Photography Photojournalism Physical Education Physical Therapy Plagiarism See also cheating Plastics Policies Political Science Post- baccalaureate admission Post-baccalaureate classified unclassified 18 40 42 42 42 42 42 42 43 45 46 47 47 47 47 47 47 48 48 48 48	Dece/Fail	56
Petitions (contact Admissions and Records) 1 Petroleum geology 504 Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Performance (acting/directing)	159
Petroleum geology 18 Phi Beta Kappa 19 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Pea also cheating 345 Plastics 51 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37	Petitions (contact Admissions and Records)	milotine 1
Phi Beta Kappa 18 Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Petroleum geology	504
Phi Kappa Phi 19 Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Phi Reta Kanna	18
Philosophy 422 Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Phi Kanna Phi	19
Photography 123 Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Philosophy	422
Photojournalism 408 Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37	Photography	123
Physical Education 322 Physical Therapy 331 Plagiarism 61 See also cheating 345 Plastics 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37	Photojournalism	408
Physical Therapy 331 Plagiarism 61 See also cheating 345 Plastics 51 Policies 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37	Dhysical Education	322
Plagiarism 61 See also cheating 345 Plastics 51 Policies 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37,90 unclassified 37	Dhysical Therapy	331
See also cheating 345 Polistics 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Planiarism	61
Plastics 345 Policies 51 Political Science 427 Post-baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	See also cheating	
Policies 51 Political Science 427 Post- baccalaureate admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Diagtics	
Political Science	Policies	51
admission 90 Post-baccalaureate classified 37, 90 unclassified 37	Political Science	427
admission 90 Post-baccalaureate 37, 90 classified 37 unclassified 37	Post- baccalaureate	
Post-baccalaureate 37, 90 classified 37, 90 unclassified 37	admission	90
classified	Post-haccalaureate	
unclassified	classified	. 37, 90
	unclassified	37
general requirements		
	general requirements	37

rower systems engineering	
See Electrical Engineering	
See Mechanical Engineering	
Pre-athletic training	2
Pre-corrective therapy	2
Pre-conective therapy	2
President's list	
Privacy rights	2
Probation	5
Professional clear credential	5
Professors	2
Programs and departments	
Project, graduate	
Psychological services	6
Psychology43	
Psychology clinic	0
Psychology, Educational	2
Psychomotor therapy32	2
Public Administration (undergraduate option)42	7
Public health	
The state of the s	
See Health Science Public performances and exhibitions	ş
Public performances and exhibitions	4
Public Policy and Administration	4
Public relations	8
PUBLIC SAFETY DIAL: 911	1
atsubate rule, graduate	
Quality assurance	38
Quality assurance	7
Quantitative methods	1
R ^{TO} Inemeasied law	
Radiation Theraphy	15
Hadiation Theraphy	2
Radio Station, KLON-FM	1
Radio, Television, and Film	6
RD (report delayed) grade5	7
Reading specialist credential	6
Deal netate	~
Real estate See Business Administration	
See Business Administration	
See Finance, near Estate and Law	
See Business Administration See Finance, Real Estate and Law Recitals	6
Recreation and Leisure Studies	10
Defined of fees	12
Refunds of fees	2
Registered Nurse (RN)	4
Registration procedures	
procedures	39
Regulations	51
Reinstatement, academic	21
Reinstatement, academic	
Religious Studies	1
Renaissance Studies, Medieval and42	
Repeating courses5	54
Paguirements	
admission	n
admission	20
Daccalaureate degree	20
general education8	33
graduate degree9	90
post-baccalaureate9	90
subject	24
subject	27
tests3	55
transfer	35
U.S. Constitution	33
U.S. History	
Percareh Centers and Institutes	
Aerospace Sciences, Center for	٠.
Aerospace Sciences, Center for	4
Brain-Hemisphere Research, Center for	4
Career Studies, Center for	14
Criminal Justice Research and Training	14
Educational Passarch and Canings Contactor	1
Educational Research and Services, Center for1	17
First Amendment Studies, Center for	4
Health and Behavior Studies, Center for	14
Humanities, Center for	14
Molecular Ecology Institute	14
Pacific Rim Institute	19
Parasitology, Institute of	14

Science and Math Education, Center for	
Successful Aging, Center for	4
Residence status	
Rhetorical studies	
ROTC, Air Force	
ROTC, Army31	2
Rules regulations	
Russian	
Russian and East European Studies	3
Safety operations	
Safety operations 25	6
Scholarships	0
Scholastic Aptitude Test (SAT)	14
School health	
School nursing	
School relations	14
Science education program	7
Sculpture	
Secondary education	
Secondary Education (EDSE)	Q
Security administration	
Senate, academic	
Senior citizens	
Seven-year rule, graduate	
Sexual assault	70
Sexual harassment 6	
Simultaneous registration	38
Single subject courses (EDSS)	
Single Subject Teacher Education Program	
Single subject teaching credential	
Smoke-free campus	
SOAR	39
Social security number, use of	2
Social Work	54
Social/Cultural Development	
Sociology	
Soroptimist House	
sororities	
housing	
South Coast Professional Training/Development	
SP (satisfactory progress) grade	
Spanish	49
Speech Communication	56
Sports, Athletics, and Recreation (SAR)	15
Student	
	72
attendance	52
	41
disabled student services	27
discipline	63
employment	47
employment, regulations	
government	29
grade report	58
grades	
health services	26
high school	
housing	
international (foreign)	
life and development	
loans	
orientation (SOAR)	
privacy rights	
returning	
rights	
services and activities	
	39
summer session	
support services	24

teaching	
union	
unit load	
ummer Bridge Program	
ummer internships	
ummer Session	
upplemental Instruction	
uspension	
Value officer sessing programs Ser Aerospace Surface	
alent Search	
eacher Education	
eaching credential multiple subjects	
single subject	
eaching English as a Second Language	
echnology Education	
elevision	
See Hadio, Television, and Film	
See University Television Center en-year rule, undergraduate	
en-year rule, undergraduate	
ESL	
est of English as a Foreign Language (TOEFL)37	
esting41	
esting and Evaluation Services	
esting and placement	
heatre Arts	
herapeutic recreation	
heses	
icket office	
OEFL	
ranscripts	
ransfer credit	
requirements	
ransportation	
See Business Administration	
See Public Policy and Administration rustees	
uition	
nonresident	
Part shall a state of the state	
J (unauthorized incomplete) grade	
Unclassified status	
Indergraduate	
admission	
application	
ten-year rule	
transferring units	
unit credit53	
unit load	
Jnits credit	
load	
Iniversity	
100	
400	
accreditation	
administration	
admission	
computer facilities	
counseling center	
development	
extension12	
Foundation	
health services	

library 13 outreach 24 student union 16, 30 television center 12 University Programs 99 University Scholars Program 108 Upward Bound Program 24 Urban Education 193 Urban studies 393, 396	
V	
Veteran's Affairs	
Visitors	
Vocal music	
Vocational education	
Volunteer services	
W	
W (withdrawal) grade	
Waiver programs (NTE)	
Women's Resource Center	
Women's Studies	
Work-study	
Writing Proficiency Examination (WPE)	
Y	
Young Scholars Program	
Z	
Zoology	

IN MEMORIAM

Corinne Crogen

Leon Dallin

John Hutcherson

George Korber

Peter LaPage

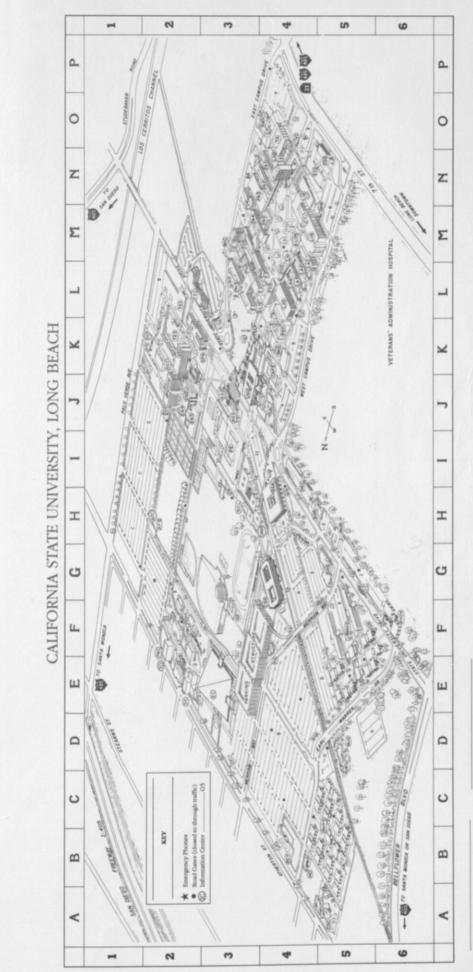
Richard Oden

Gil Warren Rankin

Jess Shaver

J. J. Thompson

John W. Wills



1		
H 2	Parking Administration PA	P.4
NC P 2	Information Center(©)	00
Z 3	Visitor Information (D)	0
40 - D 5	Parking Structure	E3-P4
E 3	Employee parking lots designated	1-1
N 3	Student parking lots designated	A-E,G,M
113	Foundation parking lot designated	1
M 4		
N 4		
P 2	BUILDINGS	
H 4		
H 4	The Party of the P	24
8 3	Applied Arts & Sciences 1 AS1	

Cafeteria CAPE	- K4	Pine
Child Development Cir, Isabel Patterson CDCA5	DC.A5	KLO
College of Business Administration CBA	- 64	Four
Dance Center, Marrha Knoebel DC	- F2	Gym
Earl Burns Miller Japanese Garden MJG	- D S	Hom
Education 1 ED1	N.4	Hon
Education 2 ED2	-N.5	Indu
Engineering 2 EN2	- 32	Isabe
ring	- 32	adel.
Engineering 4 EN4	-12	Lang
Engineering and Computer Science ECS	-12	Lecti
Engineering VBC	K2	Liber
Engineering and Industrial Technology IT	T.K2	Libe
Faculty Office 2 PO2	F7	Libe
Faculty Office 3 FOS	F.4	Libe
Faculty Office 4 FO4	M.S	Libe
Faculty Office 5 PO5	-M3	Libra
Pine Arts 1 PA1	N.4	Mele
Fine Arts 2 PA2	N.4	Micr

K4	Pine Arts 3 PA3	N 4
Patterson CDC.A5	KLON/FM88	- M 4
icion CBA G4	Foundation Education Center PEC	1.2
I DC P2	Gymnasiums PE	13
den MJG - D S	Home Economics HEC	1
N4	Housing HO	B
N 5	Industrial Technology IT	K 2
. 12	Jabel Patterson Child Development Cir CDC	CDC.A5
	Japanese Garden, Earl Burns Miller MJG	G D
	Language Arts LAB	N
ience ECS J2	Lecture Halls LH 150, 151	M
K 2	Liberal Arts 1 LA1	M
chnology IT . K 2	Liberal Arts 2 LA2	1
17	Liberal Arts 3 LA3	1
1.1	Liberal Arts 4 LA4	1
M.3	Liberal Arts 5 LAS	L
M.3	Library LTB	M
N.6	McIntosh Humanities Building MHB	N
N 4	Microbiology MIC	M

Multi-Media Center MM	N 5	
Music Center UMC	F 2	
North Campus Library NCL	H3	
Nursing NUR	H 5	
Parking Administration PA	P.4	
Parking Structure	E3-F3	
Performing Arts Center PAC	F 2	
Peterson Hall of Science 1 PH1	17	
Lecture Halls LH 150, 151	- M4	
Peterson Hall of Science 2 PH2	L 3	
Peterson Hall of Science 3 PH3	1.3	
Physical Education/Gymnasiums PE	113	
Yant Operations PO	K 2	
Psychology PSY	K 4	
Public Safety PS	K 2	
Receiving REC	K 2	
Recycling Center RCY	B4	
Residence Housing	F5,85	
Willside Commons BHHS	2.4	

HERCHISCHES INCOMES PARISH	Parkside Commons RHPS B \$		Science Lecture Halls SLH 140, 141 M 3		Social Sciences and Public Affairs SPA K 2		Student Health Service SHS		Technology Education 2 TR2 K 2	LA		University Art Museum UAM H4	sity Extension Services UES H 2	University Music Complex UMC P 2	University Student Union USU 13	University Telecommunications UTC 0 4	
HEROTERSHIP OF SHIP	Parkside Com	Science Lecture	Science Lecture	Soroptimist Hou	Social Sciences	Student Services	Student Health	Technology Edu	Technology Edu	Theatre Arts/Stu	Ticket Office TO	University Art M	University Exter	University Music	University Stude	University Telec	

