

**California State University Long Beach**  
**Physics Graduate Program**  
**Two years plan - 31 Units required**

**Core Courses:** (25-units mandatory courses)

Semester 1			Semester 2		
Class	Course	Units	Class	Course	Units
510	Graduate Mechanics	3	545 or 546	Experimental Physics I or Experimental Physics II	3
560A	Mathematical Methods in Physics	3	540A	Electrodynamics	3
Semester 3			Semester 4		
Class	Course	Units	Class	Course	Units
550A	Quantum Mechanics I	3	522	Statistical Physics	3
698	Thesis	3	698	Thesis	3

Colloquium: (PHYS-695) must be taken during at least one of the above semester (1 unit).

**Graduate Physics Options:** (6 units minimum)

<b>Applied Physics</b>		
<b>Semester 3 and/or 4</b>		
580, or 575, 576	Computer interfacing in Experimental Physics, or Modern Optics, Modern Optics Lab.	3 units
One or several classes among 545/546/575/576 or 580		3 units (minimum)
<b>Recommended Electives</b> (minimum 3 units)		
Any 500-level (or above) physics class that is useful for the Master's thesis.		

<b>Computational Physics</b>		
<b>Semester 3 and/or 4</b>		
562	Computational Physics	3 units
550B	Quantum Mechanics II	3 units
<b>Recommended Electives</b> (minimum 3 units)		
Any 500-level (or above) physics class that is useful for the Master's thesis.		

<b>General Physics</b>		
<b>Semester 3 and/or 4</b>		
550B	Quantum Mechanics II	3 units
<b>Recommended Electives</b> (minimum 5 units)		
Any 500-level (or above) physics class that is useful for the Master's thesis.		

**Department of Physics and Astronomy**  
**Master of Science in Physics, (PHYSMS01) Plan I: Thesis**

**Graduate Program for Advancement to Candidacy**

Student's Name: xxxxxxxxxxxx  
 Address: xxxxxxxxxxxxxxxx  
 xxxxxxxxxxxxxxxx

Student ID No: xxxxxxxx

*GWAR Completed*

**GRADUATE PROGRAM**

**Required Courses**

Course	Course Number	Course Title	300 – 400 Units	500 – 600 Units	Year/Sem Taken	Course Grade
PHYS	510	Graduate Mechanics		3	-----	-----
PHYS	560A	Mathematical Methods in Physics		3	-----	-----
PHYS	545 or 546	Experimental Physics		3	-----	-----
PHYS	540A	Electrodynamics		3	-----	-----
PHYS	550A	Quantum Mechanics I		3	-----	-----
PHYS	522	Statistical Physics		3	-----	-----
PHYS	695	Colloquium		1	-----	-----
PHYS	698	Thesis		6	-----	-----
<b>TOTAL UNITS</b>				<b>25</b>		

**Electives (5 units minimum)**

PHYS	550B	Quantum Mechanics II			-----	-----
PHYS						
PHYS						
PHYS						
PHYS						
PHYS						
<b>TOTAL UNITS</b>						

Course Deficiencies: *None*

**Thesis Committee:**

\_\_\_\_\_  
 Dr. xxxxxxxxxxxx, Chair

\_\_\_\_\_  
 Student's Signature

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Dr. xxxxxxxxxxxxxxxx, Member

\_\_\_\_\_  
 Department Graduate Advisor

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Dr. xxxxxxxxxxxx, Member

\_\_\_\_\_  
 Department Chair

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Associate Dean for  
 Graduate Accountability

\_\_\_\_\_  
 Date

## SUPERVISED INDEPENDENT STUDY COURSES

### PHYS 496 Special Problems    PHYS 691 Directed Study    PHYS 697 Directed Research

Each student enrolled in a supervised study course (496, 691, or 697, but excluding 698 Thesis) must have this agreement on file in the Physics Department office prior to taking the course. It includes a description of the work to be accomplished, specific information on the tasks required, the nature of the formal report, and the basis for determining the final grade. The instructor, the student, and the Chair must sign the agreement.

Name \_\_\_\_\_ CSULB ID# \_\_\_\_\_

Address \_\_\_\_\_  
(Street address) (City) (Zip)

Tel. No. \_\_\_\_\_ Email address: \_\_\_\_\_

Major \_\_\_\_\_ Graduate Student  Undergraduate

Course No. \_\_\_\_\_ Ticket No. \_\_\_\_\_ Units \_\_\_\_\_ Year \_\_\_\_\_ Semester \_\_\_\_\_

A SUPERVISED INDEPENDENT STUDY COURSE is a significant learning experience for a student. A vital part of that learning occurs as a result of participating in the kind of public reporting that is a hallmark of scientific work, namely, public written and oral reports covering the material studied.

1. **WE AGREE** that the obligations of the courses include a brief written report (or powerpoint presentation or similar record) and a 5-10 minute public oral presentation on work accomplished by the student in a venue and a time determined by the Department. The public oral report must be presented toward the end of the semester. The members of the graduate/curriculum committees, along with the colloquium coordinator, will arrange the public talks, the venue, and will facilitate ordinary equipment requests related to the presentations.

*The student and supervisor understand that this obligation is required by the Department of Physics and Astronomy, and agree to be present at the assigned times. Failure to meet this obligation can mean disqualification from any future supervised courses in the Department.*

In the public talks, the student sets the general context and background of the work in some larger overview of the discipline and then focuses on the specific work done.

2. **WE AGREE on the attached description of the intended work and outcome:**

The student and instructor write this section, and need to be specific about all relevant items such as tasks to be undertaken, nature of the formal report to be made, and basis for determining grade assigned. This description is to be attached to this cover sheet.

\_\_\_\_\_  
Signature of Faculty Supervisor                      Date

\_\_\_\_\_  
Signature of Student                                      Date

\_\_\_\_\_  
Signature of Chair of Physics and Astronomy                      Date

**SUPERVISED INDEPENDENT STUDY COURSES**

**PHYS 496 Special Problems PHYS 691 Directed Study PHYS 697 Directed Research**

Page 2

**Description of intended work and outcome(s):** Be specific about all relevant items such as tasks to be undertaken, nature of the final report to be made, and basis for determining the grade that will be assigned.

---

## PHYS 698, THESIS

Each student enrolled in PHYS 698, Thesis, must have this signed document on file in the Physics Department office. This document includes a description of the work to be accomplished, specific information on the tasks required, the nature of the formal report, and the basis for determining the final grade. The instructor, the student, and the Chair must sign the agreement.

Name \_\_\_\_\_ CSULB ID# \_\_\_\_\_

Address \_\_\_\_\_  
(Street address) (City) (Zip)

Tel. No. \_\_\_\_\_ Email address: \_\_\_\_\_

Thesis Advisor: \_\_\_\_\_

Thesis Committee: \_\_\_\_\_

Year \_\_\_\_\_ Semester \_\_\_\_\_ Units \_\_\_\_\_

A SUPERVISED THESIS is a significant learning experience for a student. A vital part of that learning occurs as a result of participating in the kind of public reporting that is a hallmark of scientific work, namely, public written and oral reports covering the material studied.

**FORMAL ORAL REPORT REGULATIONS: An oral report on the thesis is an important part of the requirements for completing PHYS 698. The student must plan to complete her or his thesis sufficiently early in the semester so that arrangements for the oral report can be made. The following regulations apply:**

- a. A 30-minute seminar giving the background, results, and significance of the Master's thesis must be presented, followed by answers to questions from the audience.
- b. A time and place will be chosen, in conjunction with the Thesis Advisor, so that the entire Thesis Committee will be able to attend.
- c. The time, place, and title of the seminar shall be publicly announced so as to encourage attendance from faculty and students in the Department, as well as others external to the Department.
- d. The grade awarded for PHYS 698 may be partially based on the seminar. Only after the University has officially accepted the thesis and after the seminar has been presented may the grade be assigned.

**IF THE FORMAL ORAL THESIS REPORT, DESCRIBED ABOVE, DOES NOT TAKE PLACE in the semester in which you receive credit in PHYS 698, then the following rule applies:**

You are required to give a brief written report (or powerpoint presentation or similar record) and a 5-10 minute public oral presentation on work accomplished in a venue and a time determined by the Department. The public oral report must be presented toward the end of the semester. The members of the graduate/curriculum committees, along with the colloquium coordinator, will arrange the public talks, the venue, and will facilitate ordinary equipment requests related to the presentations.

**IMPORTANT: The information on this document MUST BE UPDATED EVERY SEMESTER OF ENROLLMENT with a new page containing a brief progress report, signed by the Thesis Advisor, the Chair, the Graduate Advisor, and the student, that details what was done during the previous semester of enrollment.**

# PHYS 698, THESIS

Page 2

**Description of intended work and outcome(s):** Be specific about all relevant items such as tasks to be undertaken, nature of the final report to be made, and basis for determining the grade that will be assigned.

---

**THESIS TOPIC:**

**DESCRIPTION:**

\_\_\_\_\_  
Signature of Faculty Supervisor      Date

\_\_\_\_\_  
Signature of Student      Date

\_\_\_\_\_  
Signature of Chair of Physics and Astronomy      Date

\_\_\_\_\_  
Signature of Graduate Advisor      Date

**PHYS 698, THESIS**

**UPDATE OF THESIS PROJECT:**

Year \_\_\_\_\_ Semester \_\_\_\_\_ Units \_\_\_\_\_

**THESIS TOPIC:**

**DESCRIPTION** (progress report, particularly describing what was accomplished the previous semester, and also describe any changes in direction of the project, or difficulties that are impeding progress):

\_\_\_\_\_  
Signature of Faculty Supervisor                      Date

\_\_\_\_\_  
Signature of Student    Date

\_\_\_\_\_  
Signature of Chair of Physics and Astronomy                      Date

\_\_\_\_\_  
Signature of Graduate Advisor    Date



## CALIFORNIA STATE UNIVERSITY, LONG BEACH

### CALIFORNIA STATE UNIVERSITY, LONG BEACH GRADUATION PROCEDURES – MASTERS/CERTIFICATES

Potential candidates for graduation seeking a degree/certificate at CSULB **MUST** observe the following:

#### 1. MEET ALL CRITERIA REQUIRED TO FILE A REQUEST TO GRADUATE

- a. The Writing Proficiency Exam (WPE) **MUST** be taken by every student and the results posted in the computer. (Passing is required to be advanced to candidacy, but to file your request you need to have only taken the exam).
- b. Must be in good academic standing.
- c. Must have no outstanding financial obligations to CSULB.
- d. Must have an approved major on file. “Pre” major codes cannot file.
- e. Master’s students must already have approved Advancement to Candidacy on file or in the process of being advanced to candidacy.
- f. Certificate students must check with the Program Director to see whether a check sheet is required.

#### 2. FILE A REQUEST TO GRADUATE FORM

- a. Forms available at Student Relations (BH 101).  
NOTE: Filing does not guarantee permission to become a degree candidate.

#### 3. FILE ON TIME

- a. Students seeking to graduate in Spring or Summer must file between the preceding May 1<sup>st</sup> and October 15<sup>th</sup>.
- b. Students seeking to graduate in Fall or Winter must file between the preceding December 1<sup>st</sup> and March 1<sup>st</sup>.
- c. Requests to Graduate may not be filed after the deadline. In the presence of documented and compelling need, special petitions after the deadline **MAY** be allowed.  
NOTE: Petitioning does not guarantee permission to become a degree candidate.

#### 4. FEES

- Commencement Ceremony/Diploma - **\$40.00** (starting December 1, 2006)  
Program Certificate (Optional – for students seeking a certificate) - **\$10.00**

#### 5. APPROVALS – FACULTY APPROVAL IS REQUIRED FOR POTENTIAL DEGREE CANDIDATES

- a. Major(s) – Department approval for each.
- b. Master’s – Your candidacy **MUST** be approved by your major department.
- c. Your department will notify the Evaluation Unit in the Enrollment Services office if you have been denied candidacy. If denied, the candidate is responsible for clearing that denial with the department and for ensuring that the department notifies the Evaluation Unit prior to the deadline to clear all requirements.

#### 6. ELIGIBILITY DETERMINATION

- a. The “Degree Audit” process is undertaken by staff to verify your eligibility to graduate and to determine remaining requirements. It is **NOT** an advising tool. Your Advancement to Candidacy is the basis for your degree audit by the evaluator in the Evaluation Unit. Should you amend your program, you must do so through your department and the approved amendment must be on file in the Enrollment Services office. Every effort is made to complete your degree audit prior to the deadline to add/drop courses in the semester of graduation. However, delays do occur and no guarantee can be offered.
- b. The “Degree Clearing” process is the final review of your record by staff after all requirements have been completed since the degree audit was done. All documents such as substitutions, grade changes, incompletes, petitions, and waivers must be on file the last day of the term of intended graduation. Official transcripts must be on file by July 1<sup>st</sup> for Spring graduation, by October 1<sup>st</sup> for Summer graduation, and by February 1<sup>st</sup> for Fall graduation.

**Your graduation date will be cancelled and you will not receive final review if by the last day of the term:**

1. The WPE has not been passed.
2. Faculty have denied your candidacy.
3. You are not in good standing.
4. Master's candidates only – Must have library clearance on thesis; clearance on comprehensive exam; change of grade on thesis.
5. Incomplete, RD, and SP grades are unresolved.

**7. FAILURE TO GRADUATE**

- a. Students who do not file a Request to Graduate form, who do not meet all degree requirements, or who do not have all necessary documents on file in Enrollment Services by the deadline cannot be graduated. The expected graduation date will be “**CANCELLED**” until the student declares graduation for a future term. That declaration must occur within the published deadlines for the new term and a re-filing fee will be charged if the deadline is missed. (“Request to Change Graduation Date” forms are available at the Student Relations windows, BH 101).

**8. DEGREE “HOLDS”**

Students may not register for the semester following their intended graduation unless:

- a. They “cancel” their declared graduation date.
- b. They change their intended degree date (for which a fee is charged).

If continuously enrolled, Grad students may continue to enroll if an approved change of major form is submitted to the Office of Enrollment Services.

**9. NOTIFICATION**

- a. “Degree Clearing” begins 3 weeks after the end of the term and takes up to 3 months to complete.
- b. “Cancelled Graduation” letters are sent with 3 months.
- c. “Congratulations” mailers are sent within 3 months.
- d. “Diploma has arrived” postcards are sent within 6 months.
- e. The student is responsible for notifying Enrollment Services diploma staff of any name or address change, especially if it affects the diploma.

**10. DEGREES AND TRANSCRIPTS**

- a. Degrees and honors are posted to your transcript when degree clearing is complete.
- b. Transcripts are considered official and are verification of your degree. They are available at a pre-paid fee of \$4.00 per copy (less for multiple copies ordered simultaneously). Requests must be sent in writing to the CSULB Records Office.

**11. COMMENCEMENT**

One commencement ceremony is held per year at the end of the Spring semester. **Students may participate if they still have a few requirements outstanding.** However, your official graduation will depend on when you have actually fulfilled **ALL** requirements and have officially been cleared. **ATTENDING THE CEREMONY DOES NOT CONSTITUTE GRADUATION.** Information about the ceremony is available through your major department. Cap and gown rental or purchase is through the University Bookstore, usually beginning May 1<sup>st</sup>.



California State University, Long Beach  
 Office of Enrollment Services  
**Request to Graduate**  
**Masters Degree/Certificate**

**Please print clearly.** Your diploma will be printed with your name of record (name used in attendance during your enrollment at CSULB). To change your name, an official request must be submitted to Enrollment Services with the appropriate documentation.

LAST	FIRST	MIDDLE
------	-------	--------

Address (number, street, Apt. #)			Anticipated Degree Date
City	State	Zip Code	Campus ID #
Other Names used on your records:			Telephone Number

**Degree Sought:**

MA     MS     Other: \_\_\_\_\_     Certificate Title: \_\_\_\_\_

Major: \_\_\_\_\_

Option: \_\_\_\_\_

Name of Baccalaureate granting institution: \_\_\_\_\_

Baccalaureate Degree: \_\_\_\_\_

Date Awarded: \_\_\_\_\_

<b>FOR OFFICE USE ONLY</b> <i>Do not write in this space.</i>	
<u>Major Code</u> _____ - _____	
<u>Certificate Code</u> _____ - _____	
Date WPE Taken:	_____
Total Units Completed to Date:	_____
Date Received:	_____
Received by:	_____
Date Processed:	_____
Processed By:	_____
Fees Paid:	_____

**UNIVERSITY REQUIREMENTS**

1. You must be enrolled the semester or summer session in which you are advanced. Enrollment in Extended Education courses, including Graduate Studies 700, does not fulfill this requirement.
2. You must be enrolled and advanced to candidacy at least one semester prior to graduation.
3. Once you are advanced to candidacy, you must maintain continuous enrollment. Failure to meet this requirement will constitute withdrawal from the Master's program.
4. You must be enrolled in the semester or summer session in which you graduate. Students eligible to enroll in GS 700 through Extended Education are required to have an authorization slip from their department before enrolling in the course.
5. A graduation check is done based on the program that is approved by the department and school. Should you wish to amend your program, you must file a "Change of Program" form with your graduate advisor.

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

DO NOT WRITE ON THIS SIDE

### Masters Degree/Certificate Check

INCLUDES WORK THROUGH \_\_\_\_\_ including \_\_\_\_\_ units by transfer.  
(Does not include work in progress.)

Date Writing Proficiency exam was passed: \_\_\_\_\_ Date of Advancement to Candidacy: \_\_\_\_\_

According to our records, you are currently enrolled in the following courses for the \_\_\_\_\_ term:

#### THE FOLLOWING REQUIREMENTS REMAIN FOR THE DEGREE

- Library clearance from thesis reviewer
  - Clearance on oral defense of thesis
  - Clearance on Comprehensive Examination
  - Clearance on Project
  - Clearance on the foreign language requirements
  - Clearance on 699
  - Did not maintain continuous enrollment.  
*Department must initiate reinstatement.*
  - Was not enrolled when advanced to candidacy\*
  - Was not advanced one semester prior to graduation\*
- (\*Please see your major advisor regarding this matter.)

#### Grade Point Deficiencies

Major: \_\_\_\_\_ Overall: \_\_\_\_\_

#### Summary of Required Units

Required	**Transfer	CSULB	Completed	Enrolled	Required to Complete
Major					
500/600					

\*\*Transfer work may not be used towards the minimum units required for the 500/600 series.

#### Courses to be Completed:

\_\_\_\_\_

#### Transfer Work

Sem. Qtr.

School: A: \_\_\_\_\_

B: \_\_\_\_\_

Courses: \_\_\_\_\_

Official Transcript Not on File

Transfer work includes other universities, continuing education, and extension work, including CSULB Extension courses.

#### Courses Over Seven Years

CSULB: \_\_\_\_\_

Transfer Courses: \_\_\_\_\_

School: \_\_\_\_\_

#### Dates of First Units Used on Masters Program:

Transfer: \_\_\_\_\_ CSULB: \_\_\_\_\_

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.

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ Revised Dates: \_\_\_\_\_

Degree Cleared: \_\_\_\_\_