



DEPARTMENT OF PHYSICS & ASTRONOMY
UNIVERSITY of CALIFORNIA • IRVINE

GRADUATE STUDENT HANDBOOK



Academic Year 2021-2022

Department Policies, Procedures, and Guidelines

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I. WELCOME TO THE DEPARTMENT OF PHYSICS AND ASTRONOMY AT UC IRVINE.

Welcome to the University of California, Irvine! We are pleased that you have decided to join us for your graduate studies, an important stage in your academic and professional development. This is an exciting time to become a part of the Physics and Astronomy graduate program. The Department continuously tries to enhance the graduate program, and we hope that you will experience the benefits of those efforts. This handbook is designed for both new and continuing graduate students. We wish to convey the Department's philosophy of graduate education, and to provide information on how to successfully complete the program and receive your degree.

It is the responsibility of the student to know and follow the regulations and requirements for maintaining good academic standing and for making satisfactory progress towards the Ph.D. degree in Physics at UCI. The UCI General Catalogue contains all of the detailed information you need to plan your academic career here. Please obtain a copy and read it carefully. For an on-line version, go to <http://catalogue.uci.edu/>. The Graduate Advisor (Prof. Mu-Chun Chen, FRH 3127, muchunc@uci.edu) and the Graduate Affairs Officer (My Banh, FRH 4109B, mbanh@uci.edu) are here to help you in case you have any questions or difficulties in our program. Please feel free to contact them at any time during your academic career if you need help or guidance.

II. DEPARTMENTAL ADMINISTRATION

A. The Role of the Department Chair

The Department Chair is a faculty member who serves as the academic leader and administrative head of the department. Part of the Chair's job is to respond appropriately to questions, complaints, and suggestions from any member of the department, including students. The Chair will also make arrangements and assignments of duty for the counseling of students, and for the training and supervision of Teaching Assistants and other student teachers and teacher aides.

B. The Role of the Graduate Advisor

The Graduate Advisor is a faculty member in the Department of Physics and Astronomy who is the official faculty representative of the Graduate Dean in matters affecting students in the Physics and Astronomy graduate program. S/He is responsible for supervising graduate study, ensures that each graduate student is assigned an individual faculty advisor or track mentor and monitors the academic progress of graduate students. The graduate advisor plays a key role in the academic lives of graduate students, advising students and other faculty members about program requirements and the academic policies pertaining to graduate students, approving study lists, and evaluating academic petitions.

C. The Role of the Faculty Mentors

All graduate students who have not yet found a thesis advisor are assigned to a faculty mentor. The assignments are made according to areas of interest, indicated by the student. The main goal of the Faculty Mentor is to (1) improve and increase interaction between faculty and students, (2) monitor student progress, (3) notify the Graduate Advisor of any concerns or problems that need to be addressed.

D. The Role of the Thesis Advisor

Each graduate student must identify a faculty member to be his/her thesis advisor. A student's thesis advisor chairs the student's Advancement and Dissertation committees. Most importantly, thesis advisors become their students' primary source of academic and professional guidance. The thesis advisor must be a faculty from the student's academic program. The student's academic petitions must be approved by the Graduate Advisor, Professor Mu-Chun Chen.

E. The Role of the Graduate Affairs Officer

The Graduate Affairs Officer coordinates student services, advises graduate students and refers them to the appropriate faculty advisor and/or administrative office.

III. REQUIREMENTS FOR THE M.S. DEGREE

The requirements for the M.S. degree are (1) at least three quarters of residence; (2) mastery of graduate course material, which must be demonstrated by passing, with a grade of B or better, a minimum of seven quarter courses including: Physics 211, Physics 212A, Physics 213A, Physics 213B or Physics 240C, Physics 214A, Physics 215A, Physics 215B, at least two other course numbered between 200 and 259, and two other courses approved by the graduate advisor, which can include undergraduate upper-division courses in related areas, and (3) either Option A, a research project and written thesis, or, Option B, a comprehensive written examination. Students pursuing Option A typically complete three quarters of research, enrolling in Physics 295 or 296. It is suggested that students following Option B should take Physics 215B.

An M.S. by thesis will normally consist of about 12 months spent on supervised research under a thesis advisor. The student should submit a short (~1 page) written project description and schedule to the Grad Advisor for review once the research project is sufficiently well defined. The research need not lead to a publishable result, nor need it represent truly independent research. Rather, the basic idea is that the student gain substantial research experience under a faculty member's guidance, and obtain a useful result. The research must be described in a written thesis, which should demonstrate good understanding of the project and its scientific motivation and background. The thesis must be approved by a committee of three Physics and

Astronomy faculty members consisting of the thesis advisor and two more faculty members chosen by the student. While it is not a requirement, we encourage an oral presentation of the thesis, lasting approximately 30 minutes, since technical communication will be an important part of the student's future.

(The requirements for the M.S. degree with a concentration in Chemical and Materials Physics and Physics with Concentration in Astronomy & Astrophysics differ from these and are described in Section V.)

IV. REQUIREMENTS FOR THE PHD DEGREE

The principal requirements for the Ph.D. degree are a minimum of six quarters of residence, passage of a written and an oral examination, and successful completion and defense of a dissertation reporting results of original research. In addition, the Ph.D. candidate must complete certain graduate course requirements. There is no foreign language requirement.

Course Requirements:

Students are required to exhibit mastery of the basic sequences—Classical Mechanics, Electromagnetic Theory, Quantum Mechanics, Mathematical Physics, and Statistical Physics. Students who do not have a prior Master's degree (or other equivalent degree) in Physics from UCI or another institution must take a minimum of 11 quarter courses including Physics 211, Physics 212A, Physics 213A, Physics 213B or Physics 240C, Physics 214A, Physics 215A-B, at least two other courses numbered between 200 and 259, and two other courses approved by the graduate advisor, must be passed with a grade of B or better. Students are strongly encouraged to take Physics 211, Physics 212A, Physics 213A, Physics 214A, Physics 215A-B, and either Physics 213B or Physics 240C in their first year of study. It is expected that students, having selected a research specialty, will ordinarily take the core courses in that subject in their second year of study. Students pursuing research in elementary particle physics ordinarily complete Physics 234A-B-C and Physics 235A-B during their second year. Students pursuing research in plasma physics ordinarily complete Physics 239A during their first year and Physics 239B-C their second year; Physics 249 is also recommended. Students pursuing research in condensed-matter physics ordinarily take Physics 238A-B-C during their second year; Physics 133 should be taken in the first year by those students who have not had an equivalent course. Students pursuing research in astrophysics/cosmology ordinarily complete Physics 240A during Spring of their first year; Physics 240B-C in their second year; and one or more of Physics 241B-C-D in their second or subsequent years. Students interested in medical imaging should take Physics 233A-B-C in the second year. Students pursuing research in biological physics should take Physics 230A-B in the second year. Students who have earned grades B or better in equivalent graduate-level courses prior to entering UCI may be exempted from required courses by the graduate advisor. Equivalency will be determined by the instructor of each course for which an exemption is sought.

Students who have obtained a prior Master's degree (or other equivalent degree in Physics from UCI or another institution must take a minimum of 4 quarter courses including two courses numbered between 200-259 and two other courses approved by the graduate advisor. These students are strongly encouraged to take the qualifying exam in the Fall quarter of entrance.

NOTE: The requirements for the Ph.D. degree with a concentration in Chemical and Materials Physics (ChAMP) and Physics with the Concentration in Astronomy & Astrophysics differ from these and are outlined in Section V.

V. CONCENTRATION IN CHEMICAL AND MATERIALS PHYSICS (ChAMP)

This is an interdisciplinary program between condensed matter physics and physical chemistry, which is designed to eliminate the barrier between these two disciplines. Students with a B.S. in Physics, Chemistry, Applied Physics, Biological Physics, Chemical and Biomolecular Engineering, or Materials Science and Engineering, are encouraged to apply to the program. The goal of the concentration in Chemical, Applied, and Materials Physics (ChAMP) is to provide students with a broad interdisciplinary education in the applied physical sciences that emphasizes modern laboratory and computational skills. The program accepts students for both the M.S. and the Ph.D. Upon admissions to the program, students are assigned two faculty advisors, one from the Department of Physics and Astronomy, and one from the Department of Chemistry, to provide guidance on curriculum and career planning.

The curriculum for the M.S. and Ph.D. programs includes a summer session to assimilate students with different undergraduate backgrounds; formal shop, laboratory, and computational courses; a sequence on current topics to bridge the gap between fundamental principles and applied technology; and a course to develop communication skills. The required courses include 10 core courses and three electives (subject to advisor approval) as follows: **Core:** Physics 206, Physics 207, Physics 266; one course from each of the following groups: Physics 215A or Chemistry 231A; Chemistry 231B or Chemistry 231C or Chemistry 247 or Chemistry 263; Physics 214A or Chemistry 232A or Chemistry 232B; Physics 213A or Physics 228; Physics 229A or Physics 246 or Chemistry 250; Physics 273 or Physics 220 or Physics 250; Physics 133 or Physics 238A or Physics 239A. **Electives:** Physics 134A, Physics 211, Physics 215B, Physics 222, Physics 230A, Physics 230B, Physics 233A, Physics 233B, Physics 238B, Physics 238C, Physics 239B, Physics 239C, Chemistry 213, Chemistry 225, Chemistry 232C, Chemistry 233, Chemistry 243, Chemistry 248, Chemistry 249, Chemistry 267, Engineering EECS 285B, ENGRMSE 259. Electives may be chosen from other courses with the approval of the student's research advisor and ChAMP graduate advisor.

In addition to the required courses, M.S. students complete a master's thesis. Students are required to advance to candidacy for the master's degree at least one quarter prior to filing the master's thesis. There is no examination associated with this advancement, but the thesis committee needs to be selected and appropriate forms

need to be filed. The M.S. program prepares students to compete for high-tech jobs or to begin research toward a Ph.D. degree. The master's thesis requirement is waived for students who complete the requirements for the advancement to Ph.D. candidacy.

Successful completion of the M.S. degree requirements may qualify students for the Ph.D. program. Progress toward the Ph.D. degree is assessed by a written comprehensive examination that is typically administered in the summer after completion of the first year of study. This examination covers comprehensive knowledge acquired in course work, and the content of the examination depends upon the student's specific area of interest.

Participants in the Ph.D. program take an examination for formal advancement to candidacy. It is typically taken within one year of successful completion of the comprehensive examination. To satisfy normative progress toward the degree, it must be taken by the end of the student's third year. The examination is comprised of two parts: (a) a written report on a topic to be determined in consultation with the research advisor and (b) an oral report on research accomplished and plans for completion of the Ph.D. dissertation.

VI. CONCENTRATION IN ASTRONOMY AND ASTROPHYSICS

This program is focused on astronomical and astrophysical study and research. The course requirements are matched to excel in these disciplines. Students with a B.S. in Physics, Mathematics, Engineering, or other Physical Sciences are encouraged to apply to the program. The goal of the concentration in Astronomy and Astrophysics (A&A) is to provide students with a broad interdisciplinary education in the astronomical sciences that emphasizes modern computational and data analysis skills. The program accepts students for both the M.S. and the Ph.D. studies.

Requirements for M.S.

The curriculum for the M.S. program includes traditional astronomical courses; computational and data analysis courses; a research writing course to develop skills related to astronomical research and communication. The students are required to exhibit mastery of key concepts and demonstrate a clear understanding of astrophysical concepts.

The requirements for the M.S. degree are (1) at least three quarters of residence; (2) mastery of graduate course material, which must be demonstrated by passing, with a grade of B or better.

Complete the following five core courses: Physics 215A, Physics 213A, Physics 240C, Physics 242 and Physics 250 and select six courses from the following list of electives, with at least two courses from Physics 240A-Physics 241E: Physics 211, Physics 214A, Physics 215B, Physics 223, Physics 234A, Physics 234B, Physics 235A, Physics 235B, Physics 239A, Physics 240A, Physics 240B, Physics 241A, Physics 241B, Physics 241C, Physics 241D, Physics 255.

In addition, student must choose:

- Option A, a research project and written thesis, or,
- Option B, a comprehensive written examination.

Students pursuing Option A typically complete three quarters of research, enrolling in Physics 295 or 296.

Students interested in astro-particle physics, theoretical cosmology, and early universe physics are advised to take Physics 215B as the first elective during the winter quarter of first year of study. More advanced electives can be chosen in consultation with the Program Director and/or research advisor. Students interested in observational astronomy and experimental cosmology are advised to take the astronomy series beginning with either Physics 240A and Physics 241C. More advanced electives can be chosen in consultation with the Program Director and/or research advisor.

Requirements for the Ph. D

The principal requirements for the Ph.D. are a minimum of six quarter of residence, passage of a written and an oral examination, and successful completion and defense of a dissertation reporting results of original research. In addition, the Ph.D. candidate must complete certain graduate course requirements. There is no foreign language requirement.

Students who do not have a prior Master's degree (or other equivalent degree) in Physics or Astronomy from UCI or another institution must take a minimum of 11 quarter courses. The required courses include five core courses: Physics 213A, Physics 215A, Physics 240C, Physics 242, Physics 250 and six elective courses from the following, with at least two courses from Physics 240A – Physics 241E: Physics 211, Physics 214A, Physics 215B, Physics 223, Physics 234A, Physics 234B, Physics 235A, Physics 235B, Physics 239A, Physics 240A, Physics 240B, Physics 241A, Physics 241B, Physics 241C, Physics 241D, Physics 255

Three quarters of residence are required. All courses must be passed with a B or better.

Students interested in astroparticle physics, theoretical cosmology, and early universe physics are advised to take Physics 215B as the first elective during the winter quarter of the first year of study. More advanced electives can be chosen in consultation with the Program Director and research advisor. Students interested in observational astronomy and experimental cosmology are advised to take the astronomy series beginning with either Physics 240A or Physics 241C. More advanced electives can be chosen in consultation with the Program Director and research advisor.

Students who have obtained a prior Master's degree (or other equivalent degree) in Physics and/or Astronomy from UCI or another institution must take a minimum of four courses from the Concentration, including two core courses among the five

required, and two courses from the list of 16 electives with at least one from the Physics 240 and Physics 241 series. Students who have taken four or five of the core courses, or their equivalent, elsewhere in the process of earning their Master's will be required to replace them with one or two additional electives, respectively, in consultation with their research advisor.

Progress toward the Ph.D. is assessed by a comprehensive examination usually taken during the second year of studies. The comprehensive examination covers broad knowledge in astronomy and astrophysics, based on a written project of a topic in astronomy and astrophysics chosen by the Program Director in consultation with the Departmental Committee on Astrophysics Qualifying Exam, and an oral examination of the written document by a committee.

Participants in the Ph.D. program also take an examination for formal advancement to candidacy. It is typically taken within one year of successful completion of the comprehensive examination. To satisfy normative progress toward the degree, it must be taken by the end of the student's third year. The examination is an oral report on research accomplished and plans for completion of the Ph.D. dissertation.

VII. RECOMMENDED COURSE SEQUENCES FOR PH.D. DEGREE

The recommended courses for first year graduate students who are not in the ChAMP or Physics with Concentration in Astronomy & Astrophysics programs:

Recommended First Year Graduate Courses for Fall Quarter

Physics 211	Classical Mechanics (Required)
Physics 212A	Mathematical Physics (Required)
Physics 215A	Quantum Mechanics (Required)
Physics 269	Seminar in Teaching Physics (Required: in first year students expect to TA)
Physics 291	Research Seminar (Required)

Recommended First Year Graduate Courses for Winter Quarter

Physics 213A	Electromagnetic Theory (Required)
Physics 214A	Statistical Physics (Required)
Physics 215B	Quantum Mechanics (Required for Ph.D., not Masters*)
Physics 291	Research Seminar (Required)

Note that Physics 228 Electromagnetism is for ChAMP students. Regular physics students take Physics 213A and 213B beginning in the Winter quarter.

Recommended First Year Graduate Courses for Spring Quarter

Physics 213B	Electromagnetic Theory (Required) OR
Physics 240C	Radiative Processes in Astrophysics (Required)

Physics 291 Research Seminar (Required)
Elective
Elective

** If the student plans to obtain a Masters Degree by taking the Comprehensive Exam, they should take these courses.*

In the second year most Ph.D. students will take the “professional” sequence appropriate to their field of interest.

The recommended courses for first year graduate students who are in Physics with Concentration in Astronomy & Astrophysics:

Recommended First Year Graduate Courses for Fall Quarter

Physics 215A Quantum Mechanics (Required)
Physics 242 Astrophysics Fundamentals (Required)
Physics 241A Planetary (Required Elective)
Physics 269 Seminar in Teaching Physics (Required: in first year students expect to TA)
Physics 291 Research Seminar (Required)

Recommended First Year Graduate Courses for Winter Quarter

Physics 213A Electromagnetic Theory (Required)
Physics 240A Galactic Astrophysics (Required)
Physics 250 Physics & Astronomy Communication Skills (Required)
Physics 291 Research Seminar (Required)

Recommended First Year Graduate Courses for Spring Quarter

Physics 240C Radiative Processes (Required)
Physics 240B Cosmology (Required Elective)
Physics 291 Research Seminar (Required)

The recommended courses for first year graduate students who are in ChAMP Physics:

Required First Year Graduate Courses for Summer

Physics 206 Advanced Data Acquisition and Analysis (Required)
Physics 207 Applied Physical Chemistry (Required)

** Students will actually enroll and receive credit for these courses in the Fall Quarter of their entry year.*

Note that international students will need to enroll in Physics 295 (Experimental Research) during the Summer.

Recommended First Year Graduate Courses for Fall Quarter

Physics 211 Classical Mechanics **OR**
Physics 222 Continuum Mechanics

One of the two is required

Physics 215A Quantum Mechanics **OR**
Chemistry 231A Fundamentals of Quantum Mechanics

One of the three is required

Physics 229A Computational Methods **OR**
Physics 250 Computational Chemistry **OR**
Physics 246 Machine Learning & Statistics for Physicists

Physics 269 Seminar in Teaching Physics (Required: in first year students
expect to TA)
Physics 291 Research Seminar (Required)

Recommended First Year Graduate Courses for Winter Quarter

One of the four is required

Chemistry 231B Applications of Quantum Mechanics **OR**
Chemistry 247 Methods in Electron Microscopy **OR**
Chemistry 263 Materials Chemistry **OR**
Chemistry 231C Molecular Spectroscopy (Spring)

One of the two is required

Physics 213A Electromagnetic Theory **OR**
Physics 228 Electromagnetism

One of the three is required

Physics 214A Statistical Mechanics **OR**
Chemistry 232A Thermodynamics and Introduction to Statistical Methods **OR**
Chemistry 232B Advanced Topics in Statistical Mechanics (Spring)

Physics 291 Research Seminar (Required)

Recommended First Year Graduate Courses for Spring Quarter

One of the three is required

Physics 133 Introduction to Condensed Matter Physics **OR**
Physics 238A Condensed Matter Physics (Fall) **OR**
Physics 239A Plasma Physics (Fall)

Physics 266 Current Topics in Chemical and Materials Physics (Required)
Physics 291 Research Seminar (Required)

VIII. EXAMINATIONS

Comprehensive Examination:

Progress toward the degree is assessed by a written comprehensive examination covering a broad range of fundamentals of physics at the graduate and advanced undergraduate levels. It is offered twice a year (typically just before classes begin in the Fall and during the first week of the Spring quarter), and a student is allowed a maximum of three attempts. The first attempt must occur before the end of the Fall quarter of the student's second year, and the examination must be passed by the end of Spring quarter of the student's second year.

Physics and ChAMP students receiving an A/A- in the following courses will not have to take the comprehensive exam in that specific area:

- Physics students
 - Physics 211 (Classical Mechanics)
 - Physics 213A (Electromagnetic Theory)
 - Physics 214A (Statistical Physics)
 - Physics 215A and Physics 215B (Quantum Mechanics)
- ChAMP students
 - Physics 228 (Electromagnetism) **OR** Physics 213A (Electromagnetic Theory)
 - Physics 215A (Quantum Mechanics) **OR** Chemistry 231A (Fundamental Quantum Mechanics)
 - Physics 215B (Quantum Mechanics) **OR** Chemistry 231B (Applications of Quantum Mechanics) **OR** Chemistry 231C (Molecular Spectroscopy)
 - Chemistry 232A (Thermodynamics and Statistical Mechanics) **OR** Physics 214A (Statistical Physics)
 - Physics 229A (Computational Methods) **OR** Physics 246 (Machine Learning & Statistics for Physicists) **OR** Chemistry 250 (Computational Chemistry)

Comprehensive exam for students in the Physics with Concentration in Astronomy and Astrophysics program will consist of:

1. An oral examination based on a written document each student must submit by the end of Fall term of the 2nd year.
2. Students will complete a survey of research interests and potential advisors by the end of the 1st year, Winter Quarter.
3. Each student will be assigned a topic in astronomy and astrophysics by the Astro Qualifying Exam Committee at the beginning of 1st year, Spring Quarter. Each student will be assigned a topic based on the indicated research interest from the student's survey.
4. The student will conduct literature studies during 1st year Summer and 2nd year Fall. The students are expected to write a document based on their independent research, summarizing the state of knowledge on that topic. The paper is expected to be about 20 pages (double-spaced) or 6-7 pages in journal style (ApJ). Paper does not require new research work by the student. Students will be provided detailed guidelines and instructions with the

- assigned topic.
5. Students are required to submit a draft to the Exam Committee for comments by October 15th of 2nd year, Fall Quarter. The final written document is required to be submitted by January 15th of the 2nd year, Winter Quarter. The submission is a required element to schedule the oral comprehensive examination. All oral exams must be completed by the end of the 2nd year, Winter Quarter.

Advancement to Ph.D. Candidacy:

For advancement to Ph.D. candidacy, a student must pass an oral advancement examination. It is typically taken within one year of successful completion of the comprehensive examination. To satisfy normal progress toward the degree, it must be taken by the end of the student's third year. The Candidacy Committee is comprised of five faculty who are voting members of the University of California Academic Senate. The majority of the Candidacy Committee must hold either primary or joint appointments with the academic unit granting the doctoral degree. The Candidacy Committee that administers this examination will contain one or two faculty members from outside the Department. This oral examination will cover material principally related to the broad and general features of the student's dissertation area.

Dissertation:

A dissertation summarizing the results of original research performed by the student under the supervision of a doctoral committee, appointed by the Department Chair on behalf of the Dean of Graduate Studies and the Graduate Council, will be required for the Ph.D. degree. A criterion for the acceptability of a dissertation by the Department is that it be suitable for publication in a scientific journal. The dissertation must not have been submitted to any other institution prior to its submission to the UCI Physics and Astronomy Department.

Defense of Dissertation:

Upon completion of the dissertation, the student will take an oral examination, open to the public, before the doctoral committee.

Degree Conferral

Master's and doctoral degrees are conferred at the end of the academic quarter in which all requirements have been satisfied, subject to the final approval of the Graduate Council. Ordinarily, a graduate student will be registered for the quarter in which all degree requirements are completed and the degree is to be conferred. If all degree requirements (including acceptance of the dissertation or thesis by the librarian and completion of all required examinations) are completed before the first day of the regular academic quarter in which the degree is to be conferred, and the student was registered for the previous regular quarter, registration fees and enrollment are not required. Students who do not meet this second submission deadline, may be eligible to pay a Filing Fee in lieu of registration under certain circumstances. (See Section V.C.5. on Filing Fee) Unless payment of a Filing Fee or

an academic leave of absence is approved, a graduate student must register each quarter until all degree requirements are completed.

If a student does not complete the necessary courses by the end of the quarter in which degree conferral is expected, or does not attain the required level of scholarship, registration for the next regular academic session is mandatory; otherwise, student status and candidacy for the degree will lapse. Once status lapses, the degree can be conferred only after readmission of the student, followed by at least one quarter of registration and reinstatement to candidacy.

IX. REGISTRATION AND ENROLLMENT

A graduate student is expected to register for each regular academic session (fall, winter, and spring quarters) until all requirements for an advanced degree or credential have been completed, including final examinations and the submission of an approved thesis or dissertation. Registration at UCI consists of two separate steps: 1) payment of applicable student fees/tuition; and 2) enrollment in applicable units. Both steps, payment of fees and enrollment in classes, must be completed for the student to be officially registered. Registration may be accomplished online via [WebReg](#).

Registration is described at www.reg.uci.edu/enrollment/registration.html.

A. *Enrollment Process*

To register for classes, use UCI's web-based registration system WebReg (www.reg.uci.edu/registrar/soc/webreg.html). Registration through WebReg can be completed from anywhere in the world. WebReg requires access to the internet and use of a web browser.

B. *Fee Payment*

All of your billing information appears on your Zot Account, which you can access at <https://zotaccount.uci.edu/>. **It is essential that you keep track of this account.** Fee payment deadlines can be found at www.reg.uci.edu/fees/payments.html.

If you have financial support that includes fee remission, such as a fellowship or employment as a Teaching Assistant, Reader/Grader, or Research Assistant, your fees will automatically be paid when you enroll for classes through WebReg, provided that (1) you enroll for the Minimum Required Units (MRU); (2) you enroll by the fee deadline; (3) the aid posted to your Zot Bill covers the full amount of your registration fees, and (4) you have no past-due debts or holds. If you fail to meet any of these conditions, your aid will not be activated and your fees will not be paid automatically. The typical MRU needed to activate aid is 1.

If you fail to register for classes on time, you will be subject to service charges, even if the Department is paying your fees. The Department will not pay the late charges for you. You must ensure that you enroll by the corresponding deadlines. Further details on enrollment procedures are on the Registrar's website. Please read this information carefully.

C. Late Fees

There are two separate late registration service charges: one for late enrollment and one for late fee payment. Late registration will be permitted only in exceptional circumstances. See www.reg.uci.edu/fees/latecharges.html for the late charges that may apply to your situation.

Late service charges may be waived only if the University is at fault for your late registration or if you have been incapacitated throughout the registration period due to illness or injury. *Documentation will be required.*

The absolute deadline for paying fees late and/or enrolling late is the end of the third week of classes.

D. Cancellation/Withdrawal

The Cancellation/Withdrawal (C/W) form is used during the quarter when a student wishes to discontinue enrollment in a quarter for which s/he has already paid fees. If you wish to discontinue enrollment after paying fees, you **MUST** file a C/W form. Do NOT drop all of your courses. Your classes will be dropped for you automatically during the withdrawal process. Likewise, do not stop payment on the check used to pay registration fees in lieu of filing the C/W form. Please visit www.reg.uci.edu/enrollment/withdrawals/ for more information. Please see the Graduate Affairs Officer should you choose to withdraw.

E. Filing Fee

Under certain circumstances, you may be eligible to pay a "Filing Fee" if approved by your academic unit and the Dean of Graduate Division. In general, the Filing Fee option only applies to students who have completed all requirements for a Master's, Ed.D, or Ph.D. degree except for their "official" submission of a thesis or dissertation to the Special Collections University Archives, or the final formal examination (e.g., the comprehensive examination for Master's candidates). However, prior to the beginning of the "filing fee" quarter ALL other requirements for the degree must have been met by the student, including advancement to candidacy. This means, for example, that you are not eligible for Filing Fee Status if you currently have incomplete grades (NR, I) in courses that you need to fulfill your degree requirements. You may be on Filing Fee for one quarter only. While on Filing Fee, you cannot hold an academic employment position (Reader, TA, or GSR). For more information, please visit www.grad.uci.edu/forms/index.php.

F. Leave of Absence

An academic leave of absence (LOA) is intended to cover the temporary interruption of the student's academic program. The reason(s) for requesting a LOA must be consistent with University policy and guidelines, and with the guidelines of the student's academic program.

The academic LOA can be granted for up to one year (3 quarters) if, following review of the student's academic record, it is deemed consistent with the student's academic objectives and academic progress. While on a LOA, a student is not eligible for University fellowship support, University research grants, or financial aid. While on a LOA, student may not hold any academic employment position (TA, Reader, or GSR).

X. RESIDENCY REQUIREMENT

A. Domestic Out-of-State Students

University Policy states that "domestic Ph.D. students who are citizens or permanent residents of the United States may be awarded tuition fellowship support on the basis of outstanding scholarship for a **maximum of one year (three quarters)**" [Section III.B.1c.1, *UCI Graduate Advisor's Handbook 2005-2006*]. The University will not provide tuition fellowships to domestic students who are eligible for California residency. For more information regarding California residency, visit www.reg.uci.edu/residency/classification.html.

In order to avoid costly tuition charges, you are strongly advised to acquire California legal residency after your first year of study. If you choose to maintain non-California resident status, you will be responsible for your tuition payment after your first year of study.

XI. TEACHING REQUIREMENT

Experience in teaching is an integral part of the graduate program, and all students are required to serve as a Teaching Assistant (TA) for 1 quarter. The Fall quarter of the first year you plan to serve as a TA you must take Physics 269, Seminar in Teaching Physics. All TAs are required to participate in the TA Professional Development Program (TAPDP) in the first year of the program. **Failure to pass Physics 269 and failure to participate in TAPDP can jeopardize future employment as a Teaching Assistant.** Students are required to enroll in Physics 399 (University Teaching) while serving as a TA. Lab TAs are required to enroll in Physics 395 (Laboratory Teaching) as well as Physics 399.

Teaching Assistants are financially responsible for the quarterly local fees in which they are a TA:

- Associated Graduate Student Fee
- Student Center Fee

- Bren Events Center Fee
- Recreation Center Fee
- Document Fee (one-time fee, only applies to new students in the Fall quarter of the first year of the program)

Teaching Assistant Priority Appointments:

TA appointments are given preferentially to first and second year students. Second priority is given to international students who have advanced to candidacy and have not completed the 1-quarter TA requirement. Lowest priority is given to students beyond their second year who have completed the TA requirement.

XII. GUIDELINES FOR STUDENT EMPLOYMENT

A. *Teaching Assistants (TAs)*

Teaching Assistants (TAs) are full-time graduate students who are making satisfactory academic progress. Appointment as a TA in combination with other campus-wide employment may not exceed 50% time (220 hours per quarter) during any academic quarter. TAs must meet certain procedural and academic requirements. The academic requirements are enumerated in the Graduate Advisor's Handbook, as follows:

For *new and continuing* graduate students:

1. Satisfactory progress toward the degree objective. See section XII. A.
2. Enrollment in at least 12 units during the current quarter (i.e. the academic quarter in which the teaching appointment occurs).
3. **Lab TAs** are required to enroll in Physics 395 Laboratory Teaching AND at least one (1) unit of Physics 399 University Teaching.
Discussion TAs are required to enroll in at least one (1) unit of Physics 399 University Teaching.
4. International and U.S. Permanent Resident graduate student who are not citizens of countries where English is either the primary or dominant language as approved by the UCI Graduate Council must pass a campus-approved spoken English Proficiency Exam before becoming a TA. A full discussion of English proficiency options is available on Graduate Division's website at: www.grad.uci.edu/funding/employment/english-proficiency-teaching.php. The Department expects one of these tests to be passed by the end of the student's first year at UCI.

For *continuing* graduate students:

During each of the three most recent quarters of enrollment:

1. Satisfactory progress toward the degree objective. See section XII. A.
2. Completion of 8 units or more of upper division or graduate level credit courses.
3. A letter grade of B, S, or above in all courses completed.
4. No more than two incomplete (I) grades.

5. A cumulative GPA of 3.1 or higher in those courses where a letter grade (A through F) was received.
6. Meet the spoken English Proficiency requirement described above.

B. Graduate Student Researcher (GSR)

Appointment as a GSR in combination with other campus-wide employment may not exceed 50% time during any academic quarter. Between academic year sessions (quarters) and during the summer recess, appointments may not exceed 100% time.

For new and continuing graduate students:

1. Satisfactory academic progress toward the degree objective. See section XII. A.
2. Enrollment in at least 12 units during the current quarter.
3. Combined campus-wide employment of no more than 50% time (220 hours of assigned workload) or less during any academic quarter.

For continuing graduate students:

During each of the three most recent quarters of enrollment:

1. Satisfactory progress toward the degree objective. See section XII. A.
2. Completion of 8 units or more of upper division or graduate level credit courses.
3. A letter grade of B, S, or above in all courses completed.
4. No more than two incomplete (I) grades.
5. A cumulative GPA of 3.0 or higher in those courses where a letter grade (A through F) was received.

C. Reader (Grader)

Appointment as a Reader in combination with other campus-wide employment may not exceed 50% time during any academic quarter.

For new and continuing graduate students:

1. Satisfactory academic progress toward the degree objective.
2. Enrollment in at least 12 units during the current quarter.

For continuing students:

During each of the three most recent quarters of enrollment:

1. Satisfactory progress toward the degree objective. See section XII. A.
2. Completion of 8 units or more of upper division or graduate level credit courses.
3. A letter grade of B, S, or above in all courses completed.
4. No more than two incomplete (I) grades.
5. A cumulative GPA of 3.0 or higher in those courses where a letter grade (A through F) was received.

XIII. ACADEMIC STANDARD FOR GRADUATE STUDENTS

A. *Good Academic Standing / Satisfactory Progress*

Graduate students are expected to make satisfactory progress toward the M.S. and/or Ph.D. degree, as defined by the Physics and Astronomy faculty in accordance with policies of the Graduate Council, and to maintain a satisfactory grade point average (3.0 or higher) for all work undertaken while enrolled in graduate study. Satisfactory progress is determined on the basis of both the recent academic record and overall performance (i.e. research).

There are explicit requirements that are part of the definition of satisfactory progress.

1. **GPA:** the student must maintain at least a 3.0 cumulative grade point average. Students with a cumulative GPA below 3.0 for three successive quarters may be subject to academic disqualification.
2. **Normal Time to Degree:** the student must advance to candidacy and complete the degree within the limitations established by UCI's Graduate Council (March 2004). A student exceeding the maximal time to degree shall be deemed not to be making satisfactory progress toward their [sic] degree; moreover, they shall not receive University resources (e.g. financial aid, TA-ships, housing, etc.). Normal Time to Degree for each graduate program is listed in the General Catalog and in Section C below.
3. **Grade Reports:** all I, W, or NR grades should be reviewed and appropriate action taken as needed.
4. **P/NP:** no courses graded "Pass" are to be included as part of the advanced degree program, nor are they to be considered as satisfying academic criteria for University-administered fellowships and academic appointments or employment.
5. **Enrollment Units:** students must be enrolled for at least 12 graduate or upper-division units of credit each quarter, including credit for supervised teaching and research, unless part-time status or and academic leave of absence has been approved in advance by the Graduate Dean. In cases of approved part-time status, enrollment in eight (8) or fewer units of credit toward the degree is expected each quarter.
6. **Distribution of Units:** the number of upper-division and graduate-level units of credit completed toward degree requirements each quarter should be at least eight and no more than 16 units, unless an exception has been approved in advance.
7. **Residency:** time in residence prior to advancement to candidacy for the Ph.D. or professional doctorate degree should be within acceptable limits (ordinarily, no more than four years).

B. *Policy regarding Grades Below "B"*

For a graduate student, only the grades A+, A, A-, B+, B, and S represent satisfactory scholarship and may be applied toward advanced degree requirements. Graduate students may not apply courses graded Pass/Not Pass toward any degree or satisfactory progress requirements. A grade point average

below the B level (3.0 on a 4.0 scale) is not satisfactory, and a student whose grade point average is below that level is subject to academic disqualification.

C. Normal Time to Degree

In general, graduate study in the physics Ph.D. program is expected to be a full-time activity. Students may pursue the M.S. degree on either a full-time or part-time basis. Departmental approval is required for part-time status and other proposed arrangements. The Normal Time to Degree for the Physics and Physics-ChAMP program is as follows:

- Advancement for the Ph.D. = 3 years
- Ph.D. completion = 6 years
- Maximum time permitted to Ph.D. degree = 7 years

Graduate Students must advance to candidacy and complete the degree within the limitations established by UCI's Graduate Council (March 2004). A student exceeding the maximal time to degree shall be deemed not to be making satisfactory progress toward their degree; moreover, they shall not receive instructional University resources (financial aid, TA-ships, housing, etc.).

D. Departmental Commitment to Graduate Student Retention

1. **Performance Review:** In an effort to maximize scholastic achievement, student performance will be reviewed at the end of each academic quarter. Students who receive a grade of B- or lower and/or a quarter GPA below 3.0 will receive a notice from the Graduate Advisor and a reasonable period of time in which to make up all deficiencies.
2. **Friday Seminars:** During the first year of graduate study, students are required to enroll in one unit of research seminar (P291) each quarter. Seminars are held each Friday at noon and pizza is provided. Each week, students will learn about the research interests of one faculty member. Attendance is required and will result in a grade of satisfactory/unsatisfactory for each quarter.

E. Unsatisfactory Progress

A graduate student who has not demonstrated satisfactory progress is not eligible for any academic appointment/employment and may not receive fellowship support or other award that is based upon academic merit.

1. **Criteria for Determining Unsatisfactory Progress**
 - An overall grade point average below 3.0; or
 - A grade point average below 3.0 in two successive quarters; or
 - Fewer than 24 units completed and applicable toward the advanced degree requirements in the last three quarters; or
 - Failure to complete required courses or examinations satisfactorily within the period specified by the graduate program; or
 - Failure to pass a required examination in three attempts; or
 - Failure to progress academically within the Normal Time to Degree framework specified; or

- The appropriate faculty committee's evaluation that there has not been satisfactory progress toward completion of the thesis or dissertation.

Note: Unsatisfactory academic progress may be determined on the basis of explicit requirements such as those outlined above. However, the professional judgment of the faculty, upon review of all graduate work undertaken by the student, is paramount.

2. **Notice of Unsatisfactory Progress**

The Graduate Advisor will notify graduate students who have not demonstrated satisfactory progress and give them a reasonable period of time in which to make up all deficiencies. The purpose of the notice of unsatisfactory progress is to provide the student with a period of time (usually at least one academic quarter) in which to make the necessary improvement in their academic status, and successfully complete their graduate study. [Section VI.A.2.b, Graduate Advisor's Handbook 2005-06]

XIIV. INTERNATIONAL STUDENTS

A. Traveling Outside the U.S. to Obtain a New or Renewed Visa

Please be aware that the United States Homeland Security Act has complicated visa processes. It is considered particularly difficult for students from certain countries to obtain new or renewed visa stamps after a stay in the U.S. Until further notice, you are highly discouraged from leaving the country at any time during your studies if your visa has expired.

If you should decide to leave the country with an expired visa, you must meet with the Graduate Affairs Officer, My Banh, to discuss the date you must return in order to receive funding. **If you cannot arrive by the agreed date, you will not be supported on departmental or research funds for the entire quarter.** You are required to make any and all arrangements for your financial obligations including housing during your absence. **Absences beyond two quarters require approval by the Department Chair.**

XV. REQUIRED FORMS FROM GRADUATE DIVISION

Please contact the Graduate Affairs Officer, My Banh (FRH 4109B, 949-345-0528) for any academic forms such as Leave of Absence and Substitution Request.

XVI. CONTACT INFORMATION

<i>Department of Physics and Astronomy</i>	(949) 824-6911
<u>Student Affairs Officers</u>	
<i>My Banh</i>	(949) 345-0528
<i>Genessis Meza</i>	(949) 345-0502
<i>FAX</i>	(949) 824-7988

<i>Registrar's Office</i>	(949) 824-6124
<i>Graduate Division</i>	(949) 824-4611
<i>FAX</i>	(949) 824-9096
<i>Financial Aid</i>	(949) 824-8262
<i>Housing Office</i>	
<u>On-Campus</u>	(949) 824-6811
<i>Direct Line-Verano Place</i>	(949) 824-5964
<i>Direct Line-Palo Verde</i>	(949) 824-8918
<i>Direct Line- Vista Del Campo</i>	(949) 854-0900 or (949) 854-4600
<u>Off-Campus</u>	(949) 824-7247
<i>FAX</i>	(949) 824-4181

XVII. CAMPUS RESOURCES/COMMUNITY RESOURCES

<i>AVC Wellness, Health & Counseling Services</i>	(949) 824-4642
<i>Campus Assault Resources & Education (CARE)</i>	(949) 824-7273
<i>Counseling Center</i>	(949) 824-6457
<i>Dean of Students</i>	(949) 824-5590
<i>Disability Services Center</i>	(949) 824-7494
<i>Office of Ombudsman</i>	(949) 824-7256
<i>Office of Equal Opportunity & Diversity (OEOD)</i>	(949) 824-5594
<i>LGBT Resource Center</i>	(949) 824-3277
<i>Student Health Center</i>	(949) 824-5301
<i>UCI Police Department</i>	(949) 824-5223
<i>Irvine City Police Department</i>	(949) 724-7000
<i>National Suicide Prevention Hotline</i>	(800) 273-8255
<i>Hoag Memorial Hospital</i>	(949) 764-4624
<i>UC Irvine Medical Center</i>	(714) 456-7890
<i>Western Medical Center Hospital</i>	(714) 835-3555
<i>Sexual Assault Victims Services</i>	(714) 834-7991

XVIII. STATEMENT OF PROFESSIONAL CONDUCT

This handout is intended to outline the standards of professional conduct expected of graduate students in the School of Physical Sciences. Adherence to these principles of conduct -- together with good academic standing -- maintains a student's "good standing" status in the Department.

As a community, we respect the dignity, individuality, and freedom of each member. At the same time, we strive to be a place where individuals and groups learn with and from each other. We aim to foster a sense of shared experience and common purpose, along with a collective responsibility for each other's well-being, and for the well-being of the University as a whole. Although we acknowledge the difficulties inherent in creating a community of individuals who are different from each other, we remain unwavering in our commitment to both diversity and community in a context of academic excellence. We seek to enable all members of this community to pursue their educational, scholarly, and career interests in an environment that recognizes both the distinctiveness of each person's experience and the common humanity that unites us all, and permits us to take full educational advantage of the variety of talents, backgrounds, and perspectives of those who live and work here.

In all activities each graduate student is expected to be respectful of the rights and interests of the community and of the others in the community and to be personally honest. All students are expected to conduct themselves in a manner compatible with the University's function as an educational institution, and with the rights of all members of the University community to attend, make use of, and enjoy the facilities and benefits of the University without undue interruption or disruption. With their professional conduct, graduate students are expected to contribute to School climate in which all community members feel personally safe, listened to, valued, and treated fairly and with respect.

The key principles of professional conduct include:

1. *Professional Competence and Responsibility*: As scholars, we strive to maintain the highest level of competence in our work. Members of the UCI academic community are committed to engage in teaching, learning, research, and community service and to assist one another in the creation and maintenance of an environment that fosters a professional atmosphere. This includes communicating in a manner that is respectful and in no way discriminates against or harasses others, and treats the ideas, scholarship, and interests of others with respect.
2. *Integrity*: UCI is an institution of learning, research, and scholarship that is strengthened by the existence of an environment of integrity. As members of the academic community, students are responsible for maintaining this environment, and subscribe to the practice of academic integrity and accept individual responsibility for their work and actions. Violations of academic integrity are unacceptable and will not be tolerated, because they devalue the

teaching and learning experience for the entire community. Observing basic honesty in one's work, words, ideas, and actions is a principle to which all members of the community are required to subscribe.

3. *Respect for People's Rights and Dignity*: Respect for the rights, privileges, and sensibilities of each member are essential to maintain the spirit of our academic community. Actions that make the atmosphere intimidating, threatening or hostile to individuals are therefore regarded as serious offenses. Free speech and peaceful assembly are basic requirements of the University as a center of free inquiry and the search of knowledge and insight. These rights involve a concurrent obligation on the part of all members of the University, guests, and visitors to maintain on the campus an atmosphere conducive to scholarly pursuits and to respect the rights of all individuals.
4. *Respect for Diversity*: UCI seeks to promote full inclusion of all members and groups in every aspect of University life. Diversity -- on the basis of race, creed, color, sex, gender identity or expression, age, national origin, ancestry, religion, physical or mental disability, veteran status, marital or domestic partnership status, affective or sexual orientation, socio-economic background, and other protected characteristics -- is a source of strength for the School and contributes to a positive work environment. We do not tolerate any discriminatory and/or harassing behavior based on protected characteristics, and will take immediate action to end hostile environment if one has been created, prevent its recurrence, and remedy the effects of any hostile environment on affected members of campus community.
5. *Appropriate Sexual Conduct*: UCI does not tolerate sex or gender discrimination, including sexual misconduct such as sexual harassment and sexual assault, stalking, and intimate partner violence. Graduate students must undergo mandatory sexual harassment compliance training.
6. *Appropriate Use of Electronic Media*: When acting as representatives of the School or interacting on official UCI platforms, students must be responsible in their use of social media and should not violate our professional and academic standards in their social media activities.

Accountability

The School will maintain and publicize a clear structure to address complaints involving professional conduct of graduate students, staff or faculty. Allegations of improper behavior will be treated seriously and promptly. All members of the community are entitled to know what is expected of them, and to a timely, fair, and meaningful evaluation of their contributions. Proper training and orientation will be available to all members of the community.

Observance of University Policies

No set of rules can possibly address all situations that may arise. The School reserves the right to find that other conduct not specified in this Code or UCI policies constitutes a violation of good academic or professional standing. If situations arise that seem ambiguous, please consult with departmental graduate advisors, chairs, the Graduate Office, or the Associate Dean.

The UCI Student Code of Conduct defines behavior expected of all UCI students. It is each student's responsibility to know and comply with the University's Student Code of Conduct. In addition, the violation of the laws of any jurisdiction, whether local, state, federal, or foreign, may subject an individual to disciplinary action.

Certification:

I, _____, have read and understood the
[print name]

UC Irvine School of Physical Sciences Statement of Professional Conduct handout.

[signature]

[date]