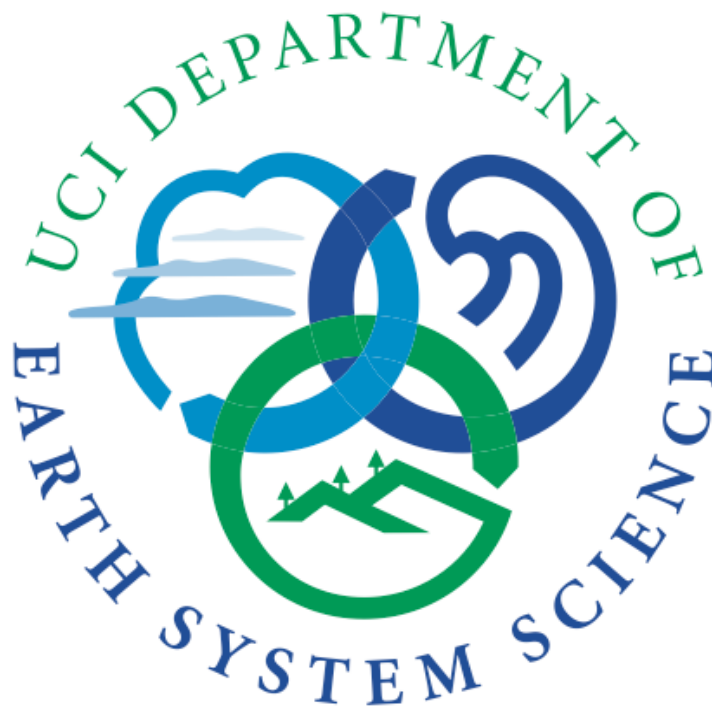


Graduate Student Handbook

Fall, 2017



UCIrvine
SCHOOL OF PHYSICAL SCIENCES
*Department of
Earth System Science*

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The Department of Earth System Science Mission Statement

To contribute through research and teaching to a fundamental scientific understanding of the Earth as a coupled system, to train the next generation of Earth scientists, and to inform and educate policy makers and the public-at-large.

We envision a society that understands the impact of human activities on the global environment and the interactions within the Earth system that preserve the habitability of the planet.

Goals of the Department of Earth System Science

Our goals are to educate and contribute, through teaching and research, to a fundamental scientific understanding of the Earth system.

The Earth as a coupled system of atmosphere, ocean, land and cryosphere has changed in our lifetimes. The observed depletion of stratospheric ozone at high latitudes has been attributed directly to industrial use of halocarbons. Global warming is likely to result from increases in the atmospheric concentrations of greenhouse gases, such as carbon dioxide and methane, which are released by use of fossil fuel and agricultural practices. These examples illustrate the ability of humans to alter the global environment on the time-scale of decades. Understanding the sensitivity of the Earth's climate system requires a broad base of scientific knowledge which includes detection, quantification, and prediction of the rates of change of chemical, physical and biological variables in the atmosphere, ocean, cryosphere and terrestrial biosphere.

Our research interests focus attention on the atmosphere, ocean, cryosphere and terrestrial biosphere and on processes with the potential to change these systems over a human lifetime. An integrated approach is needed and our program requires a balance of field, laboratory and theoretical studies. Field and laboratory measurements define the rates and mechanisms of processes and exchanges within and between the atmosphere, ocean, cryosphere and terrestrial biosphere. They also provide information on the controls and feedbacks influencing these exchanges and permit identification of natural and anthropogenic processes. Long-term observations of the Earth system, along with historical data sets and paleoclimate records, provide baseline data against which trends may be defined. The parallel development of predictive numerical models incorporating these processes is needed to interpret observations and to assess changes on regional and global scales.

The department's doctoral and post-doctoral programs are aimed at training new research scientists in the field of Earth System Science. Our goal in graduate education is to develop a comprehensive curriculum and to conduct outstanding research involving graduate students. Our doctoral-level students are expected to become researchers with a global perspective and broad research skills as well as a high level of expertise in specific areas.

Our undergraduate education program is aimed at preparing citizens who are capable of making informed environmental decisions. Graduate students make an important contribution to the ESS undergraduate program by serving as teaching assistants. The undergraduate curriculum includes courses for scientists and non-scientists alike and emphasizes an understanding of the basic science involved in global change of the Earth's atmosphere, oceans, cryosphere and terrestrial biosphere.



Members of the department participate in review and assessment panels as well as in public forums so as to provide expert advice and evaluation regarding the scientific bases for global environmental policy at the state, national and international levels. The department is committed to recruiting and maintaining an internationally recognized faculty at both junior and senior levels with broad interests and experience, committed to collaborative, interdisciplinary research and education.

Our success should be judged by the quality of our students, by our contributions to interdisciplinary research and education on the Irvine Campus, and by widespread recognition as a lively intellectual center attractive to the best students, postdoctoral researchers, and faculty.

Program Learning Outcomes (PLOs) for PhD in Earth System Science

Core Knowledge:

- Understand how basic sciences (physics, chemistry, mathematics, and biology) relate to the major processes and systems governing Earth's climate, biogeochemical cycles, and global change.
- Explain the current and projected future state of the Earth system in the context of past climate change and current human activities.
- Acquire a multidisciplinary vocabulary sufficient to understand the scientific literature relevant to Earth system science.

Research Methods and Analysis:

- Understand the methods used to collect and analyze or simulate environmental data, and to interpret results in the context of underlying theory.
- Acquire sufficient specialized knowledge to conduct independent research.

Pedagogy:

- Use pedagogical practices in discussions, lesson plans, and/or lectures to lead a group to improved understanding of scientific material

Scholarly Communication:

- Effectively communicate scientific knowledge in talks, posters, and manuscripts.

Professionalism:

- Work collaboratively to understand and address complex problems related to the Earth system.

Independent Research:

- Design and conduct original high quality research.



Preface

This booklet is intended as a guide for beginning graduate students in Earth System Science. It provides information on questions that will be important for a new arrival, outlines department procedures and policies, and gives requirements for the Ph.D. degree in Earth System Science. It is neither an exhaustive compilation nor an official statement of requirements. The UCI General Catalogue should also be consulted. This handbook is updated annually and is published on the ESS website.

Introduction to the Department

UCI Earth System Science is a relatively young department. It originated in 1986 as an initiative by School of Physical Sciences faculty, who proposed formation of an interdisciplinary graduate level program in geosciences, with an emphasis on global environmental change. The founding chair, Ralph Cicerone, joined the faculty in 1989 and by 1993 recruited 5 additional faculty with interests in global environmental change and specializing in atmospheric chemistry and biogeochemistry. The initial ESS faculty developed goals and an initial curriculum, and began offering courses during the 1993-94 academic year. Graduate students who joined the Earth System Science program prior to 1995 were primarily enrolled in the Department of Chemistry. Laboratories were built, and a wide range of research began. The name of the program was changed to Earth System Science to better describe our emphasis. A proposal to offer Ph.D. degrees was submitted in March 1994, was approved by the System-wide Faculty Senate in February 1995, and received final approval by the Office of the President in June 1995. The UCI Faculty Senate approved a proposal requesting a change from Program to Department Status in June 1995.

Getting Started

Department Location

The Department Office is located in Croul Hall 3200.

Parking

All vehicles must display a valid UCI parking permit when parked on campus or used metered spaces. The Parking and Transportation Services Office is located in the Public Services Building. The Sustainable Transportation Program provides those who do not drive regularly a limited amount for free permits each year. Information can be found at: <http://www.parking.uci.edu/AT/>

Housing

UCI has guaranteed graduate housing for incoming students. For more information, or to apply, please see <http://www.housing.uci.edu/>

Graduate Student Work Space

ESS places a high priority on providing individual work space for all graduate students. Students are assigned space based on availability, taking research groups in to consideration. Every effort is made to make graduate student desk space habitable and quiet.

Teaching Assistant Office Hour Space

Croul Hall 3103 can be reserved for TA office hours. A sign-up sheet will be posted on the door at the beginning of each quarter.



Keys

ESS graduate students are supplied with necessary keys to offices and a card key for after-hours entrance into the building once required safety training is completed. There is a \$20 refundable deposit for each key. The key request can be found in your welcome packet.

Mail

Campus and U.S. mail for students is deposited in mailboxes located in CH 3200. The Department address is: Department of Earth System Science, University of California, Irvine, CA 92697-3100. The ESS ZOT CODE, which expedites delivery, is 3100. Mail services is for business purposes only.

Telephones, Fax machines, Internet Service

Telephones, fax machines, and internet service are to be used for department and research business only. For on-campus calls, dial 4 and the extension. To call off-campus, dial 9, then the number.

Copy Machines

A copy machine is located in Croul Hall 3200A. First year students are given a small budget for photocopying, you will be given a copy code to use the copy machine in 3200A and at the copy center in Reines Hall B003. Beyond the first year, copying should be covered by research projects. Copy services are for business purposes only.

University Travel

The ESS department follows UC Office of the President travel policies. These policies can be found on the ESS internal website: <https://www.ess.uci.edu/internalESS/travel>. Please familiarize yourself with these policies. You are highly encouraged to contact the ESS travel coordinator (travel@ess.uci.edu) prior to making travel arrangements. The travel coordinator will ensure your travel expenses are in compliance with UC travel policies and are reimbursable.

Library

The Ayala Science Library was dedicated and occupied in 1994. Mitchell Brown is the Research Librarian responsible for ESS holdings, and can help with a variety of library needs. Student ID cards may be activated at the library for check-out privileges. ANTPAC, a public access catalog, provides information on UCI library materials. Libraries at Scripps Institution of Oceanography (UCSD) and UCLA are also accessible. The Department has a small lending library as well as a collection of journals that can be made available upon request.

Funding

We are committed to funding students who are in good academic standing. There are three mechanisms for funding: department fellowships, research assistantships, and teaching assistantships. Most students are initially funded by department fellowship. Taxes are not deducted from fellowships, although they are considered taxable for reporting purposes.

Research Assistants (GSR or Graduate Student Researchers) are paid by faculty member's research grants and are considered regular UCI employees; this is the typical funding mechanism while you work on your dissertation research. Students are also required to gain teaching experience by serving as teaching



assistants (TA). GSR and TA funding is considered payroll. Taxes are withheld from payroll according to how you fill out your employment paperwork. Please consult a tax professional if you have questions regarding tax withholding or liability. Appendix I includes the typical graduate student payment schedule.

University payroll is payable on the first of each month following the month worked. We try to align fellowship payments with the payroll system to make a smooth transition between the two systems. Unfortunately, we cannot completely control the dates payments are made, especially of fellowship payments. We encourage you to ask any questions about funding that you may have.

Due to the two payment systems (university payroll and the fellowship system) you will need to sign up for direct deposit for both systems. Please see the links below.

[University payroll](#) (Click for link)

Fellowship system: <https://zotaccount.uci.edu/>

Helpful Links:

Fellowship opportunities: <http://www.grad.uci.edu/funding/index.html>

ESS graduate student opportunities: <http://www.ess.uci.edu/grad/opps>

Payroll information (including employment verification and paystubs):

<https://atyourserviceonline.ucop.edu/ayso/>

ZotPortal (including direct deposit for payroll): <https://portal.uci.edu/>

Tax information: <http://www.grad.uci.edu/funding/tax-info/index.html>

California Residency

Earth System Science covers non-resident fees for the first year. Graduate students who are U.S. citizens are expected to establish California residency so they will not be liable for non-resident tuition in succeeding years. Foreign students are generally not eligible to establish residency. Obtain a Petition for Resident Classification from the office of the Registrar and file it shortly after you arrive. The following items are useful in demonstrating residence: Employment verification showing date employment started, California Driver's License, California automobile registration, California voter card, California income tax return, bank statements, utility bills, and rent receipts, especially for summer months. Please be sure to update your permanent address to your home address right away. For further information and the petition to file for residency please see https://www.reg.uci.edu/residency/downloads/reclass_grad.pdf

Student Health Insurance Plan

The University of California requires all students to have major medical health insurance as a non-academic condition of enrollment. The department is charged quarterly for the Student Health Insurance Plan (SHIP). If you are covered under another policy please submit an online request to waive out of SHIP. The waiver can be found here: http://www.shs.uci.edu/health_insurance_privacy/insurance.aspx

Restricted Areas

Radiocarbon Laboratories

Research conducted in many Croul Hall laboratories involves the detection of natural levels of radiocarbon (¹⁴C) and tritium (³H). To minimize laboratory contamination which could possibly affect samples and compromise data quality, it is necessary to restrict access to these laboratories and associated equipment. Sample collection counting procedures are often separated by months, so



occurrence and later discovery of a contamination event has the potential to compromise large amounts of data.

Rowland Hall 239

RH 239 is the ESS laboratory designated for work with radioactive tracers. Work with radioactive tracers requires training and authorization by the UCI Environmental Health and Safety Office. *Under no circumstances should glassware, apparatus, or samples from this laboratory be transferred to Croul Hall laboratories.* Questions involving transfer of potentially radioactive samples or equipment from other campus buildings should be directed to Professor Druffel.

Room Reservations

The Department Conference rooms in Croul Hall are for faculty and staff meetings, seminars, and for use as reading areas. No food, clutter, or use for extended periods is permitted. Conference rooms may be scheduled as needed. Please see <https://www.ess.uci.edu/internalESS/roomreservation> for availability and to submit a room reservation request. If you have any questions about your reservation please contact scheduling@ess.uci.edu

Academic Matters

Deadlines and Requirements

Each graduate student is responsible for meeting all necessary deadlines and requirements. The best sources of information are the UCI General Catalogue (<http://catalogue.uci.edu/>), Graduate Division, (<http://www.grad.uci.edu/>) and the Registrar (<http://www.reg.uci.edu/>).

Research Advisor

Each entering graduate student will be assigned a provisional advisor. The provisional advisor is assigned based on the student's interests and communications with faculty during the application processes. The provisional advisor may ultimately become the principal advisor (see below), but until a principal advisor is identified we encourage you to change provisional advisors as necessary to explore new opportunities, colleagues, and areas of research. First-year graduate students should consult with their provisional advisor for any matters relating to their course of study or research goals.

By the end of the spring quarter in the first year each student needs to have their principal advisor identified and to be working with that advisor to identify a possible summer research project.

Graduate Advisor

The duties of the Graduate Advisor are to supervise the activities of student advisory committees, review graduate study plans, and monitor the progress of all graduate students. The Graduate Advisor is also responsible for coordinating student awards, assigning teaching assistantships, overseeing curriculum revisions and organizing the comprehensive examination. Students should feel free to speak with the Graduate Advisor at any time about any issue, especially those relevant to their academic and research progress.

Addressing Concerns

Normally, a graduate student's principal advisor or thesis committee will attempt to solve problems. Problems involving department policies should be addressed to the Graduate Advisor or Chair. In the



case of more serious problems, the Dean of Physical Sciences and other university officials may become involved, but only after attempts at solving the problem within the Department are exhausted. Students are also welcome and encouraged to bring concerns or issues to the attention of any department staff member who can guide them on the proper course for resolution.

Maintaining Good Academic Standing

Students who are not in “good standing” as defined in Appendix II will be provided a warning letter which outlines the reasons for unsatisfactory progress. An opportunity to correct deficiencies and a specified deadline time will be given.

Academic Honesty

The importance of academic integrity cannot be overstated. It is never acceptable to present someone else’s work or research as your own. Students are expected to, at all times, adhere to *The UCI Academic Senate Policies on Academic Honesty* which are included in this packet as Appendix VI. Occurrences of academic dishonesty will be dealt with on a case-by-case basis and may result in dismissal from the ESS graduate program.

Ph.D. Degree Requirements

Residence Requirement

Academic Senate regulations specify a minimum period of residence of six quarters for Ph.D. candidates. The normative time to degree in ESS is 5 years, therefore all Ph.D. requirements should be completed within fifteen quarters in residence, excluding summer quarters. Exceptions must be put to a vote of the ESS faculty.

Language Skills

There is no formal foreign language requirement. However, since journals and research results in most aspects of Earth System Science are in English you are expected to be proficient in English. In some cases another foreign language or research tool may be applicable, individual cases are determined by the student’s Advisory Committee.

English Exam

Students whose first language is not English are required to pass a qualifying English exam to be employed as a teaching assistant. In preparation of this exam, students are required to enroll in ESL courses that are offered at UCI. **Students who have not passed the English exam must take English classes and at least one exam every quarter to remain in good academic standing.** Details regarding English exams can be found at: <https://web.due.uci.edu/testing/op/>.

Teaching Requirement

Students are required to complete a teaching assistant training program and to serve as a teaching assistant. Students serving as a “TA” should enroll in four units of University Teaching each quarter they are a TA.

Seminar Requirement

All students are expected to participate in the Department Seminar (ESS 290).



Course Requirements

A minimum of 10 approved graduate-level courses, including the course core curriculum, must be completed with a grade of B or better. Courses completed with less than a “B” (e.g., B-minus or C-plus) are not considered satisfactory, and therefore, may not be counted towards degree requirements. All courses must be approved by the student’s provisional or principal advisor.

Enrollment in a minimum of 12 units of graduate/upper division coursework per quarter is required. After the first year, students may take up to 12 units of ESS 299, Research, or a combination of other courses and Research credit. Course loads in excess of sixteen units per quarter require advance approval by the advisory committee and the Dean of Graduate Studies.

Registration in every regular academic session is necessary until all requirements for the degree have been completed, unless a formal Leave of Absence is granted by the Office of Graduate Studies.

Credit for no more than one fifth of the minimum number of courses required for the Ph.D. may be given for graduate-level work satisfactorily completed at another institution or through University Extension prior to first graduate enrollment at UCI. Transfer of credit occurs after formal petition only, and must be approved by the Advisory Committee and the Dean of Graduate Studies. Grade credit is not transferred.

Courses offered by the Program in Earth System Science are described fully in the General Catalog. The ESS core courses are:

Fall	Winter	Spring
ESS 200 Global Phys Climate	ESS 224 Ocean Processes	ESS 202 Climate Change
ESS 212 Geoscience Modeling and Data Analysis	ESS 226 Land Surface Processes	ESS 266 Global Biogeochemical Cycles
ESS 240 Atmospheric Chemistry and Physics	ESS 228 Geophysical Fluid Dynamics	ESS 298 Practicum in Earth System Science

Additional requirements, but not counted as part of the 10 courses:

- ESS 290 A-B-C Seminar in Earth System Science
- ESS 299 A-B-C Research in Earth System Science

Elective courses to complete or exceed the 10 course requirement should include graduate level and upper division undergraduate courses from other programs. ESS maintains a strong interdisciplinary focus, and we encourage students to select from a range of courses offered in the Departments of Chemistry, Physics, Mathematics, Ecology and Evolutionary Biology, Mechanical Engineering, and Civil Engineering. Approval of the student’s advisor is required.

Second Year students are expected to enroll in a combination of Special Topics Courses (ESS 282A-B-C and ESS 286A-B-C); ESS 299, Research; and ESS 399, University Teaching (when serving as a teaching assistant) to create a full course load of 12 units.



ESS Comprehensive Examination

A department-wide Comprehensive Examination for all eligible first-year students administered by the Earth System Science faculty is given in June each year. This examination determines the readiness of the student to continue the Ph.D. program in Earth System Science. The Comprehensive Examination is given in a written format and will emphasize breadth, general knowledge, and the ability to integrate the material covered in the core curriculum.

The written exam is offered approximately 10 days after the end of finals. The format for the written exam is typically six questions given in two three hour blocks, with a break for lunch. Students are given the opportunity to keep copies of their exams and are able to use calculators. Students who do not pass the written exam are given the option to retake the exam by oral examination, which provides an opportunity to clarify questions that arise from the student's performance on the written examination. The oral exam is usually offered several days after the written exam.

The Comprehensive Examination is designed to test each student's ability to solve problems on their own. During the (multiple day) interval between the commencement of the written examination and the completion of all oral examinations, students are not permitted to collaborate or confer with each other about the contents of either exam. During this interval students must not ask for, give, receive or exchange resources or information regarding the written or oral exams with anyone, in any form.

The 2018 ESS Comprehensive Exam schedule is:
Written Comprehensive Exam: Monday, June 25th
Oral Comprehensive Exam: Thursday, June 28th

Advancement to Candidacy Examination

The student must form a five-member faculty committee selected according to Academic Senate Policy included here as Appendix III and found on the UCI Academic Senate website. When forming your committee, keep in mind that one of the faculty members must be an external member (i.e., UCI faculty without formal affiliation with Earth System Science). Students should advance to candidacy by winter or spring quarter of their second year in the program.

A unanimous vote of the committee is required to pass the examination. A student who does not pass the candidacy examination shall have the option of a second examination. A student whose performance on the second attempt is also unsatisfactory, or who does not undertake a second examination within a reasonable period of time, is subject to disqualification from the Ph.D. program. The question of whether to recommend disqualification to the Dean of Graduate Studies will be decided by a majority vote of the ESS faculty. A third examination may be given only with the approval of the faculty and the Dean of Graduate Studies.

The Candidacy Committee Chair will convey the results of the Candidacy Examination and the Composition of the Doctoral Committee to the Graduate Advisor for recording and transmittal to the Office of Graduate Studies.

Following successful completion of the candidacy examination, a three member Doctoral Committee to supervise and approve the Ph.D. Dissertation will be nominated by the graduate student with the



principal advisor's approval and forwarded to the Dean of Graduate Studies for appointment. The chair of the Doctoral Committee is the student's principal advisor.

Graduate Annual Committee review process

Students are required to convene their committees annually wherein the student's progress is discussed and the Annual Committee Report form (see Appendix IV) is completed jointly. Written faculty feedback is given to the student and progress is either deemed satisfactory, unsatisfactory, or specific concerns are outlined.

Students entering their second year should form their dissertation committee before the end of the fall quarter and call a committee meeting by that time. Only ESS committee members are required to attend the first meeting. The purpose of the first meeting is to make sure the students get input from the committee before they prepare for their advancement exam by the end of the 2nd year.

Dissertation

A dissertation based on original research and demonstrating critical judgment, intellectual synthesis, creativity and skill in written communication is required for the Ph.D. degree. The student's Dissertation Committee will work closely with the student during dissertation research and preparation, and must be unanimous in approval of the final dissertation. The dissertation must summarize the results of original research performed by the student under the supervision of a faculty member of the ESS program. The criterion of acceptability of a dissertation is that its contents be judged by the committee as suitable for publication in a peer-reviewed scientific journal of high editorial standards. The dissertation may be a compilation of published papers or manuscripts accepted for publication, so long as a major proportion of the material has been produced independently by the candidate, the format and content are approved by the Dissertation Committee, and University requirements for style, format, and appearance are met.

Final Examination (Defense of Dissertation)

The text of the Ph.D. dissertation must be submitted to the Doctoral Committee for its review at least two weeks in advance of the scheduled Final Examination date.

When the committee judges the dissertation to be acceptable, the student will present his or her dissertation research in a one-hour public seminar. We will attempt to involve an outside examiner or reader in the final examination. Following this seminar, the Doctoral Committee will examine the student on the contents of the dissertation. A unanimous vote of the committee is required for approval of the dissertation.

The results of the Doctoral Committee's scrutiny of the dissertation will be conveyed by the committee chair to the Student Affairs Manager for transmittal to the Office of Graduate Studies.



Typical Timetable for the ESS Ph.D Degree

Year 1

- Provisional advisor assigned upon entering the program
- Completion of core courses and three quarters of residence
- Principal Advisor in place by the end of the spring quarter
- Research identified, proposed and presented in ESS practicum
- Completion of ESS Comprehensive Exam, with recommendation to continue for the Ph.D.
- Summer research based on practicum proposal, following comprehensive exam.
- International students are expected to pass English exam.

Year 2

- Appointment of Advancement Committee
- Serve as teaching assistant
- Complete Advancement to Candidacy Examination with recommendation for advancement as Ph.D. candidate

Years 3 through 5

- Serve as teaching assistant
- Dissertation research and writing
- Submission of an acceptable doctoral dissertation
- Dissertation defense



Appendix I: Graduate Student Payment Schedule

ESS Graduate Student Funding

Listed below is the standard UCI Department of Earth System Science graduate student salary and payment schedule. Please note the each individual situation is different and there are some administrative constraints that we must work within. It is the student's responsibility to report any variation in payment (other than slight adjustments in pay day or net income due to withholding). While we make every effort to adhere to this schedule, mistakes do happen. We encourage you to confirm receipt of funds before spending and bring any inconsistencies to the attention of department staff immediately, students will be held responsible in cases of payment overages.

2017-2018 Annual rate for Earth System Science graduate students: \$31,906

Pay date (approximate)	Pay period	Amount	Comments
10/1	September	\$2,279.00	Incoming students receive moving allowance
11/1	October	\$2,279.00	First stipend payment for incoming students
12/1	November	\$2,279.00	
1/1	December	\$2,279.00	
2/1	January	\$2,279.00	
3/1	February	\$2,279.00	
4/1	March	\$2,279.00	
5/1	April	\$2,279.00	
6/1	May	\$2,279.00	
7/1	June	\$2,279.00	
8/1	July	\$4,558.00	
9/1	August	\$4,558.00	

Notes:

*UC Policy states that students can only hold 50% appointments during the academic year (Sept-June); the department pays 100% time for July-August in order to increase the student's annual salary to a rate competitive with other institutions.

*The "moving allowance" is a way to get students some funding to assist them until they receive their first stipend check.

*Payments are set up to pay at the end of each month, however the fellowship system often pays early.

*Students are paid via payroll for graduate student researcher and teaching assistant appointments; via the fellowship system when other funding is used. The payment mechanism is determined by source of funding.

* Payroll deductions are determined by the student's W-4, filled out at time of initial appointment. The fellowship system does not withhold deductions, however the income may be taxable. It is the student's responsibility to determine any tax liability.

*Teaching Assistant salaries are determined by union contract. In the event that the TA rate is lower than the department's standard rate students will be issued a one-time payment per quarter to cover the shortfall.

*Rate increases are determined by the UC Office of the President and approved by the UC Regents.

*Students are encouraged to seek extramural funding. Students will receive either the amount of their extramural funding or the department standard rate, whichever is greater. Unless the funding specifically states otherwise, students are not entitled to receive both awards.



Appendix II: Department of Earth System Science "Good Academic Standing" criteria

In addition to UCI polices as outlined in the UCI General Catalogue, the following constitutes "good standing" for ESS graduate students:

Core Curriculum

Complete the Ph.D. core curriculum with a grade of "B" or better in each course.

Research and University Teaching

Complete ESS 299: Research (must receive grade of "B" or better) quarterly and ESS 399: University Teaching (must receive an "S"/satisfactory grade) while serving as a Teaching Assistant.

English Proficiency

International students must meet the TA English proficiency requirements by year two, end of summer. Students who have not passed the TA English proficiency requirements must enroll in an English course each quarter and register for an English exam each quarter, including summer.

Statement of Professional Conduct

Abide by the UC Irvine Department of Earth System Science Statement of Professional Conduct, see Appendix V.

UCI Required Training

Complete all required training as assigned by campus, Department or adviser.

Annual Committee Report

Complete an Annual Committee Report documenting satisfactory academic progress as determined by the student's advancement/doctoral committee each spring quarter after their first year.

If a student fails to meet the criteria for "good standing" he or she will be given a written warning addressing any issues and steps to remediation, typically expected within the next quarter. If a documented issue persists for two consecutive quarters a student can be referred to Graduate Division for dismissal.



Appendix III: Academic Senate Policy

THE MANUAL OF THE IRVINE DIVISION OF THE ACADEMIC SENATE PART II - REGULATIONS OF THE IRVINE DIVISION Chapter IV: Doctor of Philosophy Degree Requirements Regulation 918. Candidacy Committee. (Am 1 October 1998 RA) (Am 11 May 2000 DSA) (Am 18 Mar 2010 DSA)

Membership

The Candidacy Committee is comprised of five faculty who are voting members of the University of California Academic Senate or by equivalent scholarly standing, by exception. Non-voting Senate members; faculty members from other universities; or non-Senate faculty with equivalent scholarly standing will be considered for general membership on the committee on an exception basis only. Candidacy committee members need not necessarily be from the Irvine Division -- but a majority and not all must hold primary or joint appointments in the student's department. If the student is not affiliated with an individual department, a majority of the committee must hold either primary or joint appointments with the academic unit granting the doctoral degree. The following additional criteria apply to the membership of the committee.

The Chair

The Chair of the Candidacy Committee must hold either a primary or joint appointment in the student's department (or academic unit¹) and must be a voting member of the UC Academic Senate. No exceptions to these requirements will be considered. [Please see Footnote 1 for "Definitions of Academic Unit".]

General Membership

At least two members in addition to the Chair must hold either a primary or joint appointment in the student's department or academic unit. No exceptions to the requirement that a majority of voting members hold appointments in the student's department or academic unit will be considered. Non-voting Senate members; faculty members from other universities; or non-senate faculty with equivalent scholarly standing will be considered for general membership on the committee on an exception only basis.

The Outside Member

One member of the Candidacy Committee, designated the "outside member", must be from the Irvine Division and may not hold either a primary or joint appointment in the student's department or academic unit. The outside member represents the faculty at large. The role of the "outside member" is to serve as an unbiased and independent judge of both the quality and fairness of the exam. It is therefore desirable that this individual be familiar with the student's research field. No exceptions to these requirements will be considered.

The Oversight Member

If the Chair, Research/Thesis advisor or other member of the committee has a financial interest in an outside entity that carries a possibility of a conflict of interest potentially harmful to the graduate student, an oversight member must be appointed in addition to the three general members. It is



understood that the Oversight Member shall not bear a possible conflict of interest potentially harmful to the graduate student in the discharge of his or her role as Oversight Member.*

Role of the Oversight Member:

The Oversight Member shall participate on all student research advisory and/or thesis committees. An additional role of the Oversight Member is to be fully cognizant of the issues related to the possible conflict of interest and its potential impact on the student, and to be fully cognizant of the UCI resources available should a conflict of interest problem arise. If there do not appear to be any harmful results from COI, the Oversight Member shall sign a statement to that effect after each committee meeting and the statement shall be placed in the student's file as well as forwarded to the Dean of Graduate Studies. If the Oversight Member perceives that there is a problem arising from COI issues, then he/she shall not sign off on the committee deliberation, but shall instead inform the Dean of Graduate Division in writing.*

Appointment Procedures

The qualifications of all committee members must be evaluated and approved by the academic unit Chair or designee. When the membership of the proposed committee conforms to Senate policy as defined in this regulation, the Dean of Graduate Division, on behalf of the Graduate Council, may delegate to the academic unit the authority to appoint, evaluate and approve the committee. When the proposed membership deviates from this policy, as in the case of non-voting Senate members; faculty members from other universities, non-Senate faculty with equivalent scholarly standing, or when appointment of an Oversight Member is perceived to be necessary, a request for an exception or nomination must be submitted in writing to the Dean of Graduate Division (see below).

- Non-voting Senate members, faculty holding professorial titles at other Universities or non-Senate faculty with equivalent scholarly standing will be considered on an exception-only basis. The Dean of Graduate Division retains sole authority to grant these exceptions, which must be submitted in writing by the Chair of the academic unit at least two weeks prior to the scheduled exam, and must be accompanied by a curriculum vitae of the individual for whom the exception is being requested. A list of the faculty holding primary or joint appointments with the student's department or academic unit¹ may be required by the Dean of Graduate Division.
- Oversight Member: The Dean of Graduate Division shall select the Oversight Member from a list of three nominees agreed upon by the student, the faculty research advisor and the departmental representative. If no agreement can be reached on three nominees, the departmental representative -- either the graduate advisor or the chair if the advisor is conflicted -- will select the nominations. The request for appointment of an Oversight Member must be submitted in writing to the Dean of Graduate Division no less than two weeks prior to the date of the exam to allow a reasonable time for review. This request will also include background information describing the circumstances of the possible conflict. The Dean of Graduate Division will retain sole authority to appoint the Oversight Member. No exceptions to this requirement will be considered.*



It is the responsibility of the Chair of the academic unit, the Departmental Faculty Advisor/ Mentor or Associate Dean for Graduate Affairs as appropriate, and the Chair of the Candidacy Committee: 1) to inform the student regarding the policy on Candidacy Committees -- including full disclosure of issues pertaining to the possibility of a conflict of interest that is potentially harmful to graduate students; 2) to provide graduate students with a policy statement on such possible conflict of interest prior to the student designating a research topic, forming a graduate committee, or being employed as a research or teaching assistant, whichever comes first; and 3) to ensure that these Academic Senate policies are followed.* Should these Senate policies not be followed the student will be required to retake the Qualifying Exam.

* **Note:** Areas of assigned responsibility are further defined in the UCI Academic Senate policy statement dated March 2, 2000 and entitled "Proposed Policy and Procedures for Implementation of Academic Senate Policy on Conflict of Interest and Graduate Education. (See Appendix XII.)

¹Definitions of Academic Unit (CC and EC 18 Jan 05)

In cases where multicampus programs are involved, the same definitions will apply across all campuses relevant to the program.

Last revision - March 18, 2010



ANNUAL COMMITTEE REPORT

Academic Year	Year in Program	Date
---------------	-----------------	------

Name	
NTTA (Normative Time to Advance)	2 years
NTTD (Normative Time to Degree)	5 years
Faculty Advisor	
Committee Members	
Additional Graduate Level Elective	Title of Course: Quarter Completed:

Instructions: The student should complete the Annual Committee Report in preparation for a scheduled meeting with his/her advancement or dissertation committee. The report is designed to foster communication in a variety of areas to ensure the student is receiving comprehensive feedback about both his/her progress to date and future expectations. Accomplishments, challenges and goals should be addressed as well as any performance/progress issues so that both the student and the mentor/advisor have a clear understanding of the student's progress toward degree.

ACADEMIC COURSE PLANNING
In order to fulfill my academic goals and maintain NTTD progress, I plan to enroll in these courses: Annual Goals:
 Long Term Plans:
----- Mentor/Advisor Comments:



RESEARCH/ DISSERTATION PLANNING

I will make progress on my research agenda through the following: (include collaborations, research theories that you've developed, and studies/projects that you've been involved with)

Annual Goals:

Long Term Plans:

Mentor/Advisor Comments:

CONFERENCE/PUBLICATIONS PLANNING

I plan to attend the following conferences and submit the following professional papers: (include publications and submittal deadlines)

Annual Goals:

Long Term Plans:

Mentor/Advisor Comments:



CAREER PLANNING

My long and short-term career goals. Skills and competencies I expect to develop and workshops I plan to attend:

Annual Goals:

Long Term Plans:

Mentor/Advisor Comments:

FELLOWSHIP AND PROPOSAL PLANNING

My plans, if any, for applying or contributing to research fellowships and/or grants for my graduate program:

Annual Goals:

Long Term Plans (including funding for dissertations and research projects):

Mentor/Advisor Comments:



Appendix V: Department of Earth System Science Statement of Professional Conduct

This handout is intended to outline the standards of professional conduct expected of graduate students in the Department of Earth System Science. 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 Department 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 Department 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 Department 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 Department 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 Department 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 Department of Earth System Science Statement of Professional Conduct handout.

[signature]

[date]



Appendix VI: Academic Honesty

ACADEMIC HONESTY

THE MANUAL OF THE IRVINE DIVISION OF THE ACADEMIC SENATE PART III - APPENDICES OF THE IRVINE DIVISION Appendix VIII UCI Academic Senate Policy on Academic Honesty

(Revised: 12/12/96, 10/12/00, 11/21/02, 1/21/03, 1/26/06, 4/05/2007, 6/7/2007, 6/5/08, 4/23/15)

A. Preamble

The University of California, Irvine 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, instructors, students, and administrators are responsible for maintaining this environment. It is essential that all members of the University practice academic integrity and accept individual responsibility for their work and actions. Violating the Academic Integrity Policy is unacceptable, devaluing the teaching and learning experience for the entire community. While at UCI, members of the academic community should become better educated about the ethical framework underpinning academic integrity and improve their moral standards supporting it. The UCI Academic Senate Policy on Academic Integrity states the general rules and procedures associated with student academic integrity. This Academic Integrity Policy applies to undergraduate and graduate students enrolled in a UCI course. A separate policy governs the integrity of research. Medical students are governed by policies specified in the UCI School of Medicine Handbook: <http://www.meded.uci.edu/docs/2010-2011%20Handbook.pdf> Law students are governed by policies specified in School of Law Academic Honor Code: http://www.law.uci.edu/current/UCI_Law_Honor_Code.pdf

B. Defined Terms

1. Academic Integrity Policy: the UCI Academic Senate Policy on Academic Integrity.
2. Academic Integrity Policy Violations: outlined in the Procedures document of the Academic Integrity Policy.
3. Academic Consequences: grades assigned by Instructor.
4. Administrative Sanctions: outlined in the Procedures document of the Academic Integrity Policy.
5. AIAO: Academic Integrity Administrative Office.
6. Instructor: faculty member or instructor of record.
7. Student: any student or students who have allegedly violated the Academic Integrity Policy
8. Hearing Panel: Subcommittee of the Council on Student Experience as outlined in the Procedures document of the Academic Integrity Policy.

C. Students' Responsibilities

All students are expected to complete a course in compliance with the Instructor's standards. No student shall engage in any activity involving any Academic Integrity Policy Violations. No student shall engage in any activity that involves attempting to receive a grade by means other than honest effort, and shall not aid another student who is attempting to do so. All students are encouraged to notify instructors, but may also



notify the AIAO, about observed incidents of Academic Integrity Policy Violations. Instructors should take reasonable steps to preserve the confidentiality of students making such reports. All students have the responsibility to become familiar with and abide by the Academic Integrity Policy.

D. Instructors' Responsibilities

Instructors should create an environment in their classes where academic integrity is understood and supported. They should assign grades in a transparent and equitable manner. Specifically:

1. They should monitor student work to ensure these policies are followed;
2. They should report all Academic Integrity Policy Violations to the AIAO;
3. They should faithfully administer and participate in the Academic Integrity Policy;
4. They should state in writing how graded assignments and exams will contribute to the final grade in the course. If any course-specific rules are required by the Instructor for maintaining academic integrity, the Instructor shall also inform students of these in writing. A reduction in a grade for an assignment or a course in response to academic dishonesty is not to be considered as a punishment, but instead responds to a failure by the student to fulfill one of the requirements of the course. When an Instructor believes that a Student has violated the Academic Integrity Policy, the Instructor should report the incident to the AIAO within thirty instructional days of discovering the possible Academic Integrity Policy Violation. The Instructor shall participate in the process according to the Academic Integrity Policy. In all cases, the Instructor shall determine the Student's grade in the course.

E. Teaching Assistant's (TA) and Reader's Responsibilities

A student acting in the capacity of a Teaching Assistant (TA) or Reader has a special responsibility to safeguard academic integrity. A TA/Reader shall equitably grade student work in the manner set by the Instructor. A TA/Reader shall not provide a student with any information or collaboration that would aid the student in completing the course in a dishonest manner (e.g. providing access to unauthorized material related to tests, examinations, or homework). When a TA/Reader has evidence of an Academic Integrity Policy Violation, the TA/Reader should report the incident to the Instructor. The Instructor should report the incident to the AIAO.

F. Responsibility for Resolution of Cases of Violation of the Policy

The responsibility for maintaining the standards of academic integrity rests with two University authorities: the Instructor and the AIAO. Under the Standing Orders of the Regents, discipline is the exclusive responsibility of the campus administration while authority over courses and curricula is under the exclusive authority of the Instructor through the Academic Senate.

1. Role of the Instructor

The Instructor shall assign grades in the course as appropriate to the work involved. All Academic consequences (e.g. scores on the assignments and course grades) are under the sole purview of the Instructor in the course.

2. Role of The AIAO

The AIAO manages the cases for all students accused of Academic Integrity Policy Violations and is the central repository for all case-related materials. The AIAO is the initial contact for the Instructor or students on all cases of Academic Integrity Policy Violations. The AIAO is also responsible for imposing administrative sanctions. These sanctions shall be in accordance with guidelines authorized by the Council on Student Experience. Administrative sanctions range in



severity from administrative probation to dismissal from the University. Students found responsible for multiple cases of Academic Integrity Policy Violations may be subject to dismissal from the University. The AIAO must notify the Student (and if needed, the Instructor) of any allegations of Academic Integrity Policy Violations. The AIAO adjudicates cases when the Student disputes the possible imposition of administrative sanctions related to Academic Integrity Policy Violations. The AIAO can request meetings with the Instructor and Student to discuss the case, sanction, or procedure. The AIAO must follow the procedures and communicate in a timely manner. He or she may extend any timelines in the Academic Integrity Policy when practical exigencies so dictate, in which case all involved parties will be notified in writing and via email. If the Student appeals the AIAO's decision, the AIAO shall schedule a Hearing Panel (see below) to review the case and make a final determination of the appropriate sanction. The duty of the AIAO is not merely disciplinary. The office is encouraged to work with faculty and students to create a culture in which academic integrity is valued.

3. Records Management

The AIAO must archive its records to reflect the resolution of the case, and shall maintain a record of all cases as described in the Procedures document. The AIAO shall report annually to the Academic Senate Council on Student Experience, to the Vice Chancellor of Student Affairs, the Provost and Executive Vice Chancellor, the Associated Undergraduate Students of the University of California, Irvine, and the Associated Graduate Students of the University of California, Irvine on all of the following: (1) the number, nature, and type of cases; (2) the pattern of decision-making; (3) the severity and type of academic consequences and administrative sanctions; and (4) other relevant matters as directed by the Council on Student Experience.

4. Role of the Hearing Panel

If the Student requests a hearing, the AIAO will request the Subcommittee on Academic Integrity of the Council on Student Experience to convene a Hearing Panel to review the case. (See the Procedures document.) The Hearing Panel will hear evidence on the case from the Student, Instructor, and other relevant parties as determined by the panel. The Hearing Panel shall communicate the final decision to the AIAO.

G. Procedures for Resolution of Cases of Academic Integrity Policy Violations

These are described in the Procedures document of the Policy.

H. Maintenance of Disciplinary Records

The AIAO will maintain a record of each student who receives a letter(s) of Academic Integrity Policy Violations as described in the Procedures document. Maintaining such a record is not an administrative sanction.



I have read ESS's *Graduate Student Handbook including The UCI Academic Senate Policies on Academic Honesty and the ESS Statement of Professional Conduct* and understand the contents within.

Signed: _____

Print name: _____

Date: _____

I have reviewed the "What is Academic Misconduct?" on the UCI Office of Academic Integrity and Student Conduct website (<https://aisc.uci.edu/students/academic-integrity/definitions.php>) and completed the "What are Plagiarism and Academic Dishonesty" learning module (http://cast.oit.uci.edu/tltc/Production/TLTC/DUE_Plagiarism_Tutorial/Plag_Tutorial.htm) and understand any occurrences of academic misconduct may result in dismissal from the ESS graduate program.

Signed: _____

Print name: _____

Date: _____

Please return this form to the Student Affairs Manager in Croul Hall 3200 no later than October 2, 2017.

