

2021-22

University of
California, Irvine

**Environmental
Health Sciences
Graduate
Handbook**

Program in
Public Health



Table of Contents

Introduction	5
New Student Information	5
Entrance Requirements	6
Registration	6
Enrollment	6
Residency Requirements.....	6
International Students	6
Orientation.....	6
Housing.....	6
Health Insurance (UC SHIP).....	7
Electronic ID (UCInetID)	7
Parking & Transportation.....	7
Campus Map	7
Checklist.....	8
Environmental Health Sciences Program Information	8
Administration & Staff.....	8
Faculty.....	9
Ph.D. Requirements	10
Curriculum Plan: Years 1 & 2	10
Core Curriculum.....	10
Track-Specific Core Courses	11
Approved Electives.....	12
Curriculum Plan: Years 3 & 4	13
Seminar.....	13
Research Rotations.....	14
Comprehensive Examination	14
Qualifying Examination/Advancement to Candidacy	14
Preadvancement Committee Meeting.....	14
Qualifying Advancement Committee.....	15
Written Proposal Format	15
Oral Proposal Format.....	16
Teaching Requirement.....	16
Dissertation & Final Examination.....	16
Sample Program Tracks.....	17
MS Requirements	18
Plan I.....	18
Plan II	20
Seminar.....	21

Comprehensive Examination	22
Environmental Health Sciences Course Descriptions.....	22
Graduation & Diploma Information (Ph.D. & MS)	24
Important Filing Deadlines	24
Grants, Awards, & Scholarships	24
Academic Requirements, Policies, & Procedures.....	24
Continuous Enrollment Policy	24
Advisors.....	25
CEPH Competencies & Course Learning Outcomes	25
Standards for Normal Academic Progress	25
Academic Probation & Disqualification	25
Enrolling in Excess Units	26
Graduate Assistantships.....	26
Leave Guidelines.....	27
Academic Integrity.....	27
Learn at UCI.....	28
University Library.....	28
Career Development Service	28
IT Services	29
Graduate & Postdoctoral Scholar Resource Center.....	29
Graduate Study Lounge.....	29
Financial Support.....	29
Tuition & Housing	29
Financial Aid.....	29
Campus Employment.....	30
Safety & Security.....	30
Speech & Advocacy	30
Nondiscrimination Policy	30
Disability Statement.....	30
Diversity Statement.....	31
Counselling Services.....	31
Grievances Policy	31
Campus Organizations	32
Helpful Links	32
Comments & Suggestions.....	33

Introduction

The purpose of this handbook is to provide specific information on policies, procedures, and regulations pertaining to graduate study in the Environmental Health Sciences Graduate Program.

Students completing degree requirements in the Graduate Program in Environmental Health Sciences will earn either the degree of Doctor of Philosophy in Environmental Health Sciences or Master of Science in Environmental Health Sciences. The doctoral program in Environmental Health Sciences is a research-based program with two tracks of study. The Environmental Toxicology Track focuses on identifying and quantifying the harmful effects of environmental chemicals on human health and elucidating the mechanisms by which these agents act. The Exposure Sciences and Environmental Epidemiology Track focuses on population-based research and the evaluation of human exposures to environmental agents and on scientific principles used in evaluating risks to human health from environmental exposures. The master's program offers course work in both environmental toxicology and population-based environmental health sciences with options to focus on experimental research.

The *EHS Graduate Handbook* is revised annually in a collaborative process involving representatives from a number of campus offices and departments, including, but not limited to, Dean of Students; Student Accountability, Community Standards, and Academic Integrity; Housing and Residential Experience; Equal Employment Opportunity; Title IX and Student Discrimination; Student Access Services; Risk and Insurance Management; General Counsel, and Communications, taking into account ideas and suggestions from students, student organizations, faculty, staff, and University committees.

This *Graduate Handbook* is intended to be a supporting guide for our EHS students and faculty, rather than an exhaustive compilation or an official statement of requirements. Keep in mind that students should also consult the UCI General Catalogue. In instances of conflict between this handbook and official university policies or program policies, current official policies take precedence. The handbook will be distributed to all entering students and faculty and will be regularly updated. Suggestions for revisions and additions are welcome.

New Student Information

Entrance Requirements

General requirements for admission to graduate study are established in the [UCI General Catalogue](#) in the section "Research and Graduate Studies" and in the Graduate Division bulletin "UCI Graduate Application for Admission."

The table below lists the additional entrance requirements for all graduate students majoring in Environmental Health Sciences. For cases in which students with deficiencies in certain areas are admitted into the graduate program, those deficiencies will be reconciled during the first year of residence in the program. The student will be notified of any apparent deficiency at the time of acceptance into the graduate program.

Additional Entrance Requirements for Students Applying to the EHS Graduate Program

Subject	Number of Years
General Biology	One year of general biology; one quarter of molecular biology or biochemistry is strongly recommended.
Mathematics	One year of calculus and/or statistics

Chemistry

One year of chemistry; organic chemistry is strongly recommended for environmental toxicology track

Registration

The EHS program accepts students for the fall quarter only. [Students can register for classes online](#) using their UCInetID. Prior to the first quarter, students will be able to register once they have been advised by email about course selection. Each quarter, students will be required to meet with their faculty mentor to receive approval before finalizing their course schedule for the next quarter.

Courses can be dropped online through the end of second week without late fees. Students adding classes or changing units/grading options after the end of the second week of classes will be assessed a late registration fee. Students adding a class after second week will need to submit a request through the [Enrollment Exception Request System](#). Drops after the second week of the quarter are only approved if there is a documented extenuating circumstance. The student must receive approval from both the instructor of the course and the Program in Public Health Department. Each quarter, the campus performs a census of enrollment upon which state funding is based; therefore, we encourage students to enroll before the end of the second week of classes to ensure that the university receives full educational funding and to avoid late fees.

Enrollment

A minimum of 12 units of graduate or upper-division undergraduate coursework is required to be considered a full-time student. Upper division undergraduate course units may count as workload units for the purposes of being considered a full-time student, but ordinarily may not be used to fulfill degree requirements. Students receiving departmental merit funding (generally for new students only) must be enrolled full-time in order to receive the funding. Teaching Assistant and Graduate Student Researcher positions require full-time enrollment. Students not enrolled full-time may jeopardize their funding for other types of aid, including need-based financial aid and university fellowships.

Residency Requirements

All degree-seeking students should complete a [Statement of Legal Residence \(SLR\)](#) immediately after submitting their [Statement of Intent to Register \(SIR\)](#). Official residence determinations are made only after the student's SLR is reviewed and any requested documentation is received by the University Registrar's office.

International Students

Information about requesting a visa document, paying for a visa, paying the SEVIS fee, and planning a trip to Irvine [can be found here](#).

UCI International Center

Location: G302 Student Center

Telephone: 949-824-7249

Website: <http://www.ic.uci.edu>

Orientation

Incoming EHS students are asked to attend two orientations before the start of instruction. One of the orientations is the Campus-Wide New Graduate Student Orientation. The other orientation is specific to the Program in Public Health and is mandatory. It provides an introduction to the program and an opportunity to meet faculty and fellow students. Initial advising will occur prior to orientation before the deadline to enroll and pay for classes.

Housing

Information about [campus housing](#) options for graduate students can be found at the hyperlink. Incoming students are advised to place themselves on the waitlist as early as possible to improve chances of securing on-campus housing. Though EHS students are not guaranteed housing, there are a wide variety of options in the area to suit the needs of students. [There are plenty of apartments available in Irvine and in the surrounding areas.](#)

Health Insurance

All graduate students are required to have health insurance while attending UC Irvine. The university provides medical, dental, and vision coverage through the [UC Student Health Insurance Plan \(UC SHIP\)](#). If students would prefer health insurance outside the university, [they may waive participation in UC SHIP](#). Fees for UC SHIP are automatically assessed to students' billing accounts unless students [successfully waive out](#) of the plan.

Electronic ID

The UCInetID is electronic identification used for many online services at UC Irvine.

Services such as [ZotPortal](#), [WebFiles](#), [Webmail](#), [EEE](#), and [WebReg](#) require students to use their UCInetID and password in order to log in. It is for individual use only and passwords should not be shared. OIT offers [Sponsored UCInetIDs and Group UCInetIDs](#) for special situations.

To activate your UCInetID, students need an ID number first. Applicants will be sent an ID number when they first apply to UCI. Students that have an ID number should [visit our website to activate the UCInetID](#). A date of birth and last 4 digits of a Social Security Number are required. Students that do not have a social security number should enter all zeros, leave it blank, or use the identification number entered on the [UC Application](#).

Parking & Transportation

Transportation and Distribution Services (T&DS) provides a wide variety of resources for the UCI community including campus maps, parking information, and sustainable commute solutions for reducing greenhouse gas emissions and savings on travel costs.

A valid parking permit must be displayed at all times on the UC Irvine campus. Student permits are available online at [myCommute](#) by logging in with a UCInetID. All available zones and permit options will appear and may be purchased on a first-come-first-serve basis. Parking zones can be changed based on availability. In order to renew a current zone, simply purchase a new permit when a current permit is still valid. Student permits may be purchased using any major credit card.

COVID-19 Update

Parking permits are not required on campus through January 3, 2021. During this time, safety violations, disabled parking stalls, patient stalls, service stalls, and stalls marked for specific departments or persons will continue to be enforced.

Parking & Transportation

Location: 200 Public Services Building

Telephone: 949-824-7275

Website: <http://www.parking.uci.edu>

Campus Map

Nestled in the heart of Orange County, the University of California, Irvine is located in one of the safest large cities in the nation. UCI students, faculty and staff come together on the campus's 1,478 acres to be the driving force of innovation and discovery that benefits our community. Visitors can experience the vibrant campus life of 33,000+ students for themselves by using the 405 freeway or 73 tollway, or taking one of four OCTA bus routes that service our campus. [Click here for interactive Campus maps.](#)

Checklist

The following items need to be completed once the *Statement of Intent to Register* has been submitted.

Pay *Statement of Intent to Register* Deposit

In order to secure your place in our program and register for classes, you must pay a non-refundable \$200 admission acceptance fee. The \$200 fee will go towards your mandatory fees for the first quarter of the program. An enrollment hold will be placed on your record until the fee is paid.

Activate Your UCInetID

Though you may have had a UCInetID when you were an applicant, you need to activate your UCInetID as a student after you accept the offer of admission. Your UCInetID is a secure username and password that you use to gain access to your UCI email, registration, bill payment, and many more campus services. You may activate your UCInetID at <http://activate.uci.edu> by choosing the link for "Faculty, Staff, and Students."

Submit a Statement of Legal Residence

It is important that you complete and submit the *Statement of Legal Residence* as soon as possible. Establishing California residency is a key factor in determining whether or not you will need to pay non-resident supplemental tuition. If you need assistance in filling out the form or have questions about your residency status, please email the [UCI Residence Office](#) or call 949-824-6129.

Clear Provisional Admission

If your admission letter from the Graduate Division stated that your admission is provisional because we need further documentation from you, you must submit the missing documents before you can begin attending classes. The documents (usually final transcripts, degree confirmation, and/or letters of recommendation) can be submitted directly to the Graduate Student Affairs Office.

International Students (as applicable)

All international students must secure a visa before coming to the United States to study at UC Irvine. The most common student visa is an F1, but there are other kinds of visas available. If you already have a valid visa that allows you to study in a degree-earning program, then we would recommend that you check with the International Center to see if you should continue on that same visa or switch to an F1. There are distinct advantages to each kind of visa and the International Center can best advise you given your particular situation. If you do need to secure an F1 visa, you need to fill out an I-20/DS-2019 Request for New Graduate Students and return it to the department as soon as you are admitted to ensure that your documents arrive on time for you to begin school in late September. The Request Form will be sent to you by the department. Once you return the form to the department, the International Center will process the forms to aid you in applying for a student visa. The International Center can be contacted at 949-824-7249.

Environmental Health Sciences Program Information

Administration & Staff

Director/Associate Dean of Academic Affairs
[Miryha Gould Runnerstrom](#)

Telephone: 949-824-7124

Email: miryha@uci.edu

Graduate Student Advisor

Malcolm Bourne

Telephone: 949-824-7095

Email: mbourne@uci.edu

Community Engagement Coordinator

Rocio Torres

Telephone: 949-824-2358

Email: rociot1@uci.edu

Faculty

[Jun Wu, PhD](#)— Director, Environmental Health Sciences Graduate Program

Wu's research focus is on population-based research of environmental exposure assessment, environmental epidemiology, and environmental health disparity. She has extensive experience and knowledge in examining the influences of various environmental exposures (e.g. air pollution, climate, and built environment such as green space, neighborhood resources, walkability) on reproductive outcomes (e.g. maternal and fetal health), children's health, and other health endpoints. She also has strong interest in research on environmental justice and environmental health disparity, particularly working in partnership with communities.

[Dean B. Baker, MD](#) — Professor Emeritus

Baker's epidemiologic research is focused on environmental studies of hazardous waste sites, childhood exposure to environmental pollutants, asthma among inner-city children, the role of irritant exposure in occupational asthma, occupational stress, indoor air pollution and the use of biological markers of exposure for subclinical effects.

[Scott M. Bartell, PhD](#)

Bartell's research in exposure sciences and risk assessment focuses on probabilistic models and statistical methods for exposure assessment, environmental epidemiology and risk decision analysis.

[Bruce Blumberg, PhD](#)

Blumberg's research focuses on the role of nuclear hormone receptors in development, physiology and disease and how these may be disrupted by hormonally active compounds in the diet and environment. Particular research interests are the effects of environmental endocrine disrupting chemicals (obesogens) on the development of obesity and on the role of highly chlorinated chemicals such as PCBs and PBDEs on the development of the immune system and on lymphoma.

[Stephen C. Bondy, PhD](#)

Bondy's research in molecular neurotoxicology focuses on the potential role of toxic agents in the promotion of brain aging and neurological disease. Studies include evaluation of agents that accelerate or retard the aging process. Endpoints range from behavioral tests to assay of gene expression. In addition, the properties of aluminum that relate to neurotoxicity and its possible contribution to Alzheimer's disease are being investigated.

[Vincent J. Caiozzo, PhD](#)

Caiozzo's expertise is in structure and function of muscle with an emphasis on exercise physiology. He has a special interest in the role of environmental toxicants in modulating physiological responses in human muscle.

[Jefferson Y. Chan, MD, PhD](#)

Chan's research in chemical pathology focuses on the oxidative stress response in cells exposed to toxic xenobiotics.'

[Derek Dunn-Rankin, PhD](#)

Dunn-Rankin's major research focus is on laser and optical diagnostics in practical systems, optical particle sizing, droplet formation and vaporization and their application to human exposures.

[Rufus D. Edwards, PhD](#)

Edwards' research in exposure sciences and risk assessment focuses on air pollution, particles, volatile organic compounds, greenhouse gases and environmental epidemiology in the developing world and European cities.

[Chenyang \(Sunny\) Jiang, PhD](#)

Jiang's research focus is in coastal water quality microbiology and the application of molecular techniques to detect human pathogenic bacteria and viruses in aquatic environments.

[Masashi Kitazawa, PhD](#)

Kitazawa's primary research focuses on understanding the impact of neuroinflammation on the molecular pathogenesis of Alzheimer's disease (AD). In particular, how aging and/or environmental exposure perturb physiological functions of astrocytes and microglia and disrupt inflammatory microenvironment in the brain, leading to the development and progression of the disease.

[Virginia Kimonis, MD](#)

Kimonis is a Clinical Geneticist-Scientist with a strong interest in the genetics of neuromuscular diseases. Her laboratory focuses on the genetic causes of muscle disease. She is particularly interested in inherited muscle disorders that occur in combination with diseases of bone.

[Michael T. Kleinman, PhD](#) — Co-director, Air Pollution Health Effects Laboratory

Kleinman's research focuses on the mechanisms of cardiopulmonary injury following inhalation of toxic compounds. His laboratory uses state-of-the-art methods to evaluate the roles of free radicals and oxidative stress in sensitive human volunteers and laboratory animals. In vitro methods are used to evaluate specific mechanisms. Other interests include analytical and atmospheric chemistry, environmental sampling and analysis, and the application of mathematical and statistical methods to environmental and occupational assessments of exposure and risk.

[Charles E. Lambert, PhD](#)

Lambert's interests are in industrial and regulatory toxicology, pharmaceutical toxicology as it relates to impurities and degradants, green chemistry and life cycle evaluations, risk assessment and risk communication.

[Charles L. Limoli, PhD](#)

Limoli studies the mechanisms by which cells perpetuate genomic instability in response to radiation and environmental toxicants and the role of oxidative stress in these processes. He also explores how DNA damage and oxidative stress may drive the progression of normal multipotent cells in the central nervous system to brain tumor stem cell.

[Oladele A. Ogunseitan, PhD](#)

Ogunseitan's research is focused on microbial diversity and ecology, environmental pollution, industrial ecology, health and development.

[Kathryn E. Osann, PhD](#)

Osann's specialty is in cancer epidemiology and applied biostatistics.

[Robert F. Phalen, PhD](#) — Co-director, Air Pollution Health Effects Laboratory

Phalen's research focus is on the aerodynamics of particle deposition in the developing lung and in the adult lung. Another area of interest is in the assessment of lung defense mechanisms using radio-labeled aerosol inhalation challenges. His lab uses quantitative morphometry to study the mechanism of interference with organogenesis and possible long-term consequences for chronic lung disease due to toxic inhalation exposure. Additional studies include evaluating the tolerance of animals to air pollution mixtures as a mechanism that may protect humans against ambient pollutants.

[John Leslie Redpath, PhD](#) – Professor Emeritus

[Ronald C. Shank, PhD](#)– Professor Emeritus

[Ulrike Luderer, MD, PhD, MPH](#)

Luderer's research on reproductive and developmental toxicology is focused on understanding the role(s) of oxidative stress and antioxidants in ovarian toxicity, ovarian aging and ovarian cancer. A second area of focus is developmental toxicology of the reproductive system, specifically the developmental basis of premature ovarian failure and ovarian cancer.

[Veronica Viera, PhD](#)

Vieira has an extensive knowledge of GIS, groundwater modeling, cluster detection methods, and on persistent environmental contaminants including tetrachloroethylene (PCE, a dry-cleaning solvent), perfluorooctanoic acid (PFOA, a perfluorinated compound (PFC) involved in the manufacturing of Teflon), and polybrominated diphenyl ethers (PBDEs, a common class of flame retardants). Components of her work include improving methods for geocoding rural addresses using GIS and examining the relationship between PFOA exposures and health outcomes. Vieira's research also includes method development for spatial epidemiology such as disease mapping, cluster detection, and space-time interactions.

Requirements for the Degree of Doctor of Philosophy in Environmental Health Sciences

Requirements

A predoctoral student must complete the following requirements to qualify for the degree of Doctor of Philosophy in Environmental Health Sciences:

1. A major program of study (courses and research) that includes a comprehensive written preliminary examination and an oral qualifying (advancement to candidacy) examination.
2. A written dissertation based on the student's original research, and a successful defense of the dissertation during an oral examination given by the student's doctoral committee.
3. Full-time residence for at least 6 regular academic quarters.

Ph.D. Program Curriculum Plan: Years 1&2

Program-wide Core Curriculum – for Ph.D. students in both Environmental Toxicology Track and Exposure Sciences and Environmental Epidemiology Track

(EHS 206A or	Target Organ Toxicology A	4 units
EHS 206B or	Target Organ Toxicology B	4 units
EHS 202) <u>Select 2</u>	Principles of Environmental Toxicology	4 units

EHS 264*	Intro to Environmental Health Science*	4 units
EPIDEM 200A	Principles of Epidemiology	4 units
EHS 298	Environmental Health Sciences Seminar	2 units

Track-Specific Core Courses- Environmental Toxicology Track

EHS 201	Case Studies in Environmental Toxicology	4 units
PUBHLTH 204**	Biostatistics I	4 units
(EHS 202/EHS 206A/ EHS 206B)***		

*EHS 270 may be substituted with the approval of the advisor if the student already possesses a background in environmental health sciences.

** PUBHLTH 204 is only offered once per year and is the first of a sequence of 2 courses required for the Exposure Sciences track.

***Select the course (EHS 202, EHS 206A, or EHS 206B) that was not taken as part of the general core.

Approved Electives 16 Units

Track-Specific Core Courses- Exposure Sciences & Environmental Epidemiology Track

PUBHLTH 204*	Biostatistics I	4 units
PUBHLTH 204B	Biostatistics II	4 units
PUBHLTH 283	Geographic Information Systems	4 units
EPIDEM 205	Environmental Epidemiology	4 units
(EHS 275 or PUBHLTH 260)Select 1	Environmental Modeling and Risk Assessment	4 units
	Human Exposure Assessment	4 units

* PUBHLTH 204 is only offered once per year and is the first of a sequence of 2 courses required for the Exposure Sciences track.

Approved Electives 8 Units

Approved Elective Pool*

EHS 203	Psychosocial Occupational Epidemiology	4 units
----------------	--	---------

EHS 204	Neurotoxicology	4 units
EHS 212	Inhalation Toxicology	4 units
EHS 220	Industrial Toxicology	4 units
EHS 269	Air Pollution, Climate and Health	4 units
EHS 270	Human Exposure to Environmental Contaminants	4 units
EHS 294	Occupational Health Psychology	4 units
MBB 203	Structure/Biosyn. Nucl. Acids	4 units
MBB 204	Structure/Biosyn. of Proteins	4 units
DCB 231B	Cell Biology	4 units
PATH 225	Molecular Mechanisms of Disease	3 units
Anatomy 203A,B	Human Microscopic Anatomy	6 units
Physiology 206A,B	Introduction to Medical Physiology	11 units
PUBHLTH 265	Advanced Environmental Health Science	4 units

*Any core courses in either track may be taken as electives by students in the other track; additional courses may be added to this pool upon approval of the Program Faculty

Ph.D. Program Curriculum Plan: Years 3&4

EHS 298	Environmental Health Sciences Seminar	2 units/quarter
EHS 299	Research Problems	1-12 units/quarter

Seminar

The Environmental Health Sciences Seminar (EHS 298) is a required course for each graduate student in the program for each quarter the student is in residence. The seminar is organized by the faculty and graduate students and features one speaker-discussion leader on Fridays at 3:30 p.m. during fall, winter and spring quarters. This is the one opportunity on a weekly basis that brings the faculty and students together, and all students in the program are required to attend all EHS 298 seminars and to take active parts in the discussions. Faculty are also expected to attend seminar. Individual presentations last about one hour; each predoctoral student will present **two** seminars per year if they did not do a research in progress talk at the annual EHS Scientific Retreat in September. For first and second year predoctoral students, the subject of the seminar should be on a topic in toxicology in which they have special interest but not a report of their own on-going research. Senior graduate students can make their research efforts the subject of one of their seminar presentations each year. The student's grade (A, B, etc) for seminar will be based on the student's attendance, participation in the discussions, and presentation during quarters in which the student presented. Presentation criteria include:

1. Ability to analyze environmental health problems rather than merely describe them
2. Thoroughness with which the topic was reviewed and presented
3. Ability to respond adequately to questions from the audience
4. Ability to communicate one's ideas, i.e. a clear and interesting presentation, including public speaking skills and illustrations (slides, etc.)

Students should follow the steps below in preparing their seminar presentations.

1. Select the topic carefully; consult with the seminar coordinator (Dr. Luderer), your research advisor and other faculty members if you need help choosing a topic. The topic must be in the areas of toxicology, exposure sciences, or risk assessment, should be based on scientific evidence, and should be analytical ('why is something toxic; "what is the scientific evidence that something causes a specific response') rather than descriptive ('compound A causes renal damage'). Stress mechanisms of toxic action or exposure pathways, integrate exposure and toxicity wherever possible.
2. Begin preparing early; it can take up to 50 hours to prepare an excellent presentation.
3. Do a literature search to make sure you have covered all the pertinent areas.
4. Read all of your material before writing your presentation; take notes and make outlines. Ask yourself questions; this may suggest further searching of the literature.
5. Integrate your material and decide what information you want to present, what order you want to use to present your material, and how you are going to present it (verbally, slide with text or table or graph or photograph, etc). Select a few key articles and present and discuss data from those articles to make key points.
6. Write out your presentation.
7. Consult with a faculty member to make sure you are on the right track.
8. Prepare your PowerPoint presentation.
9. Practice giving the presentation.
10. Don't read from notes; use your graphic material as 'cue cards'.

Research Rotations

New students are expected to get involved in research at the earliest possible time, usually in the first quarter of the program. All students are encouraged to take advantage of the rotation option. A rotation consists of a series of residencies in laboratories/research groups of the student's choice; one quarter is spent in each laboratory/research group. Three rotations per academic year and one rotation during summer quarter of the first year are possible; two are suggested. Professors will be responsible for acting as an advisor/mentor to the student and instructing the student in proper laboratory procedures, experimental design, and data analysis/scientific interpretation. If the entering student is sure of the area in which he/she wants to work, a research rotation is not required.

Comprehensive Examination

A written comprehensive examination is given by the Environmental Health Sciences faculty, usually at the end of the second year of study early during summer quarter. The examination evaluates the student's knowledge of the fields covered by the core courses. The student must demonstrate competence in the core subjects and the ability to think analytically in order to continue to the dissertation research. All program faculty members can participate in preparing examination questions, but generally only those who have taught in the core courses do so. Students are required to answer a percentage of these questions, although some questions may be mandatory. The comprehensive examination is open book/open note. A scientific calculator is permitted, but laptops and other electronic devices are not permitted. The exam is given in two days over a five-hour period each day, with 7 problems each day. Students are required to answer at least 10 and pass at least 9 of the 14 questions. Responses are graded pass/fail. The student about to take this examination is encouraged to consult faculty and senior graduate students who have recently completed this requirement to get an idea of the nature of the examination and sample questions. Students narrowly failing the examination will be permitted to retake the examination within 12 months. Failure on the second attempt of the retake leads to disqualification from the predoctoral program; under such circumstances the student may petition the faculty to transfer to the master's degree program.

Qualifying Examination/Advancement to Candidacy

Preadvancement Committee Meeting

A preadvancement committee meeting is required by the beginning of the third year and preferably during the summer of the second year. The committee should consist of the faculty advisor and two to three other

Environmental Health Sciences faculty members, who will also serve on the qualifying/advancement to candidacy committee. The purpose of this meeting is to ensure that all students have accomplished reasonable progress in their research during their first two years in the Environmental Health Sciences graduate program. There is no written component for this meeting. However, all students are expected to prepare a presentation (between 30-45 min) for the pre-advancement meeting. During the oral presentation the committee will discuss the research with the student. After this discussion, the committee will excuse the student from the room and evaluate the student's performance. The committee recommendations should be written on the Advisement Committee Meeting Report form, which should be signed by the student and committee members.

Timing of the Examination

An oral qualifying examination is required and should be taken not later than the twelfth quarter after entrance into the program; usually it is given during winter, spring, or summer quarter in the third year of graduate study.

Qualifying Advancement Committee

It is administered by the Candidacy Committee for the individual student. Committee members are recommended by 1) the Director of the Environmental Health Sciences Program, 2) the student's research advisor, and 3) the student, and approved by the Director of the Environmental Health Sciences Graduate Program and the Dean of Graduate Studies and Research. The Candidacy Committee is comprised of five members, a majority of whom are members of the program faculty. The Chair of the Candidacy Committee must be a member of the program faculty and a voting member of the Academic Senate. The UCI Faculty Bylaws requires that all members of the Candidacy Committee be voting members of a UC academic senate; as the number of the faculty in the Environmental Health Sciences program is small, exception to this rule to permit non-tenured Environmental Health Sciences faculty to serve on these committees can be approved by the Dean of Graduate Studies if the exception is well-justified. One member of the Candidacy Committee, designated the "outside member," must be a voting member of the UC Academic Senate - not necessarily the Irvine Division - who does not hold an appointment in the student's discipline or academic unit (school or independent program). As the outside member represents the UC faculty at large, special expertise in the area of the student's dissertation is not necessary. Three members of the Candidacy Committee will continue, after the student has successfully completed the oral examination and advanced to candidacy, as the Doctoral Committee to supervise completion of the research dissertation.

The names of the proposed faculty members for the Candidacy Committee must be submitted to the Graduate Studies Office by the Director of the graduate program at least two weeks prior to the date of the qualifying examination.

Goal of the Exam

The purpose of the exam is to determine if the student is capable of Ph.D. quality research. This encompasses two related aspects: 1) defining a tractable research problem; and 2) demonstrating requisite knowledge, skills and experimental sophistication to convince the committee that there is a high probability for the project to succeed. The Advancement to Candidacy Exam is a University-level requirement.

Written Proposal

A written proposal in the format of a federal grant proposal should be prepared by the candidate and distributed to the committee at least 1 week prior to advancement.

Written Proposal Format

The proposal should follow conventional format for a federal grant. The manuscript should be prepared with proper scientific nomenclature, as would be acceptable to a granting agency. The document should be approximately 12-15 pages (single-spaced with 1 inch margin) excluding references. The document should include the following sections.

Specific Aims (1 page). It is the single most important section in the proposal. It's the master plan for the rest of the proposal and the most difficult section to write. The logic of each aim must be compelling and the answers must be important to the field. Whenever possible, test a hypothesis in the specific aim title. The Specific Aims should not be a list of experiments. Avoid writing aims that can be viewed as "a fishing expedition".

Introduction (2-3 pages). Problems and objectives of your research should be clearly stated and placed in the context of a broader field. An extensive bibliography should be included. This section should lead the reader to each question or hypothesis that you're testing in each aim. Significance of the project should be also included here.

Preliminary results (3-5 pages). This section should include your research efforts. Appropriate discussion and methods are important; you should show how you can perform all of the necessary techniques and methods. Please embed figures into the text and include a brief legend. Figures and Tables must be absolutely clear and visible.

Proposed research (6-8 pages). The proposal should address the feasibility of various experiments or analyses and point out pitfalls that might be encountered and how these could be circumvented. Be sure to include positive and negative controls, analysis and interpretation, pitfalls and alternative approaches, and somewhat detailed methods.

Oral Proposal Format

The oral portion of the exam will involve the presentation of background material, preliminary results and a summary of proposed experiments. The presentation should be ~20-30 minutes (20-30 PowerPoint slides), although committee discussion will usually interrupt the flow. During this time the committee will evaluate whether or not you have the ability to formulate questions on important environmental health sciences issues. You may be asked to discuss experimental design, required controls for an experiment, and possible artifacts or caveats. You will be expected to place the significance of the research project in a broad context, and demonstrate in-depth knowledge of the discipline in which you are working. The exam should be scheduled for a three-hour time period, although it will typically last about two hours.

The proposal and presentation serve as the initial focus of the qualifying examination; that is, it starts the examination in an area in which the student should feel comfortable. This mitigates some of the nervousness students may experience in taking a critical oral examination before a faculty panel. (The proposal can also serve as a guide to the student's dissertation research program; however, the student is not obligated to follow the course of studies in that proposal in developing the final dissertation.) It is recommended that students practice answering incisive questions orally before taking this examination. Students who fail this examination may be given the opportunity to stand for re-examination at the discretion of the Candidacy Committee. Re-examination should occur within 6 months of the first qualifying examination. Students failing the second examination are disqualified from the doctoral program; they may petition the program faculty to transfer to the master's degree program

The results of the Qualifying Examination will be submitted to the Office of Graduate Studies on the Ph.D. Form I. This form can be [downloaded from Graduate Division](#). The form must be signed by all committee members at the time the candidacy examination is concluded and submitted even if the examination was failed. If the unanimous recommendation of the Committee is favorable, a \$90 Advancement to Candidacy Fee must accompany the Form I (paid by the student, unless other arrangements have already been made).

Teaching Requirement

There is no official teaching requirement for the EHS Graduate Program. However, each doctoral student is encouraged to serve as a teaching assistant in an undergraduate course in the School of Biological Sciences or the Program in Public Health for at least one quarter. Serving as a teaching assistant may also be required as part of your funding.

Dissertation & Final Examination

The dissertation will present basic research on an original research problem in Environmental Health Sciences. The research will demand an intensive concentration of the student's time, effort and energy, and

the faculty advisor will encourage the student to work with greater independence as progress is achieved. Progress in the research project is followed by the student's Doctoral Committee during at least annual meetings with data presentations by the student. The student is encouraged to seek consultation with faculty members, and other scientists and professionals outside the University to make the research experience as enriching as possible.

When the student and/or advisor feels the student has learned how to do original and independent research and has produced publishable results, the student should present his/her experimental results to the candidate's Doctoral Committee; when the Committee agrees that the experimental work should terminate, the candidate begins writing the dissertation. The student submits draft copies of the written dissertation to each member of his/her Doctoral Committee for review and approval (this review takes approximately a month).

The Doctoral Committee supervises a final examination, the focus of which is the content of the doctoral dissertation (dissertation defense). Ordinarily, the final examination will be given just prior to the completion of the dissertation and while the student is in residence during a regular academic session, and will be open to all members of the academic community. The defense is usually conducted in the same format as a seminar.

The Doctoral Committee certifies that the completed dissertation is satisfactory through the signatures of all Committee members on the signature page of the completed dissertation. The final copy must meet the [University's requirements for style, format, and appearance](#) before the degree can be conferred.

After the dissertation has been approved by the Doctoral Committee, a final copy of the dissertation must be submitted, with the appropriate forms. The electronic submission option is now the preferred option, although paper submission is still permitted. In either case, the document will be examined to assure that it meets all University requirements. More information about submission requirements can be found on the Graduate Division website above. The student must also provide one copy of the dissertation for each member of his/her Doctoral Committee and one copy for the Graduate Program in Environmental Health Sciences.

Upon completion of the dissertation defense and approval of the dissertation, the Doctoral Committee recommends, by submission of the Ph.D. Form II, the conferral of the Ph.D. degree, subject to final submission of the approved dissertation for deposit in the University Archives.

The expense of preparing the written dissertation is borne by the student. The Environmental Health Sciences Program does provide, without charge to the student, use of microcomputers and word processing and graphics software for preparing the document.

Sample Program Tracks

Environmental Toxicology Track				
1st yr. Fall	EHS 202, 4 units	PUBHLTH 204, 4 units	EHS 298, 2 units	EHS 299, 2 units
1st yr. Winter	EHS 206A, 4 units	EHS 264, 4 units	EHS 298, 2 units	EHS 299, 2 units
1st yr. Spring	EHS 206B, 4 units	EHS 201, 4 units	EHS 298, 2 units	EHS 299, 2 units
1st yr. Summer	research rotation			
2nd yr. Fall	EPID 200A, 4 units	elective, 4 units	EHS 298, 2 units	EHS 299, 4 units
2nd yr. Winter	elective, 4 units	elective, 4 units	EHS 298, 2 units	EHS 299, 4 units
2nd yr. Spring	elective, 4 units		EHS 298, 2 units	EHS 299, 8 units

2nd yr. Summer	Comprehensive exam	Preadvancement meeting		
Yr 3	Qualifying exam		EHS 298, 2 units	EHS 299, 10 units
Yrs 4-5	yearly progress meeting with dissertation committee		EHS 298, 2 units	EHS 299, 10 units

Exposure Sciences & Environmental Epidemiology Track

1st yr. Fall	EHS 202, 4 units	PUBHLTH 204, 4 units	EHS 298, 2 units	EHS 299, 2 units
1st yr. Winter	EHS 206A, 4 units	PUBHLTH 204B, 4 units	EHS 298, 2 units	EHS 264, 4 units
1st yr. Spring	EPIDEM 205, 4 units	elective, 4 units	EHS 298, 2 units	EHS 299, 2 units
1st yr. Summer	research rotation			
2nd yr. Fall	EPID 200A, 4 units	elective, 4 units	EHS 298, 2 units	EHS 299, 4 units
2nd yr. Winter	EHS 275, 4 units	PUBHLTH 283, 4 units	EHS 298, 2 units	EHS 299, 4 units
2nd yr. Spring			EHS 298, 2 units	EHS 299, 10 units
2nd yr. Summer	Comprehensive exam	Preadvancement meeting		
Yr 3	Qualifying exam (summer)		EHS 298, 2 units	EHS 299 10 units
Yrs 4-5	yearly progress meeting with dissertation committee		EHS 298, 2 units	EHS 299, 10 units

Requirements for the Degree of Master of Science in Environmental Health Sciences

Requirements for the M. S. degree may be satisfied in one of two ways. Under Plan I, the student completes the Environmental Health Sciences core program with an average grade of B or above and under the direction of a faculty advisor also prepares a thesis that is acceptable to the thesis committee. Under Plan II, the student completes the core program, prepares a scholarly paper based on individual study in an area of toxicology or population-based environmental health sciences under supervision of a faculty member, and satisfactorily passes the written comprehensive examination at the M.S. level.

Plan I

Each candidate for the Master of Science degree Plan I must participate in Environmental Health Sciences Seminar (EHS 298), prepare a research thesis, complete the required courses listed below, meet the University requirements for residence (at least three quarters) full-time enrollment (12 upper division or graduate units each quarter, including credit for supervised research or teaching), and satisfactory progress

(at least 8 units of graduate or upper division credit completed each quarter with grades of B's, or above). 16 core course units and 8 elective units in approved courses are required, plus 2 units of EHS 298 each quarter and at least 8 units of Research Problems (EHS 299). This Plan requires at least 5 quarters and up to 7 quarters to finish (including Summer between years 1 and 2).

Core Curriculum- Plan I

(EHS 206A or	Target Organ Toxicology A	4 units
EHS 206B or	Target Organ Toxicology B	4 units
EHS 202) <u>Select 2</u>	Principles of Environmental Toxicology	4 units
EHS 264	Intro to Environmental Health Science*	4 units
EPIDEM 200A	Principles of Epidemiology	4 units
EHS 298	Environmental Health Sciences Seminar	2 units per quarter

*EHS 270 may be substituted with the approval of the advisor if the student already possesses a background in environmental health sciences

Approved electives, 8 units selected from the pool below.

The number of units required for the Environmental Health Sciences M.S. degree in Plan I is 16 program-wide core course units, at least 8 seminar (EHS 298) course units, and 8 units of approved electives for a total of 32 course units, plus at least 8 Research Problems (EHS 299) units.

Approved Elective Pool*

EHS 201	Case Studies in Toxicology	4 Units
EHS 203	Psychosocial Occupational Epidemiology	4 units
EHS 204	Neurotoxicology	4 units
EHS 212	Inhalation Toxicology	4 units
EHS 220	Industrial Toxicology	4 units
EHS 269	Air Pollution, Climate and Health	4 units
EHS 270	Human Exposure to Environmental Contaminants	4 units
EHS 275	Environmental Modeling & Risk Assessment	4 units
EHS 294	Occupational Health Psychology	4 units
PUBHLTH 260	Human Exposure Assessment	4 units
PUBHLTH 283	Geographic Information Systems	4 units
EPIDEM 205	Environmental Epidemiology	4 units
MBB 203	Structure/Biosyn. Nucl. Acids	4 units
MBB 204	Structure/Biosyn. of Proteins	4 units
DCB 231B	Cell Biology	4 units

PATH 225	Molecular Mechanisms of Disease	3 units
Anatomy 203A,B	Human Microscopic Anatomy	6 units
Physiology 206A,B	Introduction to Medical Physiology	11 units

* EHS 202, EHS 206A or EHS 206B not taken as part of required core courses may be taken as an elective; additional courses may be added to this pool upon approval of the Program Faculty.

Thesis Plan I

The Masters student is required to write a thesis based on a research problem the student has worked on under faculty supervision in the area of Environmental Health Sciences. The first-year student in Plan I is expected to get involved in a research project at the earliest possible time, usually in the first quarter of the program. When a student is unsure of where to work, that student is encouraged to take advantage of the research rotation option. A rotation will consist of up to one quarter residence in a laboratory/research group of the student's choice.

A committee of three faculty members recommended by the Graduate Advisor and officially appointed by the Dean of Graduate Studies is appointed to guide the student through the research problem and determine when a sufficient amount of work has been completed satisfactorily. At that time, the student presents the research results to the committee; after successful presentation of the results, the student can advance to candidacy for the Master of Science degree. **The student must advance to candidacy no later than one quarter before the quarter in which the degree is expected to be awarded. The deadline for submitting the advancement to candidacy form is 30 days before the opening of the quarter in which the degree is expected to be awarded.** The student should be in continual contact with the committee as the work progresses to ensure prompt completion of an appropriate thesis. All three members of the committee must approve the thesis and sign the title page of the approved final version. After the committee has approved the thesis, the thesis must be submitted electronically or as a paper copy. The final copies of the thesis must be accepted before the degree can be conferred. Copies of the *Standard and Procedures Manual*.

Plan II (Comprehensive Examination Plan)

The Master's student in Plan II is required to write a scholarly paper based on individual study the student has done under faculty supervision; while writing the scholarly paper, the student enrolls in EHS 290 (usually 4 units during Spring quarter of year 1, with completion of the paper during summer of year 1). The student must also pass a written comprehensive examination based on the required course work, which is scheduled early during summer quarter of year 1. After completion of the examination, the student can advance to candidacy for the Master of Science degree. **The student must advance to candidacy no later than one quarter before the quarter in which the degree is expected to be awarded. The deadline for submitting the advancement to candidacy form is 30 days before the opening of the quarter in which the degree is expected to be awarded.** This Plan requires 4 quarters to complete (Fall, Winter, Spring, and Summer quarter).

Core Curriculum Plan II

EHS 206A	Target Organ Toxicology A	4 units
EHS 206B	Target Organ Toxicology B	4 units
PUBHLTH 204	Biostatistics I	4 units
EHS 264	Intro to Environmental Health Science*	4 units
EPIDEM 200A	Principles of Epidemiology	4 units

EHS 298Environmental Health Sciences
Seminar

2 units/quarter

*EHS 270 may be substituted with the approval of the advisor if the student already possesses a background in environmental health sciences

Approved electives, 8 units selected from the pool for Plan I above.

The number of units required for the Environmental Health Sciences M.S. degree in Plan II is 20 program-wide core course units, at least 6 seminar (EHS 298) course units, and 8 units of approved electives for a total of 34 course units, plus at least 4 Independent Study (EHS 290) units.

Thesis Plan II

The Master's student in Plan II is required to write a scholarly paper based on individual study the student has done under faculty supervision; while writing the scholarly paper, the student enrolls in EHS 290 (usually 4 units during Spring quarter of year 1, with completion of the paper during summer of year 1). The student must also pass a written comprehensive examination based on the required course work, which is scheduled early during summer quarter of year 1.

Seminar

The Environmental Health Sciences Seminar (EHS 298) is a required course for each graduate student in the program for each quarter the student is in residence. The seminar is organized by the faculty and graduate students and features one speaker-discussion leader on Fridays at 3:30 p.m. during fall, winter and spring quarters. This is the one opportunity on a weekly basis that brings the faculty and students together, and all students in the program are required to attend all EHS 298 seminars and to take active parts in the discussions. Faculty are also expected to attend seminar. Individual presentations last about one hour; each masters' student will present a seminar **once** a year. For first year masters students the subject of the seminar should be on a topic in toxicology in which they have special interest but not a report of their own on-going research. Senior graduate students can make their research efforts the subject of one of their seminar presentations each year. The student's grade (A, B, etc) for seminar will be based on the student's attendance, participation in the discussions, and presentation during quarters in which the student presented. Presentation criteria include:

1. Ability to analyze environmental health problems rather than merely describe them
2. Thoroughness with which the topic was reviewed and presented
3. Ability to respond adequately to questions from the audience
4. Ability to communicate one's ideas, i.e. a clear and interesting presentation, including public speaking skills and illustrations (slides, etc.)

Students should follow the steps below in preparing their seminar presentations.

1. Select the topic carefully; consult with the seminar coordinator (Dr. Luderer), your research advisor and other faculty members if you need help choosing a topic. The topic must be in the areas of toxicology, exposure sciences, or risk assessment, should be based on scientific evidence, and should be analytical ('why is something toxic; "what is the scientific evidence that something causes a specific response') rather than descriptive ('compound A causes renal damage'). Stress mechanisms of toxic action or exposure pathways, integrate exposure and toxicity wherever possible.
2. Begin preparing early; it can take up to 50 hours to prepare an excellent presentation.
3. Do a literature search to make sure you have covered all the pertinent areas.
4. Read all of your material before writing your presentation; take notes and make outlines. Ask yourself questions; this may suggest further searching of the literature.
5. Integrate your material and decide what information you want to present, what order you want to use to present your material, and how you are going to present it (verbally, slide with text or table

- or graph or photograph, etc). Select a few key articles and present and discuss data from those articles to make key points.
6. Write out your presentation.
 7. Consult with a faculty member to make sure you are on the right track.
 8. Prepare your PowerPoint presentation.
 9. Practice giving the presentation.
 10. Don't read from notes; use your graphic material as 'cue cards'.

Comprehensive Examination

A written comprehensive examination is given by the Environmental Health Sciences faculty. The examination evaluates the student's knowledge of the fields covered by the core courses. The student must demonstrate competence in the core subjects. All program faculty members can participate in preparing examination questions, but generally only those who have taught in the core courses do so. The comprehensive examination is open book/open note. A scientific calculator is permitted, but laptops and other electronic devices are not permitted. The exam is given in two days for a total of ten hours, with 5 problems each day. Students are required to answer at least 6 of the 10 questions. Responses are graded pass/fail. The student about to take this examination is encouraged to consult faculty to get an idea of the nature of the examination and sample questions. Students narrowly failing the examination will be permitted to retake the examination within 2 months. Failure on the second attempt of the retake leads to disqualification from the MS program.

After completion of the examination, the student can advance to candidacy for the Master of Science degree. **The student must advance to candidacy no later than one quarter before the quarter in which the degree is expected to be awarded. The deadline for submitting the advancement to candidacy form is 30 days before the opening of the quarter in which the degree is expected to be awarded.** This Plan requires 4 quarters to complete (Fall, Winter, Spring, and Summer quarter).

Environmental Health Sciences Course Descriptions

EHS 201: Case Studies in Environmental Toxicology (4) S

Interactive case studies in environmental toxicology. Prerequisite: EHS 206A-B, or consent of instructor. (Staff)

ESH 202: Principles of Environmental Toxicology (4) F

Key principles of toxicology will be discussed: quantitative dose-response relationship; toxicant-target interactions; complete in vivo metabolism of xenobiotics by mammalian systems; integration of organ responses to toxic agents.(Kitazawa)

EHS 203: Psychosocial Occupational Epidemiology (4) W

Critical review of the internal and external validity of epidemiological studies on psychosocial work environment and diverse health outcomes. Students are required to submit critical reviews on assigned papers. (Choi)

EHS 204: Neurotoxicology (4) F, even years

The effects of various harmful chemicals upon nervous system function. Emphasis given to the molecular events underlying neurological damage and to the relation of such processes to basic mechanisms of neurobiology. (Bondy)

EHS 206A/B: Target Organ Toxicology (4,4) W,S

Analysis of the responses occurring in individual organs of man and animals exposed to environmental chemicals at toxic levels; distinctive structural and functional features of ten organ systems are presented in terms of phenomena, mechanisms of action, and methods of study. (Staff)

EHS 212: Inhalation Toxicology (4) W, even years

The principles and practice of laboratory inhalation toxicology. Topics include aerosols, gases, respiratory tract structure and function, lung defenses, aerosol deposition exposure techniques, characterization of exposure atmospheres, experimental designs, animal models, research ethics, and regulations and guidelines. (Phalen)

EHS 220: Industrial Toxicology (4) S, odd years

Analysis of responsibilities toxicologists have in industry, including product safety generating material safety, data sheets, animal testing, ecotoxicological testing, risk/hazard communication, and assisting industrial hygienists and occupational physicians; emphasis on interdisciplinary nature of industrial toxicology and communication skills. Prerequisite: TOX 206A-B. (Lambert)

EHS 264: Environmental Health Sciences I: Introduction to Environmental Health Science (4)

Convergence of agents (chemical, physical, biological, or psychosocial) in the environment can emerge as diseases influenced by social, political, and economic factors, allowing them to become rooted in society. How these agents from various spheres come together and impact human health. Prerequisite: graduate standing or consent of instructor. Same as Public Health 264/Environmental Health, Science, and Policy E224/Epidemiology 264. (Wu)

EHS 269: Air Pollution, Climate, and Health (4)

Emission of air pollutants into the atmosphere, physical and meteorological processes that affect transport, and influence on global warming. Concepts of how and where people are most exposed, and how exposures and health effects differ in developed and developing regions. Same as Epidemiology 270/Public Health 269 and Environmental Health, Science, and Policy E247. (Wu)

EHS 270: Human Exposure to Environmental Contaminants (4)

Introduces founders of conceptual thought that environmental contaminants can impact health. Theory and principles of exposure assessment, the continuum from emissions of a contaminant into the environment to evidence of health effects in a population. Same as Epidemiology 270/Environmental Health, Science, and Policy E248/Public Health 270. (Edwards)

EHS 275: Environmental Modeling and Risk Assessment (4)

This course surveys the general principles, basic mathematical methods, and practices of environmental modeling and human health risk assessment. Topics include advection-dispersion models for contaminants in air and water, uptake by plants and animals, dose-response modeling, risk management, and risk perception. Although the emphasis is on environmental toxicants, infectious disease transmission models are briefly introduced. Students conduct an original risk assessment as a final group project. Same as Public Health 275 (Bartell).

EHS 290: Independent Study in Environmental Health Sciences (2-12) F,W,S

With consent from a faculty member who will supervise the program, a student may receive credit for individual study in some area of toxicology, culminating in the completion of a scholarly paper on the subject. May be repeated for credit. (Staff)

EHS 294: Occupational Health Psychology (4) S

Introduction to psychosocial work environment that affects the health and productivity of workers. Work stress models, exposure assessment of work stressors and instruments, health effects of work stressors (e.g., cardiovascular responses), and the management and prevention of work stress will be reviewed and discussed. (Zimmerman)

EHS 297: Advanced Topics in Occupational Toxicology (2) F,W,S

Discussions with clinical and research faculty in Environmental Health Sciences and occupational medical on current toxicology problems in the workplace and critical review of current publications in the field. Journal club/seminar format. (Khan).

EHS 298: Environmental Health Sciences Seminar (2) F,W,S

Presentation and discussion of current research problems and issues by students, postdoctoral fellows, faculty, and guests, covering the broad research and policy areas of Environmental Health Sciences. (Luderer)

EHS 299: Research Problems (1 to 12) F,W,S

Research work for the M.S. thesis or Ph.D. dissertation. (Staff)

Graduation & Diploma Information (Ph.D. & MS)

A student who expects to complete all requirements for an advanced degree in a given quarter must be advanced to candidacy for that degree 30 days prior to the first day of the quarter in which the degree will be conferred. Students must complete the Graduate Student Diploma and Commencement form and are responsible for providing accurate information that will be printed on their diploma and in the commencement program.

Questions regarding eligibility to participate in spring commencement and the logistics of commencement exercises should be directed to the Office of Graduate Studies, and the Commencement Office.

Important Filing Deadlines**Final Degree Paperwork**

Fall 2020	December 11, 2020
Winter 2021	March 12, 2021
Spring 2021	June 4, 2021
Summer 2021	September 8, 2021

NO EXCEPTIONS ALLOWED

To meet the final degree deadline, all final degree paperwork must be submitted to Graduate Division by 5pm on the filing deadline.

Advancement Deadline (Ph.D. & MS)

Fall 2020	December 18, 2020
Winter 2021	March 19, 2021
Spring 2021	June 11, 2021
Summer 2021	TBD

For questions or more information, [email the EHS Department](#), call 949-824-1244, or [click here for updated filing deadlines](#).

Grants, Awards, & Scholarships

EHS students are eligible to apply for prestigious Association of Schools and Programs of Public Health (ASPPH) internships and fellowships while enrolled and post-graduation. Start an ASPPH Fellowship application [here](#) and sign up for ASPPH's weekly newsletter [here](#).

Academic Requirements, Policies, & Procedures

Continuous Enrollment Policy

For fall, winter, and spring quarters, enrollment in:

- 12.0 units or more is considered full-time status
- 0.5 – 8.0 units is considered half-time status

Advisors

The graduate school experience is about more than just academics. Pursuing a graduate degree while managing work, family, and a social life is not easy, and you may feel overwhelmed at times. The good news is that the faculty and staff of the Program in Public Health are committed to your success as a student and a future public health professional. Your advisors can address issues of school/life/work balance, career goals, long-term educational goals, getting involved in the university, and much more. The best place to start if you need help is with [Graduate Student Affairs](#). They can provide you with information about campus resources or identify Public Health faculty and staff who can answer your questions about life during and after graduate school.

UCI Graduate Division
 Office: 120 Aldrich Hall
 Telephone: 949-824-4611
 Email: grad@uci.edu

Department Chair

The Department Chair is a faculty member who serves as the academic leader and administrative head of the department. The Chair should be receptive to questions, complaints, and suggestions from members of the department, both faculty and staff personnel, and from students, and should take appropriate action on them.

Faculty Mentor

Each EHS student is assigned to a Faculty Mentor. Your Faculty Mentor will advise you on broader educational and career goals and assist with the selection of core and elective courses each quarter.

Graduate Student Advisor

The Graduate Student Advisor tracks degree progress, advises students about program requirements, assigns teaching assistant and reader positions, and refers questions to other staff, faculty, or campus services.

CEPH Competencies & Course Learning Outcomes

The Program in Public Health is fully accredited by the [Council on Education for Public Health \(CEPH\)](#) and is a member of the [Association of Schools and Programs of Public Health \(ASPPH\)](#). Click the hyperlinks for more information on CEPH and ASPPH.

Standards for Normal Academic Progress

In accordance with the policies of the Graduate Council, the Program in Public Health has set normative and maximum times to degree for the EHS program. The normative time is the average or expected amount of time it will take a student to complete the degree, and the maximum time is the most amount of time we can allow students to complete the degree.

	Normative Time	Maximum Time
MS (Plan 1)	5 quarters	7 quarters

MS (Plan II)	4 quarters	
PhD	5 years	7 years

Academic Probation & Disqualification

Students may be placed on academic probation for unsatisfactory progress toward the completion of degree requirements. Unsatisfactory progress may include, but not be limited to the following:

1. an overall grade point average below 3.0;
2. failure to complete courses or examinations satisfactorily within the period of time specified by the graduate program;
3. failure to pass a required examination in two attempts.

The Director of Academic Affairs or Graduate Student Affairs Officer may initiate procedures to place the student on academic probation. In such cases the student typically will receive written notice of the deficiencies and a deadline for remedying these deficiencies (i.e., for completing specific degree requirements). Failure to meet this deadline can result in a petition to the Dean to terminate the student from graduate study in the program.

Enrolling in Excess Units

If you wish to enroll in more than 16 units per quarter, you must obtain advance approval from your Faculty Mentor and the Graduate Advisor. To start the process, please print and fill out the EHS Petition for Exception and the Academic Planner. Both forms are available on our website. The main purpose of the planner is to show your mentor how many units you intend to take each quarter and not the exact titles of the courses. Your faculty mentor will discuss with you the appropriateness of your plan and make sure you understand the rigorosity of taking excess units. The petition only needs to be filled out once, even if you enroll in excess units over multiple consecutive quarters. If your cumulative GPA falls below a 3.0, you will not be allowed to enroll in excess units in any subsequent quarters until you have returned to good academic standing. Students will be informed if their schedules need to be changed as a result of poor grades from the previous quarter. You will be notified of the results of your petition by email if the petition is not approved. If your petition is approved, the Graduate Student Affairs Office will increase your unit limit in the enrollment system.

Graduate Assistantships

Many academic units offer research assistantships to outstanding graduate students, either as Graduate Student Researchers (GSRs) or Graduate Student Assistant Researchers (GSARs). During the academic year, GSRs and GSARs may be appointed for a maximum of half-time service (220 hours/quarter). Registration as a full-time student (12 units) is required, and students must meet academic eligibility requirements for grades, GPA and satisfactory progress. The duration and extent of such appointments vary by academic unit. Students should contact their departments for further information.

Graduate Student Researcher (GSR)

An academically qualified and registered graduate student, enrolled full-time, who performs research related to their degree program in an academic department or research unit under the direction of a faculty member or authorized Principal Investigator. The Graduate Student Researcher may or may not collaborate in the publication of said research.

Please visit [Important Information for GSRs](#) and updates regarding GSR [rights](#) & [FAQs](#).

Teaching Assistantships

Graduate students in Environmental Health Sciences are eligible for teaching assistantships in the Program in Public Health, or the School of Biological Sciences if their units are not able to fill all of their teaching assistantship positions with their own graduate students.

Academic Requirements

- A minimum GPA of 3.0
- Satisfactory academic progress towards degree objective
- A letter grade of C, S, or above in all courses completed in the last three quarters
- No more than two (2) Incomplete grades (except where stricter school policies apply) in the last three quarters

GSR Appointment Benefits

Payment of Fees/Tuition (Remission)

Campus policy regarding GSR/GSAR fee and tuition remission applies to all students employed in the GSR/GSAR series with an appointment of at least 25% time for the entire quarter. Each eligible student's total assessed fees/tuition (and non-resident supplemental tuition, if applicable), must be paid as a condition of their GSR/GSAR appointment. Charges are to be debited directly to applicable extramural awards or other funding source(s) paying the student's salary when the student registers each quarter.

Please refer to Registrar's site for the [Schedule of Fees/Tuition](#).

Leave Guidelines

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. Students who are considering an academic leave of absence should consult with the Graduate Advisor.

Academic Integrity

Academic Standards

The following excerpt is taken from the UCI General Catalogue on Scholastic Requirements for Graduate Students:

A graduate student is expected to make satisfactory progress toward an approved academic objective, as defined by the faculty of the program in accordance with policies of the Graduate Council, to maintain a satisfactory grade point average for all work undertaken while enrolled in graduate study, and to maintain academic progress within the required time to degree as established by the respective academic program. Satisfactory progress is determined on the basis of both the recent academic record and overall performance. A graduate student normally is expected to complete satisfactorily at least eight units of academic credit applicable to the graduate program in each regular academic session (unless on an approved leave of absence), and satisfy all requirements of the academic program according to an approved schedule. 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. However, a UCI course in which a grade of B- is earned may be accepted, via a formal petition process, in partial satisfaction of the degree requirements if the student has a grade point average of at least 3.0 in all courses applicable to the degree. 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.

A student's academic progress ordinarily is evaluated on the basis of the academic record, time-to-degree, and the professional judgment of the faculty. A few weeks after the end of a quarter, an updated copy of each enrolled student's permanent academic record is available from the Registrar. This record lists all UCI courses for which a graduate student was enrolled (including courses taken through the Intercampus Exchange Program), the grades assigned, and the cumulative grade point average. This record also includes formal candidacy for an advanced degree, degrees conferred, certain examinations passed, unit credit accepted from other institutions, and other important academic information.

A graduate student who has not demonstrated satisfactory academic progress is not eligible for any academic appointment such as Reader, Tutor, Graduate Student Researcher, Teaching Associate, or Teaching Assistant, and may not hold a fellowship or other award which is based upon academic merit.

Academic Honesty

The following excerpt from Graduate Policies and Procedures explains the university's position on academic honesty. We strongly recommend that you familiarize yourself with the academic dishonesty policies and procedures. The policies apply equally to electronic media and print, and involve text, images, and ideas. The policy in its entirety can be found [here](#).

The consequences of failing to uphold the academic honesty policy are published in the *UCI General Catalogue*, [and are also available here](#).

Students are expected to become familiar with this policy. Students who fail to uphold their fundamental academic obligation are subject to consequences that might range from lowering a grade to campus-wide sanctions, up to and including dismissal. Examples of conduct that fall under the aegis of the policy on academic honesty include, but are not limited to, plagiarism, cheating, stealing of exams, falsifying the record of their work, or collusion in such dishonest activities. When faculty suspect academic dishonesty, they need to follow due process guidelines and investigate their suspicions promptly and fairly. Minimally, due process requires that suspected students be given clear and prompt notice of the suspicion and the opportunity to confront or rebut the evidence that gave rise to the suspicion. Some procedures for implementing the policy can also be found in the UC-UCI document *Policies Applying to Campus Activities, Organizations, and Students*.

Learn at UCI

University Library

The [UCI Libraries website](#) is a great place to start to learn about the range of services that we offer, specific [services and resources available during COVID-19](#) curtailments, and our overall [phased reopening plan](#). Highlights include:

- [Reservable study space](#), in the Science Library Multimedia Resources Center and Libraries Gateway Study Center, including a variety of seating options (individual study rooms, computer workstations, socially distanced seating at tables and carrels).
- Increased access to digital library resources for those studying remotely or unable to visit the Libraries.
- [Curbside delivery and pick-up options](#) at Langson Library for some physical materials that cannot be accessed in a digital format.
- Remote assistance from expert librarians by [chat](#), [email](#), or scheduled in-depth [Research Consultations](#).
- [Remote reference and digitization of Special Collections and Archives materials](#).

You are encouraged to contact [your Subject Librarian](#) for assistance if you encounter any challenges accessing the resources that you need for teaching, learning, or research.

Public Health Librarian

Hector Perez

Office: 232 Science Library

Telephone: 949-824-6957

Email: perezhr@uci.edu

Career Development Service

There are multiple career development resources available at UCI. The academic department frequently emails unsolicited job listings to students and helps arrange talks from local public health agencies and private companies. The UCI Career Center has a dedicated career advisor for graduate students, though you are welcome to see any of the career advisors for assistance. The Career Center also offers mock interviews on camera, resume assistance, and workshops on the job search process.

Graduate Student Career Consultant

Neda Moayedi

Office: 100 Student Services 1

Telephone: 949-824-6881

Email: nedam@uci.edu

IT Services

Not having the right equipment to access your coursework can make them even more difficult. To help alleviate the challenge of securing appropriate computer equipment for remote learning, [UCI has secured a number of laptops for free loan](#) during each quarter to students who don't have access to key remote learning tools.

Graduate & Postdoctoral Scholar Resource Center

Graduate Scholar Resource Center

Leigh Poirier Ball

Office: 3100 Gateway Study Center

Telephone: 949-824-2207

Email: lpoirier@uci.edu

Financial Support

Tuition & Housing

All tuition, fees, and charges are subject to change without notice, and the University may impose additional tuition and fees. Consult the [University Registrar's website](#) for the most up-to-date information. Graduate student tuition [information about tuition can be found here](#).

More than 14,000 students choose to live on campus to take advantage of award-winning facilities, access to convenient campus resources. [Housing information can be found here](#).

Financial Aid

Graduate students seeking information about receiving financial support are strongly encouraged to speak with the academic departments or professional school to which they have applied and/or been admitted. To be considered for the specific federal loan programs listed below, all **domestic** (e.g., non-foreign) graduate students must complete the [Free Application for Federal Student Aid \(FAFSA\)](#).

Financial Aid Counselor

Roman Cardona

Office: 102 Aldrich Hall

Telephone: 949-824-0290

Email: rcardon1@uci.edu

Need-based Aid and Loans

Need-based aid and loans can come from private organizations or from the government. Banks can provide private loans and organizations may offer need-based scholarships for exceptional students. Applicants wishing to receive need-based aid (including government aid and/or federally subsidized loans) must fill out a FAFSA form. You must fill out the [FAFSA](#) by the California priority deadline to receive full consideration for many forms of aid, including scholarships and UCI Grants. It is strongly recommend that you fill out a FAFSA even if you do not think you are eligible for aid. International students will not be able to complete the online FAFSA, but should inquire with the department and our Financial Aid Officer after admission. While international students are not eligible for federal financial aid, they may be eligible for certain types of university fellowship funding, departmental awards, and/or employment as a teaching assistant or graduate student researcher.

Fellowships and Grants

Fellowships and grants are awards that do not have to be paid back. The award can be institutional (offered by the university or by the Program in Public Health) or "portable" (external funding offered by an organization or agency). Many deadlines for fellowships and grants occur early in the academic year, so it is important to prepare your materials in advance and apply early. For departmental grants, the Graduate Student Affairs Officer will notify you of any deadlines and application procedures.

We also suggest that [students visit this page](#) on financing your degree from the Association of Schools and Programs of Public Health.

Campus Employment

The Graduate Division restricts all on-campus employment for graduate students (including staff employment) to 50% or less time while enrolled full-time. Part-time students are allowed to work 25% time or less. Exceptions to this policy are rarely approved by the university. Limitations to on-campus employment for graduate students are explained in further detail on page 33 of the Graduate Policies and Procedures handbook. Students employed by the University of California who are interested in applying for a reduced fee waiver [should pay special attention to the employment limitations](#).

You may also wish to pursue part-time or full-time employment to help pay for school. If you wish to work full-time, we strongly encourage you to attend school part-time to ensure that you have adequate time to study for your classes. To search for jobs on- or off-campus, we recommend that you try ZotLink, the job listings database of the UCI Career Center. You must be a current student and have a UCInetID login to search the database. On-campus jobs are conveniently located and may be more willing to accommodate your course schedule. There are also a number of off-campus public health-related organizations and businesses in Orange County that may be able to provide you with employment opportunities.

Safety & Security

Speech & Advocacy

The University is committed to assuring that all persons may exercise the constitutionally protected rights of free expression, speech, assembly, and worship. [Please read the full policy here](#).

Nondiscrimination Policy

The University is committed to a policy against legally impermissible, arbitrary, or unreasonable discriminatory practices. All groups operating under the authority of The Regents, including administration, faculty, student governments, University-owned residence halls, and programs sponsored by the University or any campus, are governed by this policy of nondiscrimination. The intent of the University's policy on nondiscrimination is to reflect fully the spirit of the law. In carrying out this Policy, the University also shall be sensitive to the existence of past and continuing societal discrimination. [Please read the full policy here.](#)

Disability Statement

The University of California, Irvine, is committed to providing a barrier-free environment for learning and an electronic environment that is accessible to everyone, including individuals with disabilities. If you have a disability and feel you need accommodations in this program or a course, please contact the [Disability Services Center](#) (DSC). DSC approved accommodations will be provided for students who present a Faculty Notification Letter from the DSC.

Diversity Statement

The University of California, Irvine, in accordance with applicable Federal and State law and University policy, does not discriminate on the basis of race, color, national origin, religion, sex, gender identity, pregnancy, physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services. The University also prohibits sexual harassment. This nondiscrimination policy covers admission, access, and treatment in University programs and activities.

Counseling Services

The Counseling Center is the primary counseling and mental health agency for UC Irvine students. The Center strives to assist students with their academic success by developing dimensions of well-being. The Counseling Center provides short term time limited individual, couples, group and family counseling. The Center also assists students with urgent care and some psychological testing. Psychiatric evaluation and intervention are available on a limited basis for students concurrently seen in therapy. A wide range of workshops and courses related to interpersonal and developmental issues including cross cultural interaction, intimacy and friendships, interpersonal communication, and coping and resiliency are offered annually.

In addition, the Counseling Center provides support to the University community through crisis intervention, training regarding mental health issues, and outreach and consultation services. The Center's services are available and free of charge to currently registered students. Students with chronic and severe mental health issues needing long term and extensive services are referred to other appropriate community providers.

[Counseling Center](#)

Office: 203 Student Services 1

Telephone: 949-824-6457

Website: <https://counseling.uci.edu/>

Grievances Policy

The organizations listed below assist in resolving disputes within the University community:

- Office of Graduate Studies: gives guidance on formal and informal methods of resolving conflicts.

- UCI Ombudsman: independently, objectively, and confidentially assists in mediating and resolving conflicts.
- UCI Mediation Program: a volunteer program for dispute resolution, facilitated through the Ombudsman Office.
- UAW (International Union, United Automobile, Aerospace and Agricultural Implement Workers of America [UAW] AFL-CIO and its Local Union 2865) represents UCI graduate students that have teaching assistantship, reader, or tutor appointments (whether or not they are members of the union).
- UCI Dean of Students: investigates allegations of physical abuse, threats of violence, or conduct that threatens the health or safety of any person or university property.

Problems relating to academic policies should be resolved at the level of the academic unit where possible. If this is not possible, such problems should be addressed in accordance with the Student Academic Grievance Procedures.

Campus Organizations

As a graduate student in the Program in Public Health, there are numerous opportunities available for you to become involved in the university and in your home department. We know that many of you were active in community service and school organizations at your undergraduate institutions and we hope that you will continue to contribute here at UC Irvine. This guide lists just a few of the opportunities you will have to get involved and give something back to your fellow students, staff, faculty, and community.

PPH Organizations

Curriculum Committee

[The Curriculum Committee](#) meets periodically to plan and coordinate the Public Health curriculum and has one student member. The student member will be chosen by Public Health faculty to convey student concerns about the EHS curriculum.

Graduate Liaison

This student is elected by the graduate students each fall to represent all graduate students in the program. While we welcome feedback on our program from all students, the Graduate Liaison can bring an issue to the attention of faculty and staff if a student does not want to convey their opinion directly. The Graduate Liaison represents the students as the student member of the Graduate Committee, which oversees Public Health graduate programs, and attends monthly faculty meetings. This student also assists the department in coordinating visits from colloquium speakers if funds allow. The Graduate Liaison is elected by the end of the fall quarter.

Campus Organizations

Graduate Public Health Association

The Public Health Association (PHA) was organized by students in our undergraduate majors to promote awareness of public health issues on our campus and in the community and to educate its members about educational and career opportunities in our field. There is a Graduate Student section of the PHA with its own officers and activities. [More information can be found here.](#)

SIPHERS (Students at Irvine Public Health Emergency Response and Surveillance)

Members of SIPHERS work closely with the Orange County Health Care Agency to provide assistance to the agency during surge periods such as outbreaks. The students periodically visit the agency during the school year to train with agency employees and attend seminars.

Associated Graduate Students

The Associated Graduate Students (AGS) is the recognized graduate student government at UCI. AGS plans social activities, advocates for graduate students in campus planning and policy, and re-negotiates the GSHIP insurance plan annually. All graduate students in good standing are eligible to sit on AGS committees. The Council, the legislative arm of AGS, also has one seat available for every 100 students in each school. If you are interested in becoming a council member, [please send an email here](#). The GSHIP council is an especially informative experience for those considering careers in Health Policy and Management.

Helpful Links

- [Graduate Department Administrators and Staff](#)
- [UC/UCI Student Policy Manual \(section 170.00\): fees \(including refund schedules\), privacy policies, disclosure of information, "time to degree" policies](#)
- [UCI Associated Graduate Students: the official representative body for all graduate students and professional students at UC Irvine](#)
- [UCI Catalogue Appendix: information on access to, and release of, student records](#)
- [UCI Disability Services Center: information and assistance for students with disabilities](#)
- [UCI Graduate Policies and Procedures: information on academic policies and related administrative procedures, including but not limited to:](#)
 - academic appointments and graduate student employment
 - academic standards
 - examinations
 - leave of absence/part-time enrollment
 - residency issues
 - transfer of credit
- [UCI Health and Wellness Services](#)
- [UCI International Center: information and assistance for international students, faculty, and visiting researchers](#)
- [UCI Office of Equal Opportunity and Diversity: policies and procedures regarding discrimination, retaliation and sexual harassment](#)

Comments & Suggestions

Thank you for reading the EHS Student Handbook. Our goal is to make this Handbook informative and easy to use. We would appreciate any comments or suggestions that will help us to enhance this Handbook.

[Please send your comments and suggestions regarding this Handbook here.](#)

This link is only for Handbook comments. Program advice or assistance cannot be obtained from this e-mail address.