

DEPARTMENT OF
ENVIRONMENTAL HEALTH SCIENCES

MASTERS STUDENT HANDBOOK



M.S.

M.P.H.

M.P.H./MURP

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Introduction

The goal of the Department of Environmental Health Sciences is to promote human health through a healthy environment. Human health is profoundly shaped by our environment. The research and educational activities of the Department's faculty and students range from studying the impact of biological, chemical, and physical hazards on human health to understanding how human activities impact the environment. Our graduates are scientists and professionals capable of identifying and measuring agents of environmental concern; evaluating the health, environmental, and all other impacts of such agents; developing means for their effective management; and evaluating alternative policies directed at improving and protecting environments. This training is accomplished through degree programs which offer specialized study in selected academic areas of environmental health sciences such as air quality, environmental biology, environmental chemistry, environmental management/policy, industrial hygiene, toxicology, and water quality. Graduates of the department have pursued careers in both the private and public sectors as researchers, educators, managers, policymakers, and practitioners.

Scope & Objectives:

The field of EHS is undergoing rapid evolution due to rising public and policy awareness of the importance and impact of the environment on health, as well as to the impacts of humans on the environment. With disasters such as Hurricane Katrina and the Gulf Oil Spill, there is greater need for scientists and professionals who understand the implications of these outcomes on the environment and human health. The department offers both professional (M.P.H.) and research-oriented degrees (M.S. and Ph.D.). Academic areas of specialization for the M.S. and Ph.D. degrees include air quality, environmental biology, environmental chemistry, environmental assessment; environmental management/policy, industrial hygiene, toxicology, and water quality. In addition, the Environmental Health Sciences Department and the Department of Urban Planning offer a concurrent plan of study (M.P.H./M.U.R.P.) providing an integrated curriculum for students interested in interdisciplinary training on the public health consequences of urban planning. There is also an interdepartmental degree program (IDP) that is housed in the EHS department: the [Molecular Toxicology Program](#) (Ph.D.).

The Environmental Health Sciences Department houses a number of organizations including: the UCLA Center for Occupational and Environmental Health (COEH), the Southern California Education and Research Center (ERC), and the Sustainable Technology and Policy Program (STPP).

Research:

EHS is a leader in the health effects of air pollution and vehicular emissions, industrial hygiene, toxicology (including ecotoxicology and risk assessment), children's health and the environment, environmental biology and chemistry including water quality, air quality, built environment and health, agriculture and pesticide issues, teratology and carcinogenesis, environmental health policy, globalization, as well as other areas.

Community Service:

The EHS faculty strives to maintain a strong commitment to outreach efforts by sharing research results and engaging communities. Faculty members are involved in a number of federal, state, local, community and academic committees. They also offer technical assistance and testify and comment on key environmental issues. A number of projects involve collaborations with community based organizations. Researchers at UCLA work with community groups to develop measurements of impact as it relates to air pollution, traffic and pedestrian safety and create maps of these impacts within the community.



Career Opportunities:

A graduate degree in environmental health sciences equips students with not only the training to identify and measure environmental agents that impact human health, but also to evaluate policies designed to improve and protect environments and health. Graduates of the department generally pursue careers in the private or public sector as researchers, educators, managers, policymakers, policy analysts and and/or practitioners.

Academic Information:

Graduate Degrees Offered:

- M.S. in Environmental Health Sciences
- Ph.D. in Environmental Health Sciences
- M.P.H. with specialization in Environmental Health Sciences
- MURP/M.P.H.: Urban Planning, MURP/Public Health, M.P.H. with a specialization in Environmental Health Sciences

The M.S. and Ph.D. are research-oriented degrees, while the M.P.H. is a professional degree that emphasizes Public Health applications.

The M.P.H. and M.S. degrees are typically two year programs, but can be completed in less time by well-prepared students. The M.P.H. emphasizes Public Health, exposing students to many important areas of health research. The M.S. gives the students a strong theoretical foundation, as well as applications, and is the best choice for any student planning to go on for a doctorate.

The MURP/M.P.H.: Concurrent students pursue studies in both schools/departments and following three years of full time study earn both the Master of Public Health with an emphasis in Environmental Health Sciences and the Master of Urban and Regional Planning.

Admissions Requirements:

Applicants should meet the University requirement of a Bachelor's Degree with a minimum 3.0 grade point average (B) and satisfactory performance on the Graduate Record Exam (GRE) taken within the last five years. There is no minimum combined score requirement for the GRE. Foreign students must have a satisfactory TOEFL score, taken within the last three years. MCAT

or DAT scores are accepted only for applicants already holding MD or DDS degrees. In addition to the [University's minimum requirements](#) and those listed above, all applicants are expected to submit the departmental application through the [UCLA Graduate Division](#) and the Schools of Public Health Application Service ([SOPHAS](#)).

Additional admissions requirements for the MS, MPH, & PhD degrees in Environmental Health Sciences are as follows:

Desired Qualifications: In addition to meeting the [University's minimum requirements](#), students should have a bachelor's (or master's) degree in public health, environmental health, life sciences, physical sciences, engineering, environmental science, or a related field.

Applicants with non-science majors who meet the following course work requirements will be considered for admission:

Course Work:

- 1 university-level course or equivalent in Calculus, Linear Algebra, or Statistics
- 1 university-level course in Chemistry or equivalent
- 1 university-level course in Biology or equivalent

Students who do not have the prerequisites at the time of application may take equivalent courses at UCLA in their first year.

Prospective doctoral students should contact faculty doing research in their field of interest before applying to the doctoral program.

Industrial Hygiene Admissions Requirements:

Applicants who have completed one undergraduate course each in Chemistry, Biology, and Calculus (or equivalent) or have an undergraduate degree in environmental science, engineering or equivalent are encouraged to apply for the Industrial Hygiene (IH) program. This is an area of specialization within the Environmental Health Sciences program. The M.S. and M.P.H. programs in IH are fully accredited by the Applied Science Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET/ASAC), <http://www.abet.org>, the only such IH program in California. Applicants who are admitted and who are US citizens or holders of Green Cards qualify for fees and stipend support from the NIOSH Southern California Education and Research Center. For questions about the Industrial Hygiene program and curriculum, please contact the IH Director, Professor Shane Que Hee at squehee@ucla.edu.

MURP/MPH: Applicants must apply and be admitted to both the M.P.H and MURP programs. Further details regarding coursework and program structure may be obtained from the admissions office or graduate adviser in either the department of [Urban Planning](#) or the department of [Environmental Health Sciences](#).

How to Apply: Detailed information on the application process and procedures can be found at: <http://ph.ucla.edu/prospective-students>.

All application materials for the School's graduate programs are available online for electronic submission at <https://grad.ucla.edu/admissions/> and at www.sophas.org. Students are admitted in the Fall Quarter only.

Transferring into the Doctoral Program: Current master's students who are interested in pursuing a doctoral degree may submit a blue petition to transfer into the doctoral program after their first year in residence. The student must have at least a 3.5 GPA and must identify a faculty member who is willing to serve as their advisor. An updated statement of purpose must be submitted along with the blue petition. Admission into the doctoral program is not guaranteed.

Standards and Procedures for Graduate Study at UCLA:

General regulations concerning graduate courses, standards of scholarship, disqualifications, appeals, leaves of absence, normal progress toward degree, withdrawals and other matters can be found at: <http://www.gdnet.ucla.edu/gasaa/library/spintro.htm> The site also provides detailed information and sets forth general policies regarding completion of degree requirements, master's and doctoral committees, examinations and foreign language requirement.

Laboratory Safety Training:

Training requirements depend on the nature of work being done. Employees, students, and supervisors/Principal Investigators (PIs) should select training courses based on the types of hazards that may be encountered. Everyone must be properly trained before beginning their work, given new assignments, or when new hazards are introduced.



All laboratory personnel who work with or around hazardous materials are required to take the Laboratory Safety Fundamental Concepts class offered by EH&S, plus additional classes specific to the hazards of their laboratory. This requirement also applies to visiting and/or part-time researchers. Laboratory safety training from other institutions or universities does not substitute for UCLA lab safety training. The conduct of the research must meet the current UCLA regulations relative to human subjects, animal experimentation, radioactivity, and chemicals/physical/biological hazards as appropriate.

Interdisciplinary research is encouraged.

For more information or to enroll in a laboratory safety training course, visit the Environmental, Health & Safety website: www.ehs.ucla.edu.

Master's Degree Program Requirements:

Please refer to the [UCLA General Catalog](#) and the [Graduate Division website](#) for more detailed information regarding the degree requirements for the M.P.H. with a specialization in Environmental Health Sciences.

Master of Science in Environmental Health Sciences (M.S.):

The MS in Environmental Health Sciences is a research oriented degree that includes the preparation of a thesis or comprehensive examination and a major written report.

Students may choose to concentrate on one of the following areas of academic focus: air quality; environmental biology; environmental chemistry; environmental health practice and policy; industrial hygiene; toxicology; or water quality. Interdisciplinary research is encouraged.

Minimum Units Required: 59 units

Time-to-Degree: Normative time-to-degree from initial enrollment to graduation is six quarters.

Course Requirements:

Students must complete at least one year of graduate residence at the University of California and a minimum of 10 full courses (40 units), at least five of which must be graduate courses in the 200 or 500 series. Only one 596 course (4 units) and one 598 course (4 units) may be applied toward the total course requirement; only four units of either course may be applied toward the minimum graduate course requirement. Environmental Health Science 597 may not be applied toward the degree requirements.

Courses numbered in the 300 series are professional courses or pre-professional experience and are not applicable toward requirements for graduate degrees.

Sequence of Courses:

Students in the MS program should take Environmental Health Sciences C200A and Biostatistics 100A in their first quarter and Environmental Health Sciences C200C and Biostatistics 100B in their second quarter. They may also take additional courses in each of those quarters.

EHS required courses include:

- Biostatistics 100A: Introduction to Biostatistics (Fall, Spring)
- Biostatistics 100B: Introduction to Biostatistics (Winter)
- Epidemiology 100: Principles of Epidemiology (Winter, Spring)
- EHS C200A: Foundations of Environmental Health Sciences (Fall)
- EHS C200C: Foundations of Environmental Health Sciences (Winter)
- EHS 201: Seminar on Health Effects of Environmental Contaminants (Fall)
- EHS C240: Fundamentals of Toxicology (Spring)
- EHS 411: Environmental Health Sciences Seminar (Fall, Spring). One quarter each year is required
- EHS 596 (Comp/Report Plan) OR 598 (Thesis plan): 4 units are required*
- Students must take one advanced laboratory course (3 or more units) on a topic in or related to environmental health sciences, for example Environmental Health Sciences 207, 410B, 252F, Microbiology, Immunology, and Molecular Genetics 100L, or Molecular, Cell, and Developmental Biology 104AL

- 18 units of upper division (200 level) or graduate level (400) elective courses. These courses may be taken in related fields outside of the department, but should be selected in consultation with your Faculty advisor.
- Public Health course: Students who have not previously taken and passed a course in Public Health at the undergraduate or graduate level are required to complete one of the following at UCLA:
 1. Public Health 150: Contemporary Health Issues
 2. Health Policy & Management M242: Determinants of Health
 3. Attend 6 FSPH Grand Rounds presentations over the course of 2 years and submit a report for each seminar attended. Students must consult with the Department's Student Affairs Officer, prior to attending the first presentation, if they choose this option

Requirement for Elective Courses:

MS students may not count 296, 596, 597, 598, or 599 towards the elective requirement.

In addition to the above course requirements MS students must either complete a thesis (Plan I) or (Plan II) complete a project and take a comprehensive examination.

MS Thesis Plan:

If the thesis option (Plan I) is selected, a thesis committee of at least three faculty members must be established. The committee is formally nominated by the submission and approval of the [*Nomination of Master's Committee Form*](#). Guidelines for nominating the committee can also be found on this form. The committee approves the thesis prospectus before the student files for advancement to candidacy and the final thesis needs to be approved before graduation. An externally peer-reviewed publication (e.g. journal article or book chapter) completed while a student, may be submitted as the thesis, with appropriate format modification.

While preparing their thesis, students must enroll in *EHS 598: Master's Thesis Research* for an appropriate number of units. At least 4 units are mandatory for graduation.

MS Thesis research usually begins in the summer before the student's second year.

Every master's degree thesis plan requires the completion of an approved thesis that demonstrates the student's ability to perform original, independent research.

For detailed information on how to prepare and file your thesis, visit:

<http://www.gdnet.ucla.edu/gasaa/etd/index.html>.

MS Comprehensive Examination/Report Plan:

If the comprehensive examination/report option (Plan II) is selected, the candidate must pass a comprehensive examination on the major area of study. This examination is prepared by a committee of at least three faculty members, two of which must hold academic appointments in the EHS Department. The third member can be from an outside Department or from within EHS. If the examination is failed, the student may be reexamined once.

In addition, the student must complete a research activity under their advisor’s supervision and prepare a comprehensive report, which must be approved by their advisor and one other faculty member. The research subject should be proposed and approved before the beginning of the quarter during which the research will be carried out. It can be an experimental, field, theoretical, library, modeling or computer study. The student also has the option of submitting an externally peer-reviewed publication (e.g. journal article, book chapter).

MS Comp/Report students must enroll in 596 and complete their comprehensive exam/report requirement in their final quarter.

In addition, MS Comp/Report students must submit the following form once they have completed their MS Comprehensive Exam and submitted their MS Report: [“Comprehensive Examination & Master’s Report for the M.S. in Environmental Health Sciences”](#).

A blue petition must be submitted to the FSPH Student Affairs Office (A1-269) in order to formally establish the MS Comp/Report committee. This should be done when the student is submitting their official paperwork for advancement to candidacy.

MS Competencies: Upon graduation, a student with an M.S. degree in Environmental Health Sciences should be able to do the following:

<i>Environmental Health Sciences MS Competencies</i>	
<i>Access, critique, and interpret environmental health studies</i>	<ul style="list-style-type: none"> • Retrieve and organize literature; synthesize and critically evaluate scientific literature in environmental health, public health and other relevant fields • Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from environmental health data • Evaluate seminars and presentations in environmental health and distill the critical and salient issues from them
<i>Design a research study</i>	<ul style="list-style-type: none"> • Formulate a research question • Evaluate the scientific merit and feasibility of study designs • Identify an appropriate target population or organism for investigating the research question • Identify potential sources of systematic error (bias) as well as random error • Be able to articulate interdisciplinary approaches to solving public health problems • Identify potential sources of systematic error (bias) as well as random error • Implement and use a project monitoring system

<i>Analyze data</i>	<ul style="list-style-type: none"> • Use computer systems and analytic software packages • Produce working tables, statistical summaries, and effective figures to summarize data
<i>Interpret data</i>	<ul style="list-style-type: none"> • Make reasonable inferences from results of analysis of observational and analytic studies
<i>Communicate effectively with wide variety of colleagues and stakeholders</i>	<ul style="list-style-type: none"> • Prepare presentation materials including outlines, posters, and PowerPoint presentations • Deliver effective oral presentations individually and as part of a team • Explain and interpret research findings for students, professionals, the public, and media • Work effectively as part of an interdisciplinary team
<i>Ethics & safety</i>	<ul style="list-style-type: none"> • Understand the concepts of human subject protection and confidentiality • Recognize ethical issues that arise in research • Identify circumstances when Institutional Review Board, Institutional Biosafety Committee and/or Animal Care and Use Committee review and/or approval is required • Identify and implement appropriate safety controls and practices

Master of Public Health (M.P.H):

The MPH is a schoolwide professional degree in the field of public health. Environmental Health Sciences is one of the areas of specialization. Students are expected to focus on public health practice and to acquire a broad knowledge related to professional skills. MPH students are required to complete a 400 hour internship.

Minimum Units Required: 62 units

Time-to-Degree: Normative time-to-degree from initial enrollment to graduation is six quarters.

Course Requirements:

Students must complete a minimum of 11 full (4 unit) courses totaling 44 units, at least six of which must be graduate courses and at least two of which must be 400-series courses. Only one 596 course (4 units) may be applied toward the six graduate courses; 597 and 598 courses may not be applied toward the degree. Courses numbered in the 300 series are professional courses or pre-professional experience and are not applicable toward requirements for graduate degrees.

****Courses that apply toward the MPH degree must be taken on a letter grade basis****

Sequence of Courses:

Students in the MPH program should take Environmental Health Sciences C200B and Biostatistics 100A in their first quarter and Environmental Health Sciences C200C and Biostatistics 100B in their second quarter. They may also take additional courses in each of those quarters.

FSPH required courses (20 units):

- Biostatistics 100A: Introduction to Biostatistics (Fall, Spring)
- Community Health Sciences 100: Introduction to Community Health Sciences (Winter, Spring)
- Epidemiology 100: Principles of Epidemiology (Winter, Spring)
- Health Policy & Management 100: Introduction to Health Policy and Management (Fall, Winter, Spring)
- EHS 400: Field Studies in Environmental Health Sciences (Students enroll in this course the quarter that they have completed and submitted their final internship report)

EHS required courses (26 units):

- Biostatistics 100B: Introduction to Biostatistics (Winter)
- EHS C200B: Foundations of Environmental Health Sciences (Fall)
- EHS C200C: Foundations of Environmental Health Sciences (Winter)
- EHS 201: Health Effects of Environmental Contaminants (Fall)
- EHS C240: Fundamentals of Toxicology (Spring)
- EHS 411: Environmental Health Sciences Seminar: (Fall, Spring): One quarter each year is required

Elective Courses (16 units):

In addition to School and Department requirements, a minimum of 16 units of upper division or graduate level elective courses are required. At least 4 of the 16 units must be taken from the 400 level series. These courses should be selected in consultation with your advisor.

MPH students may not count 296, 597, 598, or 599 towards the elective requirement.



MPH Required Internship/ Field Study:

The internship or field study provides the student with an opportunity to apply the principles and knowledge obtained in the classroom to real-world problems in a professional setting. Following the internship, the student enrolls in EHS 400 and writes a research report based on the field study, and this acts as the culminating experience for the degree. Upon graduation, EHS students are prepared for careers in organizations, programs, and services in the public and private sectors.

All students in the MPH Program in EHS are required to complete a 400-hour internship in an appropriate environmental health setting. Internship settings may include government agencies or departments, non-profit organizations, local industry, consulting firms, community

organizations, advocacy agencies, national laboratories, or a university, college, or school setting. Students coming into the program with at least 12 months of prior relevant work experience may request to waive out of the internship requirement (see Internship Handbook for more information). Students are encouraged to complete the internship during the summer between years 1 and 2. Prior to starting the internship, the student must complete a “MPH Internship Approval Form” and have it signed by the field mentor at the organization that is sponsoring the internship. The student should then submit this form to his or her faculty advisor and the EHS department chair for approval. The signed form should be turned in to the Internship Coordinator. After the student has been at the internship for two weeks, the “Scope of Work” form is due. By this time, the student and field advisor will have a good sense of what the internship will entail and this should be described on the form. The student should also clearly articulate the question(s) to be addressed by the internship project, and the relationship between the internship and the MPH Final Report. It is highly recommended that a meeting take place between the student, the field advisor, and the faculty advisor, so that the research question(s) can be determined. Once the form is signed it should go to the Internship Coordinator. At the end of the internship, the student will also turn in the “Student Internship Evaluation” and the “Internship Performance Evaluation”.

In the final quarter of the internship project or the quarter following completion of the project, the student must enroll in their faculty advisor’s section of EHS 400, the product of which is the MPH Final Report. The final form of this report must be approved by both the field mentor (first) and the faculty advisor (second). It should be submitted to the faculty advisor for a grade no later than the 8th week of the terminal quarter, and once approved it should go to the Internship Coordinator by the end of week 10. The report should be a scholarly treatment of the problem area in which the intern has worked, but does not need to be a description of the totality of the experience. The report should show evidence of originality and critical thought. The faculty advisor assigns a letter grade to the report. Those students who wish to waive out of the internship must still write an internship report that summarizes their prior field experience; this report must be submitted to the faculty advisor for a letter grade before the request to waive the internship will be approved. Students that want to waive their internship requirement should consult with their faculty advisor and the Internship Coordinator prior to preparing a written report.

Students should consult the [EHS Internship Handbook](#) for more information. Both the handbook and the required forms can be found on the EHS website.

For specific questions please contact the EHS-MPH Internship Coordinator. Azadeh Terceman at aterceman@ph.ucla.edu.

Registered Environmental Health Specialist (REHS):

A person certified in REHS works to improve the quality of life and health through environmental education, consultation, and enforcement. Although a majority of those who are REHS-certified work for government, many are also employed by the private sector. Some typical program responsibilities include food protection, land use, recreational swimming, onsite sewage disposal, drinking water, housing, vector control, disaster sanitation, and solid waste and hazardous materials management. Typical duties of a REHS in local government include

inspections of various facilities such as food establishments, public swimming pools, community drinking water systems, landfills, and underground storage tanks in order to determine compliance with federal, state, and local statutes, regulations, and ordinances.

The Environmental Health Sciences department has an articulation agreement with the California Department of Public Health which allows EHS MPH graduates to sit for the Registered Environmental Health Specialist (REHS) exam after graduation. Students interested in completing the requirements for REHS will need to take specific electives and core requirements while in the program. Requirements can be found on the EHS website. Interested students are advised to set up a meeting with the EHS Internship Coordinator, as soon as possible after matriculating to UCLA, preferably fall quarter of the first year.

Note that this program is only for EHS MPH students. MS and doctoral students in the EHS department will need to work directly with the California Department of Public Health on their eligibility to sit for the REHS exam.

Master of Public Health (M.P.H) in EHS & Master of Urban and Regional Planning (MURP) Concurrent Degree Program:

The Environmental Health Sciences Department and the Department of Urban Planning offer a concurrent plan of study providing an integrated curriculum for students interested in interdisciplinary training on the public health consequences of urban planning. Students in this program study how public health intersects with urban design and land use patterns, location choices and activity participation, economic factors, equity and social justice, governance and institutional management and planning for sustainability.

Minimum Units Required: 118

Time-to-Degree: Three years (9 quarters)

Course Requirements:

This three-year concurrent degree program requires completion of 118 units (as opposed to 134 units if the two degree programs were completed sequentially as 16 units of course overlap is allowed between the two programs), comprising 62 units for the MPH and 56 units for the MURP.

Required courses (82 units):

Environmental Health Sciences Required Courses	
Biostatistics 100A	4 units
Biostatistics 100B	4 units
Community Health Sciences 100	4 units
Health Policy and Management 100	4 units
Epidemiology 100	4 units
Environmental Health Sciences C200B	6 units
Environmental Health Sciences C200C	6 units
Environmental Health Sciences 201	2 units
Environmental Health Sciences 207	4 units

Environmental Health Sciences 208	4 units
Environmental Health Sciences C240	4 units
Environmental Health Sciences 400	4 units
Environmental Health Sciences 411 (2 unit course taken twice)	4 units
Urban Planning Required Courses	
Urban Planning 207	4 units
Urban Planning 211	4 units
Urban Planning 222A	4 units
Urban Planning M250	4 units
Urban Planning 281	4 units
Urban Planning Capstone Courses specific to the chosen capstone project. <ul style="list-style-type: none"> • UP 205A & 205B (Client Project) • UP 208C & 598 (Thesis) 	8 units
REQUIRED COURSE UNITS	82

Additional requirements to meet a total of 118 units:

Environmental Health Sciences	
Environmental Health Sciences Electives	8 units
Urban Planning	
Urban Planning Area of Concentration (AOC) courses. Students Must choose 5 electives from the courses listed in the two areas of concentration below, with at least one elective in each AOC.	20 units
<i>Design and Development Concentration</i>	
<ul style="list-style-type: none"> • Urban Planning 206B • Urban Planning 219 • Urban Planning M256 • Urban Planning 261 • Urban Planning 273 • Urban Planning 274 • Urban Planning 279 • Urban Planning 282 • Urban Planning M291 	
<i>Environmental Analysis and Policy Concentration</i>	
<ul style="list-style-type: none"> • Urban Planning M258 • Urban Planning 262 • Urban Planning M264A • Urban Planning M265 • Urban Planning C266 	

<ul style="list-style-type: none"> • Urban Planning M267 • Urban Planning 269 • Urban Planning 289 	
Urban Planning Electives (at least one from inside the department)	8 units
ADDITIONAL REQUIRED UNITS	36

16 units from the above chart can be used towards both degree requirements:

- EHS 208 (4 units towards the MURP)
- EHS 400 (4 units towards the MURP)
- Any Environmental Health Sciences Elective (8 units towards the MURP)

MPH/MURP Capstone Requirement:

Concurrent degree program students are required to separately satisfy the capstone requirements for each program (EHS 400 for the MPH AND one of two comprehensive examination options for the MURP).

MPH Competencies: Upon graduation, a student with an M.P.H. degree in Environmental Health Sciences should be able to do the following:

<i>Cross-Cutting Core MPH Competencies</i>
<ul style="list-style-type: none"> • Understand the concepts of human subject protection and confidentiality • Recognize ethical issues that arise in epidemiological research • Apply legal and ethical principles to the use of information technology and resources in public health settings • Collaborate with communication and informatics specialists in the process of design, implementation, and evaluation of public health programs • Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health activities • Use information technology to access, evaluate, and interpret public health data • Use informatics methods and resources as strategic tools to promote public health • Develop public health programs and strategies responsive to the diverse cultural values and traditions of the communities being served • Articulate an achievable mission, set of core values, and vision • Engage in dialogue and learning from others to advance public health goals • Demonstrate team building, negotiation, and conflict management skills • Demonstrate transparency, integrity, and honesty in all actions • Use collaborative methods for achieving organizational and community health goals • Articulate how biological, chemical and physical agents affect human health • Discuss sentinel events in the history and development of the public health profession and their relevance for practice in the field • Apply basic principles of ethical analysis (e.g. the Public Health Code of Ethics, human rights framework, other moral theories) to issues of public health practice and policy

- Apply evidence-based principles and the scientific knowledge base to critical evaluation and decision-making in public health
- Apply the core functions of assessment, policy development, and assurance in the analysis of public health problems and their solutions
- Appreciate the importance of working collaboratively with diverse communities and constituencies (e.g. researchers, practitioners, agencies and organizations)
- Differentiate between qualitative and quantitative evaluation methods in relation to their strengths, limitations, and appropriate uses, and emphases on reliability and validity.
- Explain how the contexts of gender, race, poverty, history, migration, and culture are important in the design of interventions within public health systems.

Core MPH Competencies in Biostatistics

- Judge, critique and interpret reports of individual epidemiologic studies; evaluate strengths and limitations of epidemiologic reports
- Use existing databases to provide background information or data to address research questions and draw appropriate inferences/estimates from epidemiologic data
- Describe preferred methodological alternatives to commonly used statistical methods when assumptions are not met
- Distinguish among the different measurement scales and the implications for selection of statistical methods to be used based on these distinctions
- Apply descriptive techniques commonly used to summarize public health data
- Apply common statistical methods for inference
- Apply descriptive and inferential methodologies according to the type of study design for answering a particular research question
- Apply basic informatics techniques with vital statistics and public health records in the description of public health characteristics and in public health research and evaluation
- Interpret results of statistical analyses found in public health studies
- Develop written and oral presentations based on statistical analyses for both public health professionals and educated lay audiences

Core MPH Competencies in Epidemiology

- Identify key sources of data for epidemiologic purposes
- Identify the principles and limitations of public health screening programs
- Describe a public health problem in terms of magnitude, person, time and place
- Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues
- Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data
- Apply the basic terminology and definitions of epidemiology
- Calculate basic epidemiology measures
- Communicate epidemiologic information to lay and professional audiences
- Draw appropriate inferences from epidemiologic data
- Evaluate the strengths and limitations of epidemiologic reports

Core MPH Competencies in Health Policy & Management

- Apply epidemiologic and statistical reasoning and methods to address, analyze, and solve problems in public health
- Describe the legal and ethical bases for public health and health services
- Explain methods of ensuring community health safety and preparedness
- Discuss the policy process for improving the health status of populations
- Apply the principles of program planning, development, budgeting, management and evaluation in organizational and community initiatives
- Apply principles of strategic planning and marketing to public health
- Apply quality and performance improvement concepts to address organizational performance issues
- Communicate health policy and management issues using appropriate channels and technologies
- Demonstrate leadership skills for building partnerships

Core MPH Competencies in Community Health Sciences

- Prepare presentation materials including outlines, slides, posters, and transparencies
- Identify the causes of social and behavioral factors that affect health of individuals and populations
- Identify individual, organizational and community concerns, assets, resources and deficits for social and behavioral science interventions
- Identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions
- Describe steps and procedures for the planning, implementation and evaluation of public health programs, policies and interventions
- Describe the role of social and community factors in both the onset and solution of public health problems
- Describe the merits of social and behavioral science interventions and policies
- Apply evidence-based approaches in the development and evaluation of social and behavioral science interventions
- Apply ethical principles to public health program planning, implementation and evaluation
- Specify multiple targets and levels of intervention for social and behavioral science programs and/or policies

Discipline Specific Competencies for MPH in EHS

Environment Important to Health

- Describe major direct and indirect human health and safety effects of major environmental or occupational agents or conditions.
- Identify the most important disease burdens with major environmental or occupational risk factors and the environmental or occupational risk factors that produce the most disease burden in either the general population or in heavily affected subgroups.

<i>Environment Important to Health</i>	<ul style="list-style-type: none"> • Identify significant gaps in the current knowledge base concerning health effects of environmental or occupational agents • Be able to construct and interpret models of environmental health pathways to develop solutions to environmental health problems and exposures.
<i>Toxicity and Toxicology</i>	<ul style="list-style-type: none"> • Explain the general mechanisms of toxicity in eliciting a toxic response to various environmental or occupational exposures • Describe how chemical agents are tested for acute, sub-chronic and chronic health effects, including reproductive, developmental and carcinogenic effects, and use of "omics" methods, and interpret toxicological data in terms of relevance to human health.
<i>Exposure and Exposure Assessment</i>	<ul style="list-style-type: none"> • Describe how humans are exposed to chemical, physical, and biological agents in the workplace and environment and how exposures are determined • Describe how exposures can be controlled through administrative procedures, personal protective equipment, various engineering technologies, and social interventions
<i>Patterns of Disease and Epidemiology</i>	<ul style="list-style-type: none"> • Utilize epidemiological data, with due regard to statistical validity and sources bias, in the assessment of impacts of hazardous agents on the health of human populations • Describe genetic, biological, psychosocial, and socio-economic factors that may affect susceptibility to adverse health outcomes following exposure to environmental hazards
<i>Methods for Assessment</i>	<ul style="list-style-type: none"> • Use at least three of these assessment methods: quantitative risk assessment; burden of disease using disability-adjusted life years; spatial analysis and geographic information systems; health impact assessment; alternatives assessment • Identify areas of uncertainty in exposure and risk assessment processes
<i>Environmental Health Policy</i>	<ul style="list-style-type: none"> • Describe major types of institutions responsible for occupational or environmental health policy • Identify major state, federal, international regulatory programs or authorities for occupational or environmental health • Analyze policy contexts and develop responsive policy proposals reflecting environmental health science • Define the important constructs used in policy analysis and development including risk, costs, benefits and the contribution of empirical work to them
<i>Equity and Justice</i>	<ul style="list-style-type: none"> • Define environmental justice and give examples of environmental exposures that are distributed unequally with regard to race/ethnicity and/or socio economic status • Explain how equity can be considered in environmental health
<i>Community</i>	<ul style="list-style-type: none"> • Describe importance of community and home environments and

<i>Environments and Health</i>	<ul style="list-style-type: none"> what contributes to cumulative impacts Define the built environment
<i>Global Environments and Health</i>	<ul style="list-style-type: none"> Explain climate change and likely direct and indirect impacts on environment and health Define major approaches for climate change mitigation and adaptation in California and internationally
<i>Communicating Science and Results</i>	<ul style="list-style-type: none"> Organize information and data, prepare technical reports and give oral presentations on environmental contaminants and impacts Communicate effectively with diverse audiences
<i>Working through Cases, Finding Solutions</i>	<ul style="list-style-type: none"> Draw upon scientific knowledge and assessment methods to develop approaches to assess, prevent and control environmental hazards that pose risks to human health and safety
<i>Communicating Science and Results</i>	<ul style="list-style-type: none"> Present cogent and well substantiated arguments for actions to address environmental health concerns Draw upon key information sources and references essential to environmental health practice

Additional Information for Master’s Students:

Advancement to Candidacy:

Students who wish to graduate in the spring quarter must petition for advancement to candidacy prior to the deadline. This deadline will be announced at the graduation workshop, which will be held in February. Advancement to candidacy is a requirement for all M.S. and M.P.H. degree candidates. All ATC forms must be completed and returned to the Student Affairs Office. Please be sure to complete all required information and follow special instructions per the direction on the forms or by the Student Affairs Office Staff.

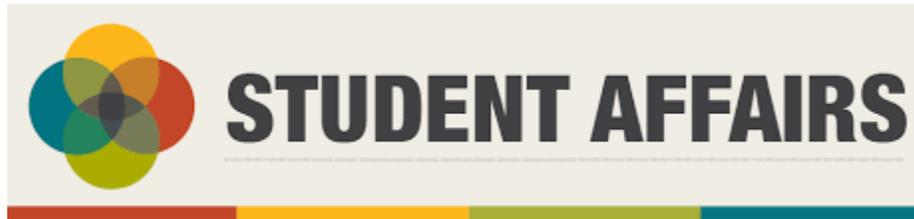
Students who wish to graduate in the fall or winter quarters, must petition for Advancement to Candidacy prior to the end of the second week of the chosen quarter. They also must inform the EHS Department Student Affairs Officers that they will be graduating early.

The Student Affairs Office regularly posts the specific deadlines.

Important Forms for Master’s Students:

- [Nomination of Master’s Thesis Committee](#)
- [Reconstitution of Master’s Thesis Committee](#)
- [Master’s Filing Fee Application](#)
- [Comprehensive Examination & Master’s Report for the M.S. in Environmental Health Sciences](#)

Changing Degree Objective: Current master's students who wish to change their degree objective from MS to MPH or from MPH to MS must submit a blue petition in order to do so. The petition must be submitted by week three of the quarter and if approved, the change will be effective the following quarter.



Student Services/Advising:

- *Environmental Health Sciences Department:* Rebecca Greenberg and Azadeh Terceman are the Student Affairs Officers for the Department. Azadeh Terceman is also the MPH student Internship Coordinator. Their contact information is as follows:

Rebecca Greenberg
Office: 56-085 CHS
Phone: (310) 206-1619
Email: rgreenberg@ph.ucla.edu

Azadeh Terceman
Office: 56-085 CHS
Email: aterceman@ph.ucla.edu

- *The Environmental Health Sciences Department's Faculty Graduate Advisor is:* Dr. Yifang Zhu. Students may meet with her to discuss confidential issues.
- *The Fielding School of Public Health Student Affairs Office* provides oversight and guidance of school-wide and departmental graduate program affairs, including admissions processing, degree processing, class scheduling, funding, orientation and graduation preparations, and general counseling to prospective, new and continuing students.

Location: A1-269 CHS
Hours: Monday-Friday from 10am-3pm
Phone Number: (310) 825-5524

- *Faculty Advisor for Master's students:* Students are assigned a faculty advisor prior to the beginning of their academic program. An attempt is made to match the student with an advisor on the basis of similar academic interests.

If a master's or doctoral student wishes to change advisors, a blue petition must be submitted. Approval of both faculty members involved should be obtained by the student before she/he submits the petition to the Student Affairs Officer, who will submit the

request for departmental approval. An approved petition is then recorded with the School's Student Affairs Office.

Official Materials from the University:

You will receive many documents from the University stating deadlines, offering opportunities, etc. It is your responsibility to observe the deadlines, and take any action that is required. This is especially important for work-study, financial aid, traineeships, filing deadlines, etc. For the most current deadlines, go to the online schedule and calendar at <http://www.registrar.ucla.edu/calendar/>.

Registration:

Registration consists of paying fees and enrolling in classes.

1. Registration fees and other University charges are due the 20th of each month. BAR (Billing and Receivable) accounts can be viewed through www.my.ucla.edu.
2. Enrollment in classes is completed via MyUCLA at www.my.ucla.edu.

Students must complete both processes by the established deadlines to be officially registered and enrolled for the term.

Graduate students must be either registered & enrolled or on an official leave of absence every term until their degrees are awarded. As an exception, certain graduate students may be eligible to pay the filing fee (see below). Failure to register or be on an official leave of absence for any term constitutes withdrawal from UCLA.

Paying Fees:

Your registration fees (and non-resident tuition, if applicable) are due via your BAR account by September 20 (Fall quarter), December 20 (Winter quarter) and March 20 (Spring quarter). Credit card payments may be made online using MyUCLA online. If registration fees are not paid in full by the payment deadline, a \$50 late registration fee is assessed and classes are dropped in accordance with the drop class deadline. If you enroll in classes and pay registration fees after Friday of the second week of classes, both the \$50 late registration fee and a \$50 late Study List fee are assessed.

Details on fee payment, enrollment procedures, and deadlines are in the Schedule of Classes at <http://www.registrar.ucla.edu/schedule/>.

Miscellaneous Fees: For information on miscellaneous fee charges, such as BruinCard replacement, collection fees, late changes to courses/study lists, etc., visit: <http://www.registrar.ucla.edu/fees/miscfee.htm>.

eBill

BAR accounts are administered electronically (eBill) through MyUCLA. Monthly financial activity is displayed for the current month as well as past account activity for the last 24 months.

MyUCLA also includes a link to the [Student Accounts website](#) where students can find important communications from the University regarding registration and University policies.

Enrollment/ MyUCLA:

Students enroll in classes through MyUCLA, which is accessed at <http://www.my.ucla.edu>. MyUCLA gives students real-time access to their University academic, personal and financial records. Enrollment-related tasks, such as adding, dropping, or exchanging classes, signing onto the wait list for a class, checking waitlist status, or changing the grading basis for a class can also be done through MyUCLA.

Enrollment Deadlines:

The deadlines are always on Friday of the following weeks of every quarter:

Week 2: Enrollment in all coursework.

Week 3: Fee charged for course changes, such as adding courses, dropping courses, and changing the grading basis for courses.

Week 10: Additional fee charged for adds, drops and grading basis changes.

After week 10: Requesting retroactive adds or drops to any courses after week 10 is a long and complicated procedure with NO guarantee of approval.

Study List:

UCLA refers to your class schedule as a “study list”. All UCLA students are required to have a “study list on file”, which mean that you must be enrolled in at least one unit by the end of the 2nd week of classes. Any student who is not enrolled in at least one unit by the end of the 2nd week of classes will be assessed a \$50 late study list fee when they attempt to enroll. Please be aware that this fee will be charged even if you paid the \$50 late registration fee. After the 2nd week of classes, your student record will be “locked” out of enrollment, and you will have to (1) go to the Student Affairs Office to pick up a form, (2) get written instructors’ permission to enroll in each class at this late date and (3) submit the from, in person, to the Registrar’s Office in Murphy Hall. You will not be able to process any enrollment activities until your student record is unlocked. You can go to [MyUCLA](#) online to view your study list. Note: you can print your study list to provide proof of enrollment in class. You should check your study list each quarter to make sure that you are enrolled in classes.

Normal Progress/Full-time Graduate Program:

A normal load is 12 units per quarter; a minimum of 8 and maximum of 17.5 units are permitted. Students can request permission to take additional units by filing a blue petition. Students are directed by the department to enroll full time whenever possible. Academic student employees (ASEs) and graduate student researchers (GSRs) are required to be registered and enrolled in at least twelve quarter units throughout their appointments. Those assistants who take a leave of absence or withdraw terminate their appointments. Course 375 for teaching assistants, and independent studies at the 500-level for graduate student researchers, may be included in reaching the eight or twelve-unit load. Graduate students holding special fellowships must be enrolled in at least twelve units, both before and after advancement to candidacy. The twelve

units required per quarter may include, among others, courses in the 500 series (individual study or research).

Filing Fee:

If a student has completed, while registered, all requirements for a degree except the filing of the thesis or dissertation and/or the final examination (master's comprehensive or doctoral final oral examination), the student may be eligible to pay a Filing Fee during the quarter in which the degree is to be awarded, instead of registering. For detailed information on the filing fee policies and to access the Filing Fee application, visit: <https://grad.ucla.edu/academics/graduate-study/filing-fee-application/>.

Students may only pay the filing fee one time.

Leave of Absence:

Continuing graduate students in good academic standing (3.0 GPA or above) who have completed at least one quarter of academic residence at UCLA, may petition to take a leave of absence. The leave must be approved by the student's home Department and the Graduate Division. Graduate students are allowed a maximum of three quarters of official leave of absence.

Federal policy governing students on F-1 and J-1 visas restricts leaves of absence to certain conditions. Therefore, the Dashew Center for International Students and Scholars, in consultation with the Graduate Division, individually evaluates each international graduate student request for a leave of absence to determine that it meets federal (and University) eligibility criteria.

Students on approved leave of absence are not permitted to use faculty time or make use of University facilities for more than 12 hours since their last registration and are not eligible for apprentice personnel employment or other services normally available to registered students. There is no need to apply for readmission, since the approved leave is for readmission to a specific term. The Registrar's Office notifies students about registration information for the returning term.

To petition for a leave of absence, students must fill out a "[Leave of Absence Request](#)" form, obtain the appropriate signatures, and submit it to the FSPH Student Affairs Office. For more details on the University's Leave of Absence policy, visit: <http://www.gdnet.ucla.edu/gasaa/library/loa.htm>

Establishing California Residency (US Citizens & Permanent Residents only):

Domestic students who are not California residents will need to establish residency to avoid assessment of nonresident tuition. In order to establish residency, certain requirements must be met. Please refer to the Registrar's web page: (<http://www.registrar.ucla.edu/Fees-Residence/Residence-Requirements>) or call the Residence Deputy at (310) 825-3447 for complete details on establishing California Residency. This is very important. Otherwise, you may have to pay non-resident tuition during your second year.

Data sheet:

The Fielding School of Public Health requires that a data sheet is completed quarterly. The FSPH Student Affairs Office will send reminders out regarding this. Failure to complete this in a timely manner may result in an academic hold being placed on your record.

Transfer of Credit:

Through petition, courses completed in graduate status on other UC campuses may apply to master's programs at UCLA, provided they were not used toward a previous degree. Such courses may fulfill up to one-half of the total course requirement, one-half of the graduate course requirement, and one-third of the academic residence requirement.

A maximum of two courses completed with a minimum grade of 'B' in graduate status at institutions other than UC may apply to UCLA master's programs. Two courses would be the equivalent of eight quarter units or five semester units. They may not fulfill the minimum five graduate- course requirement or the academic residence requirement. The approval of the Graduate Division and the student's major department is required on a petition for transfer of credit.

Courses taken for any other degree previously awarded at UCLA or another institution, and courses taken before the award of the Bachelor's degree may not be applied toward a graduate degree at UCLA. Correspondence courses are not applicable to graduate degrees.

Grading:

UCLA grades for graduate students are A, B, C, F, and I. Grade point averages are computed on the basis of 4 points for an "A", 3 points for a "B", 2 points for a "C", and 0 points for an "F". Only courses in which a grade of C- or better is received may be applied toward the requirements for a master's degree.

Once an Incomplete (I) grade is assigned, it remains on the transcript along with the passing grade students may later receive for the course. The instructor may assign the "I" grade when work is of passing quality but is incomplete for a good cause (such as illness or other serious problem). It is the student's responsibility to discuss with the instructor the possibility of receiving an "I" grade as opposed to a nonpassing grade.

If an "I" grade is assigned, students may receive unit credit and grade points by satisfactorily completing the coursework as specified by the instructor. Students should not reenroll in the course; if they do, it is recorded twice on the transcript. If the work is not completed by the end of the next full term in residence, the "I" grade lapses to an F, NP, or U as appropriate.

Academic Probation:

A graduate student may be disqualified from continuing in the graduate program for a variety of reasons. The most common is failure to maintain the minimum cumulative grade point average (3.0) required by the Academic Senate to remain in good standing (note that some programs require a higher grade point average). Other examples include failure of examinations, lack of progress toward the degree, poor performance in core courses, etc. Probationary students (those with cumulative grade point averages below 3.0) are subject to immediate dismissal upon the

recommendation of their department. Check the [Standards and Procedures for Graduate Study](#) at UCLA for more information.

English as a Second Language Placement Exam (ESLPE):

The ESLPE (English as a Second Language Placement Examination) is required of all entering UCLA graduate students whose first language is not English and who have not otherwise satisfied the ESL requirement. The “Graduate Admissions Checklist” that comes with the acceptance letter gives a link to information on whether a student needs to take the exam or contains a paragraph instructing the student to take the exam. For more information, visit: <http://www.internationalcenter.ucla.edu/home/handbook/181/226/eslpe>.

Test of Oral Proficiency (TOP):

Students who plan to work as a teaching assistant (TA) at UCLA and are non-US citizens must pass the TOP before working as a TA in any department at UCLA. All non-citizens are considered international students. This includes permanent residents. However, international students who have earned a bachelor’s degree from a U.S. university are exempt from taking the TOP. If you believe that you should receive an exemption from taking the TOP for any other reason (e.g., native speaker of English), please contact your home departmental Student Affairs Officer/Academic Advisor directly to request an exception from the Graduate Division. For more information, visit: <http://www.oid.ucla.edu/training/top>.

Course Waivers:

Any departmental required courses may be waived by course instructor consent if the student either has taken a similar course or can pass a waiver examination. Requests for waiver examinations for any other courses are considered on a case-by-case basis, and in consultation with the course instructor and the student’s advisor. A student who passes a waiver examination waives *only* the course requirement, *not* the unit requirement, so they will need to take additional elective courses to make up the units.

- [2016/17 FSPH Waiver Exam Information/Schedule](#)

Student Complaints and Academic Grievances:

A grade may be appealed, on any reasonable grounds, to the instructor, the chair of the department, and the dean of the school or division.

If the student believes that the instructor has violated the Faculty Code of Conduct by assigning the grade on any basis other than academic grounds, the matter should first be taken up with the instructor. If the matter is not resolved, the student may go for counsel to the Office of Ombuds Services or may follow the procedures for the formal filing of charges. If a charge is sustained by the Academic Senate Committees on Charges and on Privilege and Tenure, an ad hoc committee is appointed within two weeks to review the disputed grade, and any warranted change is made within four weeks.

Academic Dishonesty:

Some students may incorrectly assume that academic dishonesty is a minor infraction. It is a serious matter that must be dealt with by instructors aggressively. For more information, visit our university's Academic Dishonesty website:

<http://www.oid.ucla.edu/programs/facultydev/teachersguide/academicdishonesty>

Ordering Transcripts:

Official academic and verification transcripts can be ordered by mail, in person or online through [MyUCLA](#). For more information on ordering transcripts, visit:

<http://www.registrar.ucla.edu/forms/>.

Change of Name or Address:

Students who wish to change their name on official University records should fill out a [UCLA Legal Name Change or Correction form](#) and submit it with the required supporting documentation to the Registrar's Office Student Services. All name changes are recorded on the transcript. If students change their address, they should update their address through [MyUCLA](#).

Financial Support and Funding:

The UCLA Graduate Division offers funding opportunities for both incoming and continuing graduate students. Prospective students may apply for Graduate Division funding by completing the fellowship section of the online graduate admissions application before the December 1 deadline. Need-based student loans and work-study awards are available through the UCLA Financial Aid office.

The Environmental Health Sciences Department has a limited amount of funds available for incoming and continuing students. The allocation of these awards is based on academic standing (GPA) and/or financial need. Factors considered are GPA, campus employment, outside employment and fellowships.

The Fielding School of Public Health also has a limited number of interest-based fellowships and scholarships for incoming and continuing masters and doctoral students.

Formal announcements and fellowship applications for the School and Department funding opportunities are sent out to students via email upon availability throughout the academic school year.

Academic Apprentice Personnel:

“Academic apprentice personnel” are academic student employees (Readers, Tutors, and Teaching Assistants) and Graduate Student Researchers (GSRs). These apprenticeships are intended to provide qualified students with relevant training experience for academic and academic-related careers in teaching and research and to augment limited resources from within the University for graduate student support. As a matter of University policy, academic apprentice personnel are considered primarily as students being professionally trained, and graduate student status takes precedence over University employment.

Many students obtain part time academic personnel positions as Special Readers, Teaching Assistants or Graduate Student Researchers with faculty either at the Fielding School of Public Health or elsewhere on campus. Students who are appointed to academic personnel positions for at least 25% time and enrolled in a minimum of 12 units may be eligible to receive fee remissions.

Please refer to the [Academic Apprentice Personnel Manual](#) or the following site for detailed information on employment opportunities, policies and benefits, including fee remissions: <https://grad.ucla.edu/funding/working-at-ucla/>.

Working over 50% time:

Graduate Students must have approval from the Department to work over 50% time. Students will need to coordinate with the Department Student Affairs Officer to file the appropriate paperwork. A letter of support from the Faculty Advisor is required to work over 65% time. Approval from the Graduate Division is required to work over 75% time.

****It is the student's responsibility to inform the Department of any campus positions that they have accepted and any funding that they are receiving. You must provide this information to the Department's Student Affairs Officer****

Please click on links below for specific information:

- [Support for Continuing Students](#)
Brochure & application forms.
- [ASE Appointment Opportunities](#)
Anticipated student employee openings & union agreement.
- [Summer Research Mentorship](#)
Summer support for doctoral students in the humanities & social sciences.
- [Funding Opportunities](#)
Extramural support, online funding databases, & proposal consultants.
- [Graduate Work-Study Program](#)
Support for academic research projects.
- [Bruin Direct Deposit](#)
Authorization form for direct deposit of stipend payments.
- [Tax Information & Forms](#)
UCLA tax information and forms for fellowship recipients.



Student Life & Resources:

2016-17 Academic Calendar:

Fall Quarter 2016

Quarter begins	Monday, September 19
Instruction begins	Thursday, September 22
Study List deadline (becomes official)	Friday, October 7
Veterans Day holiday	Friday, November 11
Thanksgiving holiday	Thursday-Friday, November 24-25
Instruction ends	Friday, December 2
Common final exams	Saturday-Sunday, December 3-4
Final examinations	Monday-Friday, December 5-9
Quarter ends	Friday, December 9
Christmas holiday	Friday, December 23; Monday, December 26
New Year's holiday	Friday, December 30; Monday, January 2
Winter campus closure (tentative)	December 27-29

Winter Quarter 2017

Quarter begins	Wednesday, January 4
Instruction begins	Monday, January 9
Study List deadline (becomes official)	Friday, January 20
Martin Luther King, Jr, holiday	Monday, January 16
Presidents' Day holiday	Monday, February 20
Instruction ends	Friday, March 17
Common final exams	Saturday-Sunday, March 18-19
Final examinations	Monday-Friday, March 20-24
Quarter ends	Friday, March 24

Spring Quarter 2017

Quarter begins	Wednesday, March 29
Cesar Chavez holiday	Friday, March 31
Instruction begins	Monday, April 3
Study List deadline (becomes official)	Friday, April 14

Memorial Day holiday	Monday, May 29
Instruction ends	Friday, June 9
Common final exams	Saturday-Sunday, June 10-11
Final examinations	Monday-Friday, June 12-16
Quarter ends	Friday, June 16

BruinCard (Student ID):

[BruinCard](#) is the official campus identification for UCLA, and is required for all students, faculty, and staff. Your BruinCard also serves as your library card, recreation card, door access card, and much, much more! (www.bruincard.ucla.edu)

MyUCLA:

MyUCLA is a customized portal web page where students can access real-time class schedules, grades, campus appointments, traffic and weather information, check their UCLA e-mail account and link to campus events and resources.

www.my.ucla.edu

International Students:

Federal regulations governing policy and procedure of visa issuance and maintenance for international students and scholars make it especially important for these individuals to maintain contact with international student and scholar counselors and advisers following their arrival on campus. UCLA students, postdoctoral fellows, and visiting scholars from abroad are encouraged to visit the UCLA Dashew Center for International Students and Scholars (<http://www.internationalcenter.ucla.edu>). The Dashew Center for International Students and Scholars provides a mandatory orientation program that helps international students and scholars pursue their goals while at UCLA.

The Dashew Center also provides specialized services, counseling, and programs for all international students and scholars, from the time of their arrival to their departure. They offer services such as orientation for new students, help in locating affordable housing, English conversation classes, programs for the families of international scholars, assistance with questions regarding immigration issues, employment, financial aid, tax matters, and cultural adjustment, as well as a number of other topics.

Student Mailboxes:

Each student has their own mailbox in the EHS Student Room (56-081). This is to be used for educational and University purposes only.



Student Lockers:

Lockers are available for EHS students in the EHS Student Room (56-081). They are assigned on a first come, first served basis. Students will need to provide their own combination lock and must give the Department's Student Affairs Officer the combination number (for emergency use only). Students are prohibited to store food in their lockers.

Graduate Writing Center:

The Graduate Writing Center offers free writing consultation to graduate and professional school students at all levels and in all disciplines, as well as writing workshops on a variety of topics. Meet with a trained and experienced writing consultant to work on writing issues ranging from style and argumentation to grammar and syntax. The graduate writing consultants will work with you to develop your writing confidence and your writing skills. <http://gsrc.ucla.edu/gwc/>

Additional Writing Resources for FSPH Students:

Strong communication skills, including the ability to write clearly and concisely for different audiences, are essential tools for all public health professionals. Click [here](#) for a list of writing resources for FSPH Graduate Students and PH/EHS Minors

Arthur Ashe Student Health and Wellness Center:

All registered graduate students may use the Arthur Ashe Student Health and Wellness Center, an outpatient clinic geared to the special needs of students at UCLA. The Ashe Center offers a full range of clinical and support services, most of which are prepaid by student registration fees. The clinical staff is comprised of highly qualified doctors, nurse practitioners, and nurses. For more information, visit: <http://www.studenthealth.ucla.edu>

Medical Insurance Requirement:

Health Insurance is mandatory for all UCLA registered students and a condition of enrollment. The UC Student Health Insurance Plan (UC SHIP) is a comprehensive medical insurance program offered to UCLA students. All registered students are automatically enrolled in UC SHIP. Students who have comparable insurance and do not want to keep UC SHIP as dual coverage, must submit a request to waive enrollment by the specified deadline. For more information, visit: <http://www.studenthealth.ucla.edu/CustPages/Insurance.aspx>

UCLA Counseling and Psychological Services:

CAPS professionals provide a safe, confidential place to discuss concerns or problems interfering with personal growth and academic achievement. They offer a range of counseling and clinical services designed to meet students' varied mental health needs throughout the year. For more information, visit: <http://www.counseling.ucla.edu/>.

FSPH Career Services Office:

The mission of the Career Services Office is to facilitate the career development process for Fielding School of Public Health students through individual counseling sessions, workshops, employer presentations, career fairs and online job postings. For more information, visit their website at: <http://ph.ucla.edu/current-students/career-development> or contact:

Kristy J. Sherrer
Career Services Office
UCLA Fielding School of Public Health
Box 951772
Los Angeles, CA 90095-1772
Phone: 310-826-1020
Email: ksherrer@ph.ucla.edu

EHS Career Services:

The EHS Department provides the following career services:

- Dr. Shane Que Hee: Careers related to Industrial Hygiene and Environmental Chemistry
- MPH Internship Coordinator: Internship placement, resume critiques, mock interviews, career guidance.

UCLA Career Center:

The UCLA Career Center provides a wide range of programs and services exclusively for UCLA students. Your academic studies are based upon the career you want to develop, so discussing options when you arrive will give you the edge in the competitive job market. The Career Center provides services such as: individual career counseling, workshops, and online resume critique. For more information, visit: <http://career.ucla.edu>.

Bruin OnLine (BOL):

Bruin OnLine (BOL) is a collection of services that provides UCLA students, faculty, and staff with e-mail, web hosting services, network connectivity (including wireless), and free software and support. For more information, visit: www.bol.ucla.edu

Walk-in Consulting: Kerckhoff Hall, Suite 124
Telephone Technical Support: (310) 267-HELP (4357)

BruinTech:

The purpose of [BruinTech](#) is to help faculty, students, and staff navigate the diversity of UCLA information technology (IT) services and organizations. The web site reflects the dynamic nature of IT on campus by spotlighting current views and events.

Borrowing a CLICC Laptop:

The Campus Library Instructional Computing Commons (CLICC) offers technology and support for UCLA students, faculty, and staff. CLICC provides services such as laptop lending, printing, study room reservations, projector loans, video kits, computer stations, and a wide variety of instructional software. For more information, visit: <http://www.library.ucla.edu/powell/clicc-laptop-lending-powell-library>.

Center for Accessible Education (CAE)

The Center for Accessible Education (CAE) is designed to meet the unique educational needs of regularly enrolled UCLA students with documented permanent and temporary disabilities.

The Center for Accessible Education is committed to adding value to the UCLA community by

- Facilitating access to services that contribute to positive student outcomes
- Fostering an atmosphere of shared responsibility in providing accommodations
- Promoting an atmosphere of respect and inclusion

For more information, visit: <http://www.cae.ucla.edu/>

2016-17 EHS Schedule of Classes:

This schedule is subject to change. Please visit the on-line Schedule of Classes for the most up to date course offerings: <http://www.registrar.ucla.edu/schedule/schedulehome.aspx>

EHS Course Descriptions:

100. Introduction to Environmental Health (4 units)

Lecture, three hours; discussion, one hour. Preparation: one course each in chemistry and biology. Introduction to environmental health, including coverage of sanitary principles and chronic and acute health effects of environmental contaminants. P/NP or letter grading.

101. Fundamentals of Chemistry in Environmental Health (2 units)

Seminar, one hour; discussion, one hour. Designed for undergraduate students in Public Health minor or master's and doctoral students in Fielding School of Public Health. Ideal for students who feel that their background in chemistry is not strong enough and are planning to take course 100, C200A, C200B, or 200C or are concurrently enrolled in one of those courses. Interactive seminar with focus on critical concepts in chemistry that students need for core environmental health sciences courses. P/NP, S/U, or letter grading.

C125. Atmospheric Transport and Transformations of Airborne Chemicals (4 units)

Lecture, four hours. Preparation: one year of calculus, one course each in physics, organic chemistry, and physical chemistry. Designed for science, engineering, and public health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C225. P/NP or letter grading.

C135. Environmental Policy for Science and Engineering (4 units)

Lecture, four hours. Limited to senior undergraduate and graduate students. Examination of theoretical underpinnings of several major types of regulatory policy, as well as practical issues involved in implementing and enforcing each. Exploration of selection and impact of regulatory forms from variety of disciplines and viewpoints. Focus on traditional command and control regulation (including self-executing performance standards and permitting), market-based regulation (such as emissions trading), remediation, and emerging regulatory approaches such as management-based regulation and alternatives assessment. Issues of compliance and enforcement. Concurrently scheduled with course C235. P/NP or letter grading.

C140. Fundamentals of Toxicology (4 units)

Lecture, four hours. Preparation: one course each in biology, organic chemistry, and biochemistry. Essential aspects of toxicology, with emphasis on human species. Absorption, distribution, excretion, biotransformation, as well as basic toxicologic processes and organ systems. Concurrently scheduled with course C240. Letter grading.

C152D. Properties and Measurement of Airborne Particles (4 units)

Lecture, four hours. Preparation: one year each of chemistry, physics, and calculus. Basic theory and application of aerosol science to environmental health, including properties, behavior, sampling, and measurement of aerosols and quantitative problems. Concurrently scheduled with course C252D. P/NP or letter grading.

C157. Risk Assessment and Standard Setting (4 units)

Seminar, four hours. Requisites: course C140, Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of selected occupational and

environmental exposures with disease. Special emphasis on critical evaluations of literature. Attention specifically to interface of science and regulatory standards. Concurrently scheduled with course C257. P/NP or letter grading.

C164. Fate and Transport of Organic Chemicals in Aquatic Environment (4 units)

Lecture, four hours. Recommended requisites: Chemistry 14A and 14B, or 20A and 20B. Evaluation of how and where and in what form and concentration organic pollutants are distributed in aquatic environments. Study of mass transport mechanisms moving organic chemicals between phases, biological degradation and accumulation, and chemical reactions. Effect of humic substances on these processes. Concurrently scheduled with course C264. P/NP or letter grading.

M166. Environmental Microbiology (4 units)

(Same as Civil Engineering M166.) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: Civil Engineering 153. Microbial cell and its metabolic capabilities, microbial genetics and its potentials, growth of microbes and kinetics of growth, microbial ecology and diversity, microbiology of wastewater treatment, probing of microbes, public health microbiology, pathogen control. Letter grading.

M166L. Environmental Microbiology and Biotechnology Laboratory (1 unit)

(Same as Civil Engineering M166L.) Laboratory, two hours; outside study, two hours. Corequisite: course M166. General laboratory practice within environmental microbiology, sampling of environmental samples, classical and modern molecular techniques for enumeration of microbes from environmental samples, techniques for determination of microbial activity in environmental samples, laboratory setups for studying environmental biotechnology. Letter grading.

C185A. Foundations of Environmental Health Sciences (6 units)

Lecture, six hours. Preparation: one year of undergraduate biology and chemistry. Introduction to field of environmental health sciences designed for students pursuing M.S. degrees. Examination of series of topics relevant to science of environmental health (e.g., population, agriculture/food, microbiology, energy, climate change, water, waste, air) by introducing scientific basis from ecological perspective and describing how topics relate to health on biochemical and molecular basis. Emphasis on scientific aspects of field, with focus on critique of primary literature and quantitative approaches for examination of topics to provide skills that are critical to perform research. Concurrently scheduled with course C200A. Letter grading.

C185B. Foundations of Environmental Health Sciences for Public Health Professionals (6 units)

Lecture, six hours. Preparation: one year of undergraduate biology and chemistry. Introduction to field of environmental health sciences designed for students pursuing M.P.H. degree in Environmental Health Sciences. Examination of series of topics that cover scientific principles of field, as well as translation of science to environmental health practice. Topics include physical, chemical, and biological hazards, as well as risk assessment and communication. Acquisition of skills important for public health professionals, such as application of scientific information to real-world problems and ability to communicate effectively with different stakeholders. Concurrently scheduled with course C200B. Letter grading.

C185C. Foundations of Environmental Health Sciences (6 units)

Lecture, six hours. Preparation: one year of undergraduate biology and chemistry. Introduction to field of environmental health sciences designed for students pursuing M.P.H. degree in Environmental Health Sciences. Examination of series of topics that cover scientific principles of

field, as well as translation of science to environmental health practice. Topics include physical, chemical, and biological hazards, as well as risk assessment and communication. Acquisition of skills important for public health professionals, such as application of scientific information to real-world problems and ability to communicate effectively with different stakeholders.

Concurrently scheduled with course C200B. Letter grading.

197. Individual Studies in Environmental Health Sciences (2 to 4 units)

Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

C200A. Foundations of Environmental Health Sciences (6 units)

Lecture, six hours. Preparation: one year of undergraduate biology and chemistry. Introduction to field of environmental health sciences designed for students pursuing M.S. degrees. Examination of series of topics relevant to science of environmental health (e.g., population, agriculture/food, microbiology, energy, climate change, water, waste, air) by introducing scientific basis from ecological perspective and describing how topics relate to health on biochemical and molecular basis. Emphasis on scientific aspects of field, with focus on critique of primary literature and quantitative approaches for examination of topics to provide skills that are critical to perform research. Concurrently scheduled with course C185A. Letter grading.

C200B. Foundations of Environmental Health Sciences for Public Health Professionals (6 units)

Lecture, six hours. Preparation: one year of undergraduate biology and chemistry. Introduction to field of environmental health sciences designed for students pursuing M.P.H. degree in Environmental Health Sciences. Examination of series of topics that cover scientific principles of field, as well as translation of science to environmental health practice. Topics include physical, chemical, and biological hazards, as well as risk assessment and communication. Acquisition of skills important for public health professionals, such as application of scientific information to real-world problems and ability to communicate effectively with different stakeholders.

Concurrently scheduled with course C185B. Letter grading.

C200C. Foundations of Environmental Health Sciences (6 units)

Lecture, four hours; group project, two hours. Enforced prerequisite: course C200A or C200B. Multidisciplinary aspects of environmental health sciences in context of public health for environmental health majors. Concurrently scheduled with course C185C. Letter grading.

201. Seminar: Health Effects of Environmental Contaminants (2 units)

Seminar, two hours. Requisites: courses C200A, C200B. Emphasis on health effects of air, water, environmental pollutants on man and review of research literature. May be repeated for credit. S/U or letter grading.

202. Seminar: Environmental Chemistry (2)

Seminar, one hour. Requisites: courses C200A, C200B, 410A, 410B. Environmental chemistry aspects of environmental health sciences through multimedia analyses and biological and microbiological analyses. May be repeated for credit. Letter grading.

203. Seminar: Ecotoxicology (2 units)

Seminar, two hours. Discussion of various topics in ecotoxicology. Topics vary from term to term and include aspects of environmental chemistry, toxicology, and ecology. May be repeated for credit. S/U grading.

204. Seminar: Exposure Assessment (2 units)

Seminar, two hours. Discussion of various topics in exposure assessment. Topics vary by term and include aspects of population activity, microenvironments, types of monitoring (outdoor, indoor, personal, biomarkers), and multimedia sources of exposure. S/U grading.

205. Environmental Health Sciences Doctoral Seminar (2 units)

Seminar, two hours. Limited to environmental health sciences doctoral students. Presentation of current research of environmental health sciences doctoral students. May be repeated for credit. S/U grading.

206. Seminar: Applied Coastal Ecology (2 units)

Seminar, two hours. Discussion of various topics in applied coastal ecology. Topics vary by term and include wetland ecology, restoration ecology, and ecology and management of coastal watersheds. May be repeated for credit. S/U grading.

207. Introduction to Geographic Information Systems (4 units)

Lecture, two hours; laboratory, two hours. Introduction to geographic information systems (GIS), including use of GIS software, mapping, geocoding, and data analysis. S/U or letter grading.

208. Built Environment and Health (4 units)

Lecture, three hours; discussion, one hour. Limited to public health and urban planning graduate students. Interdisciplinary course on built environment and health and breaking down silos. U.S. and other developed, as well as developing, countries are facing increasingly lethal and costly epidemics of acute and chronic diseases related to land use and built environment decisions. While hazards presented by air and water pollution are well recognized for acute, infectious, and toxicological illnesses, there is increasing recognition of hazards presented by building and community designs that fail to recognize human health. Land use and built environment decisions impact every age group and social and racial minority. Impacts range from very acute (motor vehicle trauma) to long term (obesity, cancer, heart disease). Decisions have as their bases economic, financial, insurance, housing, and other factors. Analysis of each factor and related disease endpoints. S/U or letter grading.

209. Practical Applications in Environmental Health Sciences (2 units)

Lecture, two hours. Enforced requisites: courses C200A, C200B. Description of many leading environmental and occupational health problems that environmental health practitioners face today, conducted as series of lectures, assignments, hands-on field exercises, and group projects, to help students develop skills necessary to integrate concepts across disciplines in field of environmental health. May satisfy some requirements needed to qualify for Registered Environmental Health Specialist (REHS) certification. S/U or letter grading.

M211. Epidemiologic Methods in Violent Injury (4 units)

(Same as Epidemiology M252.) Lecture, four hours. Requisites: Epidemiology 200A, 200B, and 200C (or 100). Description and critical evaluation of epidemiologic methods in approaches to understanding incidence risk factors and prevention strategies of violence and violence-related injury. Letter grading.

212. Applied Ecology (4 units)

Lecture, four hours. Preparation: one ecology course. Application of ecological theory and principles to solve environmental problems, including conservation biology, assessment of environmental impacts, and restoration ecology and mitigation of environmental impacts. Letter grading.

213. Seminar: Practical Aspects of Biosafety and Biosecurity (2 units)

Seminar/discussion, two hours. Preparation: one year of introductory biology. Recommended

requisite: Microbiology 101 or 102. Designed for environmental health sciences graduate students and students in UCLA Biosafety Training Program. Interactive seminar with focus on critical concepts in and practical aspects of biosafety, biosecurity, risk assessment, and risk management that are needed for individuals wishing to serve as interns in UCLA biosafety program and/or become biosafety professionals. S/U or letter grading.

214. Children's Environmental Health: Prenatal and Postnatal (4 units)

Lecture, four hours. Preparation: one year each of chemistry and biology. Examination of how environmental exposures to chemical, physical, and biological agents during period of maturation (from fertilization to adulthood) cause pathophysiological perturbations in homeostasis at any stage during life. Letter grading.

215. Fundamentals of Health Impact Assessment (4 units)

Seminar, four hours. Provides students with sound understanding of health impact assessment (HIA) practice, its rationale and underlying principles, and opportunities to develop and apply HIA skills in work with public agencies and community-based organizations. Focus on problem solving around case-study HIAs and student experiences working on HIA-related projects. S/U or letter grading.

C225. Atmospheric Transport and Transformations of Airborne Chemicals (4 units)

Lecture, four hours. Preparation: one year of calculus, one course each in physics, organic chemistry, and physical chemistry. Designed for science, engineering, and public health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C125. S/U or letter grading.

M229. Epidemiology of Foodborne Illnesses (4 units)

(Same as Epidemiology M229.) Lecture, four hours. Requisites: Biostatistics 100A, Epidemiology 200A, 200B, and 200C (or 100). Food poisoning is significant cause of morbidity and mortality in both developing and developed world. Examination of etiologic agents of food poisoning and factors specific to foods that allow them to become agents of disease transmission. S/U or letter grading.

230A. Interdisciplinary Occupational Health Practice (2 units)

Seminar, one hour; fieldwork, one hour. Multidisciplinary nature of occupational health practice featured and explored in these varied-activity courses, including material related to recognition, prevention, surveillance, and management of work-related health problems that occupational health and safety researchers and professionals encounter in various work environments. Lectures, seminars, field exercises, workshops, clinical case conferences, and group assignments combined to help students develop skills necessary to integrate and communicate relevant approaches to occupational hazard detection and control, work-related injury and illness surveillance, and disease and disability prevention from different disciplines in field of occupational health and safety. S/U grading.

230B. Interdisciplinary Occupational Health Practice (2 units)

Seminar, one hour; fieldwork, one hour. Multidisciplinary nature of occupational health practice featured and explored in these varied-activity courses, including material related to recognition, prevention, surveillance, and management of work-related health problems that occupational health and safety researchers and professionals encounter in various work environments. Lectures, seminars, field exercises, workshops, clinical case conferences, and group assignments combined to help students develop skills necessary to integrate and communicate relevant

approaches to occupational hazard detection and control, work-related injury and illness surveillance, and disease and disability prevention from different disciplines in field of occupational health and safety. S/U grading.

230C. Interdisciplinary Occupational Health Practice (2 units)

Seminar, one hour; fieldwork, one hour. Multidisciplinary nature of occupational health practice featured and explored in these varied-activity courses, including material related to recognition, prevention, surveillance, and management of work-related health problems that occupational health and safety researchers and professionals encounter in various work environments.

Lectures, seminars, field exercises, workshops, clinical case conferences, and group assignments combined to help students develop skills necessary to integrate and communicate relevant approaches to occupational hazard detection and control, work-related injury and illness surveillance, and disease and disability prevention from different disciplines in field of occupational health and safety. S/U grading.

C235. Environmental Policy for Science and Engineering (4 units)

Lecture, four hours. Limited to senior undergraduate and graduate students. Examination of theoretical underpinnings of several major types of regulatory policy, as well as practical issues involved in implementing and enforcing each. Exploration of selection and impact of regulatory forms from variety of disciplines and viewpoints. Focus on traditional command and control regulation (including self-executing performance standards and permitting), market-based regulation (such as emissions trading), remediation, and emerging regulatory approaches such as management-based regulation and alternatives assessment. Issues of compliance and enforcement. Concurrently scheduled with course C135. Letter grading.

C240. Fundamentals of Toxicology (4 units)

Lecture, four hours. Preparation: one course each in biology, organic chemistry, and biochemistry. Essential aspects of toxicology, with emphasis on human species. Absorption, distribution, excretion, biotransformation, as well as basic toxicologic processes and organ systems. Concurrently scheduled with course C140. Letter grading.

M241. Advanced Concepts in Gene-Environment Interactions (4 units)

(Same as Molecular Toxicology M247.) Lecture, three hours; discussion, one hour.

Comprehensive and practical examination of emerging science of gene-environment interaction. Discussion of primary components of field, including role of metabolic pathways in modifying environmental responses and importance of environmental influences in human disease.

Exploration of selected hot topics in field, such as importance of epigenetics and of microbiome. S/U or letter grading.

M242. Toxicodynamics (2 units)

(Same as Molecular Toxicology M242.) Lecture, one hour; discussion, one hour. Preparation: undergraduate biology and chemistry courses. Requisite: course C240. Examination of recent literature on mechanisms of toxicity or toxicodynamics. Student presentation of papers selected by instructor on various aspects of toxic mechanisms, including free radical mechanisms, mechanisms of cell death, metal toxicity/ion homeostasis, intracellular pH and calcium regulation, stress and adaptive pathways, DNA repair/mutagenesis, carcinogenesis, and teratogenesis. Discussion of various papers. S/U or letter grading.

C252D. Properties and Measurement of Airborne Particles (4 units)

Lecture, four hours. Preparation: one year each of chemistry, physics, and calculus. Basic theory and application of aerosol science to environmental health, including properties, behavior,

sampling, and measurement of aerosols and quantitative problems. Concurrently scheduled with course C152D. S/U or letter grading.

252E. Identification and Measurement of Gases and Vapors (4 units)

Lecture, three hours; discussion, one hour; outside study, two hours. Preparation: one year each of chemistry, physics, and calculus. Theoretical and practical aspects of industrial hygiene sampling and measurement of gases and vapors. Letter grading.

252F. Industrial Hygiene Measurements Laboratory (3 units)

Laboratory, three hours. Corequisites: courses C252D, 252E. Limited to industrial hygiene majors. Laboratory methods for sampling, measurement, and analysis of gases, vapors, and aerosols found in occupational environment. S/U or letter grading.

252G. Industrial and Environmental Hygiene Assessment (4 units)

Lecture, one hour; discussion, two hours; laboratory, two hours; outside study, four hours. Requisites: courses C200A, C200B, C252D, 252E, 252F. Environmental and industrial hygiene sampling strategies and assessment via walk-through surveys, lectures, group discussion, actual field measurements, laboratory calibrations, and analyses and reports, with emphasis on chemical, physical, and ergonomic hazards. Letter grading.

253. Physical Agents in Work Environment (2 to 4 units)

Lecture, two hours; laboratory, two hours. Preparation: one year of physics. Physics, measurement methods, health effects, and control methods for radiation (ionizing and nonionizing), noise, and thermal stress in workplace environment. S/U or letter grading.

255. Control of Airborne Contaminants in Industry (4 units)

Lecture, two hours; laboratory, two hours. Preparation: one year of physics. Requisite: course C252D. Principles and applications of control technology to industrial environments, including general and local exhaust ventilation, air cleaning equipment, and respiratory protection. S/U or letter grading.

256. Biological and Health Surveillance Monitoring in Occupational/Env. Health (4 units)

Lecture, three hours; discussion, one hour; assignments, three hours. Principles and applications of biological monitoring and health surveillance to assess occupational and environmental exposures to organic and inorganic chemicals and physical factors. Letter grading.

C257. Risk Assessment and Standard Setting (4 units)

Seminar, four hours. Requisites: courses C240, 251, Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of selected occupational and environmental exposures with disease. Special emphasis on critical evaluations of literature. Attention specifically to interface of science and regulatory standards. Concurrently scheduled with course C157. S/U or letter grading.

258. Identification and Analysis of Hazardous Wastes (4 units)

Lecture, three hours; discussion, one hour; laboratory, one hour; one field trip. Requisites: course 252E, Biostatistics 100A. Designed to define, identify, label, and quantify hazardous wastes and how workers should be protected. Provides critical understanding of all analytical aspects of hazardous wastes, health aspects, and regulation and practice of handling hazardous wastes. Letter grading.

259A. Occupational Safety and Ergonomics (4 units)

Lecture, four hours. Overview of most frequent and severe occupational injuries and illnesses, their distribution, causes, analysis methods, and control approaches, including low back pain, falls, machine exposures, upper extremity musculoskeletal disorders, fleet safety, and selected ergonomics topics. Letter grading.

259B. Workplace Safety (2 units)

Lecture, two hours. Introduction to broad range of topics in workplace safety through lectures on safety hazards, their classification, metrics, control philosophy, and control methods. Specific topics include traditional safety rubrics, such as fall hazards, machine safety, and fire hazards. Introduction to concepts of safety culture and philosophy. Review and presentation of peer-reviewed articles on topics relevant to course material. Letter grading.

M260. Occupational Epidemiology (4 units)

(Same as Epidemiology M261.) Lecture, three hours. Requisites: Epidemiology 100; for Epidemiology majors, Epidemiology 200A, 200B, 200C. Methodological considerations, approaches, and limitations in epidemiological studies of occupational groups and environments. S/U or letter grading.

261. Chemical Behavior of Aquatic Systems (4 units)

Lecture, three hours. Requisites: courses C200A, C200B, Chemistry 20A, 20B, Mathematics 3A. Chemistry of ocean waters, rivers, groundwaters, and water treatment systems. Topics include thermodynamics of natural waters, acids and bases, carbon dioxide cycle, solubility reactions, oxidation and reduction, plus applied problems. Letter grading.

C264. Fate and Transport of Organic Chemicals in Aquatic Environment (4 units)

Lecture, four hours. Preparation: bachelor's degree in science, engineering, geophysics, chemistry, biology, or public health. Evaluation of how and where and in what form and concentration organic pollutants are distributed in aquatic environments. Study of mass transport mechanisms moving organic chemicals between phases, biological degradation and accumulation, and chemical reactions. Effect of humic substances on these processes. Concurrently scheduled with course C164. S/U or letter grading.

M270. Work and Health (4 units)

(Same as Community Health Sciences M278.) Lecture, three hours; practicum, one hour. Recommended preparation: graduate-level methods/statistics course, basic epidemiology. Designed for graduate students. Exploration of impact of work on physical and psychological health in context of newly emerging discipline. Focus on psychosocial models, measurement (including hands-on experience), contextual factors (gender, ethnicity, social class), and how work stressors can be ameliorated. S/U or letter grading.

296A. Research Topics in Environmental Health Sciences: Coastal Ecological Processes and Problems (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296B. Research Topics in Environmental Health Sciences: Teratogenesis (2 units)

Research group meeting, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296C. Research Topics in Environmental Health Sciences: Toxicology and Environmental Health Policy (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296G. Research Topics in Environmental Health Sciences: Advances in Aerosol Technology (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296H. Research Topics in Environmental Health Sciences: Occupational and Environmental Exposure Assessment (2 units)

Research group meeting, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296I. Research Topics in Environmental Health Sciences: Industrial and Environmental Hygiene (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296J. Research Topics in Environmental Health Sciences: Germ Cell Cytogenetic/Genetic Biomarkers (2 units)

Research group meeting, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296K. Research Topics in Environmental Health Sciences: Aquatic Chemistry (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296L. Research Topics in Environmental Health Sciences: Water Science and Health (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296M. Research Topics in Environmental Health Sciences: Experimental and Modeling Studies of Atmospheric Pollution (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296N. Research Topics in Environmental Health Sciences: Genetic Toxicology (2 units)

Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

375. Teaching Apprentice Practicum (1 to 4 units)

Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Field Studies in Environmental Health Sciences (4 units)

Fieldwork, to be arranged. Field observation and studies in selected community environmental health organizations. Students must file field placement and program training documentation on form available from Student Affairs Office. May not be applied toward M.S. minimum course requirement; 4 units may be applied toward 62-unit minimum total required for M.P.H. degree. Letter grading.

401. Environmental Measurements (4 units)

Lecture, two hours; laboratory, four hours. Requisites: courses C200A, C200B, Chemistry 20A, 30AL. Instrumental methods for laboratory and field applications to assess quantity of environmental pollutants in air, food, and water, and to assess degree of exposure to such factors as noise and radiation. Letter grading.

410A. Instrumental Methods in Environmental Sciences (4 units)

Lecture, four hours; discussion, two hours; other, two hours. Preparation: one year each of physics, chemistry, and biology. Theory and principles of instrumental methods through lectures and group discussions. Letter grading.

410B. Instrumental Methods Laboratory in Environmental Health Sciences (4 units)

Lecture, one hour; discussion, one hour; laboratory, four hours; other, two hours. Preparation: one year each of physics, chemistry, and mathematics. Requisites: courses C200A, C200B. Laboratory techniques and instrumentation used in preparation and analysis of biological, environmental, and occupational samples. Letter grading.

411. Environmental Health Sciences Seminar (2 units)

Seminar, two hours. Required of graduate environmental health sciences students for one term each year. Current topics in environmental health in science, policy, and leadership. Speakers who are leading thinkers at interface of health and environment address important subjects of environmental health. May be repeated for credit. S/U grading.

M412. Effective Technical Writing (2 units)

(Same as Environment M412.) Seminar, two hours. Essentials of grammar, punctuation, syntax, organization, and format needed to produce well-written journal articles, research reports, memoranda, letters, and résumés. Development of technical writing skills using critique, exercises, and examples. S/U grading.

M413. Advanced Technical Writing (2 units)

(Same as Environment M413.) Seminar, two hours. Development of advanced technical writing skills, with exercises focused on preparation of manuscripts for publication in peer-reviewed journal. S/U grading.

M414. Effective Oral Presentation (2 units)

(Same as Environment M414.) Seminar, two hours. Introduction to oral presentations. Development of oral presentation skills, including content structure, visual aids, delivery, and audience interaction. S/U grading.

M415. Advanced Oral Presentation (2 units)

(Same as Environment M415.) Seminar, two hours. Development of advanced oral presentation skills. Preparation for oral qualifying examination. S/U grading.

454. Health Hazards of Industrial Processes (4 units)

Lecture, two hours; field trips, four hours. Requisite: course 255. Industrial processes and operations and occupational health hazards that arise from them. Letter grading.

461. Water Quality and Health (4 units)

Lecture, three hours; discussion, one hour. Requisites: courses C200A, C200B, 401. Introduction to water quality, with coverage of hydrology, water chemistry, and various chemical contaminants that may affect human health. Various treatment methods and health implications. S/U or letter grading.

M471. Improving Worker Health: Social Movements, Policy Debates, and Public Health (4 units)

(Same as Community Health Sciences CM470 and Urban Planning M470.) Lecture, three hours; fieldwork, two hours. Examination of intersection between work, health, and environment, analysis of social causes of health disparities, investigation of historical trends and social movements, interpretation of current policy debates, and development of innovative interventions. S/U or letter grading.

495. Teacher Preparation in Environmental Health Sciences (2 units)

Seminar, two hours. Preparation: 18 units of cognate courses in area of specialization. May not be applied toward master's degree minimum total course requirement. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research (2 to 8 units)

Tutorial, to be arranged. Limited to graduate students. Individual guided studies under direct faculty supervision. Only 4 units may be applied toward M.P.H. and M.S. minimum total course requirement. May be repeated for credit. S/U or letter grading.

597. Preparation for Master's Comprehensive or Doctoral Qualifying Examinations (2 to 8 units)

Tutorial, to be arranged. Limited to graduate students. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

598. Master's Thesis Research (2 to 10 units)

Tutorial, four hours. Only 4 units may be applied toward M.P.H. and M.S. minimum total course requirement; may not be applied toward minimum graduate course requirement. May be repeated for credit. S/U grading.

599. Doctoral Dissertation Research (2 to 10 units)

Tutorial, four hours. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

EHS Faculty & Research Interests:**Professors:****Richard (Rich) Ambrose, Ph.D.**

Research Interests: Environmental biology, ecology of coastal areas, ecosystem services, resource management policy, climate change, ecological aspects of low impact development/green infrastructure.

Email: rambrose@ucla.edu

Phone: (310) 825-6144

Office: 46-078 CHS

Michael (Mike) Collins, Ph.D.

Research Interests: Developmental toxicology, teratology, gene-gene and gene-environment interactions

Email: mdc@ucla.edu

Phone: (310) 206-6730

Office: 71-297 CHS

Hilary Godwin, Ph.D.

Associate Dean for Academic Programs; Luskin Scholar

Research Interests: Nanotoxicology, nanoregulatory & toxics policy, climate change and health, climate action planning

Email: hgodwin@ucla.edu

Phone: (310) 794-1238

Office: 16-035 CHS

Richard J. Jackson, M.D., M.P.H.

Research Interests: Biomonitoring, built environment and health, environmental health policy, children's health, and community environmental health

Email: dickjackson@ucla.edu

Phone: (310) 206-8522

Office: 51-297B CHS

Michael Jerrett, Ph.D., M.A. (Department Chair)

Director of the Center for Occupational and Environmental Health (COEH)

Research Interests: Geographic information science for exposure assessment and spatial epidemiology, air pollution exposures and health effects, built environment, physical activity and climate change.

Phone: (310) 206-5296

Office: 56-070B CHS

Niklas Krause, M.D., M.P.H., Ph.D.

Director of the Southern California Education and Research Center (SCERC)

Research Interests: Occupational safety and health, occupational epidemiology of musculoskeletal and cardiovascular diseases, physical activity at work

Email: niklaskrause@ucla.edu

Phone: (310) 825-2079

Office: 56-071B CHS

Shane Que Hee, Ph.D.

Director of the UCLA Industrial Hygiene Program

Research Interests: Industrial hygiene, environmental chemistry, analytical chemistry, biomarkers, skin exposure, risk assessment, exposure assessment, analysis for organics and metals in environmental and biological media, bioassay-directed chemical analysis

Email: squehee@ucla.edu

Phone: (310) 206-7388

Office: 56-071A CHS

Robert Schiestl, Ph.D.

Professor of Pathology, School of Medicine

Research Interests: Toxicology, carcinogenesis DNA damage and repair, and gene-environment interactions

Email: rschiestl@mednet.ucla.edu

Phone: (310) 267-2087

Office: 71-295B CHS

Assistant: Chayo Minutti (schiestllab@mednet.ucla.edu; (310) 825-6857)

Irwin (Mel) Suffet, Ph.D.

Research Interests: Water quality, environmental chemistry- analysis, fate and treatment of hazardous and odorous chemicals

Email: msuffet@ucla.edu

Phone: (310) 206-8230

Office: 61-295A CHS

Yifang Zhu, Ph.D.

Research Interests: Air pollution, exposure assessment, aerosols, and industrial hygiene

Email: yifang@ucla.edu

Phone: (310) 825-4324

Office: 51-295B CHS

Associate Professors:

Jane L. Valentine, Ph.D., M.S., REHS

Research Interests: Environmental health sciences (REHS), trace-metal exposures and health, water quality and technological advances, environmental measurements and chemistry.

Email: jlvalentine@ucla.edu

Phone: (310) 825-8751

Office: 66-062A CHS

Assistant Professors:

Patrick Allard, Ph.D.

Research Interests: Biological perspective on issues of gene-environment interaction

Email: pallard@ucla.edu

Phone: (310) 825-5257

Office: 73-251 CHS

Joint Professors:

Jesus Araujo, M.S., Ph.D.

Assistant Professor, Medicine

Research Interests: Environmental Cardiology; Biology of vascular oxidative stress

Email: jaraujo@mednet.ucla.edu

Phone: (310) 825-3222

Office: 43-264 CHS

Jared Diamond, Ph.D.

Professor of Geography and Physiology

Research Interests: Regulation of nutrient transport; integrative and evolutionary physiology

Email: jdiamond@geog.ucla.edu

Phone: (310) 825-6177

Office: 1255 Bunche Hall

Timothy F. Malloy, J.D.

Professor of Law

Faculty Director- UCLA Sustainable Technology and Policy Program

Research Interests: Environmental, chemical and nanotechnology policy, regulatory policy, and organizational theory, with particular emphasis on the relationship between regulatory design and implementation and the structure of business organizations

Email: malloy@law.ucla.edu

Phone: (310) 794-5278

Office: 1242 Law Building

Andre Nel, M.B.Ch.B., Ph.D.

Division Chief, NanoMedicine; Professor, Medicine; Director, Center for Environmental Implications of Nanotechnology, California NanoSystems Institute;

Research Interests: Nanomedicine and Nanobiology, and the role of air pollutants in asthma, with particular emphasis on the role of ultrafine particle-induced oxidative stress in the generation of airway inflammation and asthma.

Email: anel@mednet.ucla.edu

Phone: (310) 285-6620

Office: 52-175 CHS

Beate Ritz, Ph.D., M.D.

Professor and Vice Chair of the Epidemiology

Research Interests: health effects of occupational and environmental toxins such as pesticides, ionizing radiation, and air pollution on chronic diseases including neurodegenerative and neurodevelopmental disorders (Parkinson's disease, autism cognition), cancers, and adverse birth outcomes and asthma.

Email: britz@ucla.edu

Phone: (310) 206-7458

Office: 73-320A CHS

Wendie Robbins, M.S.N., Ph.D.

Professor and Audrienne H. Moseley Endowed Chair

Research Interests: Total worker health, male reproductive health, reproductive and environmental epidemiology

Email: wrobbins@sonnet.ucla.edu

Phone: (310) 825-8999

Office: 5-254 Factor

Linda Rosenstock, M.D., M.P.H.

Professor and Dean Emeritus

Research Interests: Occupational and environmental health; Occupational medicine

Email: lindarosenstock@ph.ucla.edu

Phone: (310) 206-7724

Office: 10960 Wilshire Blvd., Suite 1500

Adjunct Professors:

Thomas Hatfield, REHS, Dr.P.H.

Professor- Environmental and Occupational Health Department, CSUN

Research Interests: Environmental Health Practice, Risk Analysis

Email: thomas.hatfield@csun.edu

Phone: (818) 677-7476

Adjunct Associate Professors:

Linda Delp, Ph.D., M.P.H.

Research Interests: Worker health and safety through education, community-based research, and policy initiatives; occupational health disparities; environmental sustainability; labor-community capacity-building.

Email: ldelp@ucla.edu

Phone: (310) 794-5976

Office: UCLA-LOSH 10945 Le Conte Ave., Suite 2107, Los Angeles, CA 90095

James R. Greenwood, Ph.D., M.P.H., M.S.

Research Interests: Injury prevention and policy development, as it relates to environmental factors.

Email: jgreenwo@ucla.edu

Phone: (310) 825-8579

Office: 71-254 CHS

Daniel Uslan, M.D., M.S.

Research Interests: Antibiotic use, medical device infections including pacemaker infections, and epidemiology of infections

Email: duslan@mednet.ucla.edu

Phone: (310) 825-7225

Office: UCLA Infectious Disease 200 UCLA Medical Plaza 365-C Los Angeles, CA 90095

Adjunct Assistant Professors:

Angelo Bellomo, M.S., REHS

Research Interests: Environmental Health Practice, Environmental Public Policy and Climate Change and Public Health

Email: abellomo@ph.lacounty.gov

Pablo Cicero-Fernandez, D.Env.

Research Interests: Air pollution, exposure assessment, vehicle emissions controls, and global climate change

Email: pcicero@arb.ca.gov

Phone: (626) 575-6633

Office: 56-070 CHS

Brian L. Cole, Dr.P.H.

Research Interests: Health impact assessment, physical and social environmental determinants of health, policy studies, qualitative and quantitative evaluation methods, environmental approaches to physical activity promotion, risk perception and behavior in organizational settings, school health promotion.

Email: blcole@ucla.edu

Phone: (310) 206-4253

James Gibson, Ph.D., M.P.H., REHS

Research Interests: Occupational and Environmental Health, Environmental Health Practice, Vector Borne Disease

Email: j.gibson@usc.edu

Phone: (213) 740-0720

Office: 3434 South Grand Avenue, CAL 120, Los Angeles CA 90089

Nicole M. Green, Ph.D.

Director, Public Health Laboratory

Los Angeles County Department of Public Health

Research interests include: Molecular epidemiology, comparative genomics, host-pathogen interactions, evaluation of diagnostic methods

Email: nicgreen@ph.lacounty.gov

Phone: (562) 658-1330 or (562) 658-1352

Office: 12750 Erickson Avenue, Downey, CA 90242

Tao Huai, Ph.D.

Chief, Freight Emissions Assessment and Research Branch in the Monitoring & Laboratory Division at the California Air Resources Board

Research Interests: Vehicle emissions research and testing, environmental public policy and climate change mitigation

Email: tao.huai@arb.ca.gov

Kevin Njabo, Ph.D., M.Sc.

Research Interests: Ecology and evolution of tropical diseases, biodiversity management and conservation

Email: kynjabo@ucla.edu

Phone: (310) 267-5132

Office: UCLA Institute of Environment and Sustainability, La Kretz Hall, Suite 300

Visiting Professors:

Peter Schnall, M.D., M.P.H.

Research Interests: occupational stress, psychosocial factors in the workplace, cardiovascular disease

Email: pschnall@workhealth.org

Phone: (949) 824-8641

Office: University of California, Irvine

Center for Occupational & Environmental Health

5201 California Ave, Suite 100

Irvine, CA 92617

Emeritus:

Arthur (Art) Cho, Ph.D.

Professor Emeritus of Pharmacology

Research Interests: molecular and medical pharmacology, drug metabolism, pharmacokinetics

Email: acho@mednet.ucla.edu

Phone: (310) 825-6567

Office: 21-297 CHS

Curtis D. Eckhert, Ph.D

Research Interests: Toxicology; nutrition; molecular cell biology of boron an overlooked nutrient that is essential for dietary plants and has anticarcinogenic, bone and executive brain health properties in humans.

Email: ceckhert@g.ucla.edu

Phone: (310) 825-8429

Office: 76-080 FSPH

John R. Froines, Ph.D.

Associate Director of the Southern California Environmental Health Sciences Center;

Research Interests: Chemical toxicology including mechanism, exposure sciences and the exposome, risk assessment and policy

Email: jfroines@ucla.edu

Office: 21-293C CHS

Oliver Hankinson, Ph.D.

Director of the Molecular Toxicology IDP

Research Interests: Carcinogenesis and Hypoxia.

Email: ohank@mednet.ucla.edu

Phone: (310) 825-2936

Office: 13-230 Factor

William (Bill) Hinds, Sc.D.

Research Interests: industrial hygiene, aerosols, particulate air pollution

Email: whinds@ucla.edu

Arthur Winer, Ph.D.

Research Interests: air pollution, exposure assessment, atmospheric chemistry

Email: amwiner@ucla.edu

Phone: (310) 206-5296

Office: 61-295B CHS