# Table of Contents

Introduction.................................................................................................................. 4
Scope & Objectives........................................................................................................ 4
Research....................................................................................................................... 5
Community Service ..................................................................................................... 5
Career Opportunities.................................................................................................... 5
Academic Information .................................................................................................. 5
  Graduate Degrees Offered ....................................................................................... 5
  Admissions Requirements ....................................................................................... 6
  Standards and Procedures for Graduate Study at UCLA ................................... 7
  Laboratory Safety Training ................................................................................... 7
  Important Links for Graduate Students ............................................................... 8

Master’s Degree Program Requirements ................................................................... 8
  Master of Science in Environmental Health Sciences (M.S.) ............................. 8
  Master of Public Health (M.P.H) ........................................................................... 11
  Registered Environmental Health Specialist (REHS) ....................................... 13
  Additional Information for Master’s Students .................................................... 14
    Advancement to Candidacy ............................................................................... 14
    Important Forms for Master’s Students ......................................................... 14
    Transferring into the Doctoral Program ............................................................ 14

Doctoral Degree Program Requirements .................................................................. 14
  Doctor of Philosophy in Environmental Health Sciences (Ph.D.) ...................... 14
  Doctor of Public Health in Environmental Health Sciences (Dr.P.H.) .......... 16
  Additional Information for Doctoral Students .................................................... 19
    Written Doctoral Qualifying Exam .................................................................. 19
    Nomination of Ph.D. Doctoral Committee ...................................................... 19
    Nomination of Dr.P.H. Doctoral Committee ................................................. 19
    Oral Doctoral Qualifying Exam ...................................................................... 20
    Advancement to Candidacy ............................................................................. 20
    Final Oral Examination (Defense of Dissertation) ......................................... 20
    Required Forms and Timing ........................................................................... 21
    Research Credits .............................................................................................. 21

Student Affairs .......................................................................................................... 22
  Student Services/Advising .................................................................................... 22
  Official Materials from the University ............................................................... 23
  Academic Course Load ......................................................................................... 23
  Course Schedule and Classrooms ....................................................................... 23
  Registration ........................................................................................................... 23
  Paying Fees ......................................................................................................... 23
  Filing Fee .............................................................................................................. 24
  Enrollment/MyUCLA ........................................................................................... 24
  Enrollment Deadlines ........................................................................................... 24
  Study List .............................................................................................................. 25
  Normal Progress/Full-time Graduate Program ................................................... 25
  Leave of Absence ................................................................................................. 25
Establishing California Residency ................................................................. 26
Data sheet ...................................................................................................... 26
Transfer of Credit ......................................................................................... 26
Grading .......................................................................................................... 26
Academic Probation ..................................................................................... 27
English as a Second Language .................................................................... 27
Course Waivers ............................................................................................. 27
Student Complaints and Academic Grievances ........................................... 28
Academic Dishonesty .................................................................................... 28
Ordering Transcripts ..................................................................................... 28
Change of Name or Address ......................................................................... 29
Financial Support and Funding ................................................................... 29
  Academic Apprentice Personnel ................................................................ 29
Requirements for Fee Remissions ................................................................. 30
Student Life & Resources ........................................................................... 31
  2014-15 Academic Calendar ...................................................................... 31
  BruinCard (Student ID) ............................................................................. 32
  MyUCLA .................................................................................................... 32
  International Students ............................................................................... 32
  Student Mailboxes ..................................................................................... 33
  Graduate Writing Center .......................................................................... 33
  Additional Writing Resources for FSPH Students ..................................... 33
  Arthur Ashe Student Health and Wellness Center .................................... 33
  Medical Insurance Requirement ............................................................... 33
  Waiving SHIP ......................................................................................... 34
  UCLA Counseling and Psychological Services ....................................... 34
  FSPH Career Services Office .................................................................... 34
  EHS Career Services ................................................................................ 34
  UCLA Career Center ............................................................................... 34
  Bruin OnLine (BOL) ................................................................................ 34
  BruinTech ................................................................................................ 35
  Borrowing a CLICC Laptop ...................................................................... 35
  Office for Students with Disabilities (OSD) ............................................. 35
  Transportation & Shuttle Services .............................................................. 35
2014-15 EHS Schedule of Classes ................................................................. 36
EHS Course Descriptions ............................................................................ 36
EHS Faculty & Research Interests ................................................................. 48
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 Dr.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, the Southern California Education and Research Center, and the Southern California Particle Center

**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
- Dr.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. and Dr.P.H. are professional degrees which emphasize 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 (Ph.D. or Dr.P.H.).

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 are as follows:

**MS:** Bachelor's (or advanced) degrees in life sciences, physical sciences, or engineering. Well-prepared applicants have basic knowledge of physics, biology, mathematics (through calculus), general chemistry, organic chemistry, and biochemistry. Applicants without this background but who have a significant interest in pursuing a master's degree in Environmental Health Sciences should apply for the MPH program with a specialization in Environmental Health Sciences.

**MPH:** Bachelor's (or master's) degree in public health, life sciences, physical sciences, or engineering or a related field. Students who have taken extensive related coursework but who majored in other fields, or who have a related professional degree, are also encouraged to apply. Well-prepared applicants have basic knowledge of biology, mathematics (through calculus), and chemistry (including at least one quarter of organic chemistry or biochemistry).

**MURP/MPH:** Bachelor's (or master's) degree in public health, life sciences, physical sciences, or engineering or a related field. Students who have taken extensive related coursework but who majored in other fields, or who have a related professional degree, are also encouraged to apply. Well-prepared applicants have basic knowledge of biology, mathematics (through calculus), and chemistry (including at least one quarter of organic chemistry or biochemistry).

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.
**PhD:** A Bachelor’s degree in chemistry, physics, biology, engineering, or other appropriate field. Preparation should include at least one year of chemistry (including organic chemistry or biochemistry), physics, biology, and mathematics through calculus. A Master’s degree in a related field with a grade point average of at least 3.5 for graduate studies.

**DrPH:** Completion of the MPH or a Master’s degree in an appropriately related field (if the master’s degree is in a field other than public health. Applicants must have taken the equivalent of the MPH mandatory core courses or include them in their course of study after admission).

At least a 3.0 junior/senior undergraduate grade point average, at least a 3.5 GPA in graduate studies or demonstrated superiority in graduate, and at least a “B” in each of the mandatory core courses.

**How to Apply:** Detailed information on the application process and procedures can be found at: [http://ph.ucla.edu/prospective-students](http://ph.ucla.edu/prospective-students).

All application materials for the School’s graduate programs are available online for electronic submission at [http://www.gdnet.ucla.edu](http://www.gdnet.ucla.edu) and at [www.sophas.org](http://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](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.

**Important Links for all Graduate Students:**
- Requirements for Specific Graduate Programs at UCLA (note that MPH & DrPH requirements are listed in the under Public Health): [http://www.gdnet.ucla.edu/departments.html](http://www.gdnet.ucla.edu/departments.html)
- Important Deadlines: [http://www.gdnet.ucla.edu/asis/deadlines/default.asp](http://www.gdnet.ucla.edu/asis/deadlines/default.asp)

**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:** 60 units

**Time-to-Degree:** Normally two years (six academic quarters)

**Course Requirements:**
Students must complete a minimum of 10 full courses (40 units), at least five of which must be graduate courses in the 200 or 500 series, with at least a 3.0 (B) GPA. Only one 596 course (4 units) and one 598 course (4 units) may be applied toward the total course requirement; 4 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, Environmental Health Sciences C200B and Biostatistics 100B in their second quarter. They may also take additional courses in each of those quarters.
Students with an extensive math background may take Biostat 110 A-B instead of Biostat 100A-B. Please contact the Biostatistics Department for more detailed information on these courses. Your Faculty advisor must approve this before you enroll in the course.

EHS required courses include:

- Biostatistics 100A: (Fall, Winter, Spring)
- Biostatistics 100B: (Winter)
- Epidemiology 100 (Winter, Spring)
- EHS C200A (Fall) & C200B (Winter): Foundations of Environmental Health Sciences
- EHS 201: Seminar on Health Effects of Environmental Contaminants (Fall)
- EHS C240: Fundamentals of Toxicology (Spring)
- EHS 410A: Instrumental Methods in Environmental Science (Winter)
- EHS 411: Environmental Health Sciences Seminar (Winter/Spring). One quarter each year is required
- EHS 596 (Comp/Report Plan) OR 598 (Thesis plan): 4 units are required*
- 18 units of elective course: Elective courses should be selected from the student's academic area of focus, in consultation and with approval from your Faculty Advisor.

*Only 4 units of 596 OR 598 may be applied toward the MS minimum total course requirements.

Requirement for Elective Courses:
In addition to the Department required courses, at least 18 units of upper division or graduate level elective courses are required for the M.S. degree. These courses may be taken in related fields outside the Department, but should be selected in consultation with your advisor.

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 complete a thesis (Plan I) or a project and take a comprehensive examination (Plan II).

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. 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, at the latest. It can be an experimental, field, theoretical, library, modeling or computer study. In order to satisfy this requirement you must enroll in at least 4 units of EHS 596: Directed Individual Study or Research with your advisor.

The student also has the option of submitting an externally peer-reviewed publication (e.g. journal article, book chapter) that was completed while a student.

MS Comp/Report students must enroll in 596 in their final quarter in order to satisfy the comprehensive exam/report requirement. If the comp/report is not completed by the end of that quarter, then the student will receive an Incomplete (I) and will have one quarter to complete this requirement. The following quarter, the students must pay a filing fee by the second week of classes in order to submit their comp/report. Students who receive an “I” in spring can pay the filing fee in either summer or fall. If the comp/report is not submitted the quarter that the filing fee is paid, then the student must apply for re-admission to the Environmental Health Sciences Department, register and enroll in the quarter that they are completing this requirement.

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.*
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 hours internship.

Minimum Units Required: 62 units

Time-to-Degree: Normally two years (six academic 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 degree must be taken on a letter grade basis.

Sequence of Courses:
Students in the MPH program should take Environmental Health Sciences C200A and Biostatistics 100A in their first quarter, Environmental Health Sciences C200B and Biostatistics 100B in their second quarter. They may also take additional courses in each of those quarters.

Students with an extensive math background may take Biostat 110 A-B instead of Biostat 100A-B. Please contact the Biostatistics Department for more detailed information on these courses. Your Faculty advisor must approve this before you enroll in the course.

FSPH required courses (20 units):
- Biostatistics 100A (Fall, Winter, Spring) or 110A (Fall)
- Community Health Sciences 100 (Winter, Spring)
- Epidemiology 100 (Winter, Spring)
- Health Policy & Management 100 (Fall, Spring)
- EHS 400: Field Studies in Environmental Health Sciences (Students enroll in this course the quarter that they have completed their final internship report)

EHS required courses (30-34 units):
- Biostatistics 100B (Winter)
- EHS C200A: Foundations of Environmental Health Sciences. (Fall)
- EHS C200B: Foundations of Environmental Health Sciences (Winter)
- EHS 201: Health Effects of Environmental Contaminants (Fall)
- EHS C240: Fundamentals of Toxicology (Spring)
- EHS 401: Environmental Measurements (Spring) OR
- EHS 410A/410B: Instrumental Methods in Environmental Sciences and Lab (Winter)
- EHS 411: Environmental Health Sciences Seminar: (Fall/Winter): One quarter each year is required

**Elective Courses (12 units):**
In addition to School and Department requirements, at least 12 units of upper division or graduate level elective courses are required. 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 MPH Internship Coordinator, Courtney Klipp, at cklipp@ph.ucla.edu or (310) 206-4880.

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 Internship Coordinator, Courtney Klipp (cklipp@ph.ucla.edu), 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.
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. If you miss the workshop, petitions for advancement to candidacy can be picked up in the Student Affairs Office, Room A1-269 CHS. The 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.

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.

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. The petition must be approved by the Master’s Advisor, Doctoral Advisor and Department Chair. Admission into the doctoral program is not guaranteed.

Doctoral Degree Program Requirements:
Please refer to the UCLA General Catalog, Graduate Division website, and the EHS Doctoral of Philosophy Program Guidelines. For more detailed information regarding the degree requirements for the Dr.P.H. with a specialization in Environmental Health Sciences.

Doctor of Philosophy in Environmental Health Sciences (Ph.D.):
The Ph.D. in Environmental Health Sciences is an advanced research degree that emphasizes depth of knowledge and original research skills. The dissertation must demonstrate ability for independent and original scholarly investigation. Students may choose to concentrate on any field of environmental health sciences. Such areas of academic focus may include: air quality;
environmental biology; environmental chemistry; environmental health practice and policy; industrial hygiene; toxicology; or water quality. Interdisciplinary research is encouraged.

The doctoral program encompasses the following major elements:
- Course work in the major field under direction of the Guidance Committee
- Written qualifying examinations, including proposals related to the dissertation, under direction of the Guidance Committee
- Oral Qualifying Examination on the proposal for the dissertation (advancement to candidacy) under direction of the Doctoral Committee
- Dissertation
- Oral defense of the dissertation under the direction of the Doctoral Committee. (This is a public examination.)

Time-to-Degree:
The normal time from initial enrollment to advancement to candidacy is six to nine quarters (two to three calendar years); from advancement to candidacy to filing of dissertation, the normal time is six to nine quarters (two to three calendar years).

Foreign Language Requirement:
There is no foreign language requirement for the PhD.

Teaching Experience:
Teaching experience is recommended, but not required for the doctoral degree.

Course Requirements:
Students select a course of study upon consultation with their Advisor and guidance committee. Proficiency in biostatistics/statistics is also required. Each specific letter grade required course can be waived if the equivalent has been successfully taken previously with a grade of B or better.

**EHS required courses include:**
- EHS 100: Introduction to Environmental Health (Fall, Spring) **OR**
- EHS C200A (Fall) & C200B (Winter): Foundations of Environmental Health Sciences
- EHS 296: Research Topics in EHS (taken each quarter in residence)
- EHS 411: Environmental Health Sciences Seminar: (Fall/Winter). One quarter per year for the first two years
- ENV 410A: Environmental Science & Engineering Workshop (Fall)
- One full course (4 units or more at the 100 or 200 level) in Epidemiology

Proficiency in biostatistics/statistics is also required. Each specific letter grade required course can be waived if the equivalent has been successfully taken previously with a grade of B or better.

**Major Fields or Subdisciplines:**
Students may choose to concentrate on any field of environmental health sciences. Such areas of academic focus may include: air quality; environmental biology; environmental chemistry;
environmental health practice and policy; industrial hygiene; toxicology; or water quality. Interdisciplinary research is also recommended.

**Advising:**
Each student must meet with their Faculty Advisor on a regular basis. Student and advisor together agree upon a study list for each academic quarter; any subsequent alterations must be approved both by the advisor and the Guidance Committee.

Students are advised by the following faculty:
- *The advisor* and later *the doctoral committee chair*, who assists the student to develop his or her particular career interests and who supervises the student’s course work, preparation for examinations, proposals and dissertation.
- *The Guidance Committee*, who assists the student to develop his or her particular career interests, who supervise the student’s course work, assists the student in defining his or her interests, and who evaluate the Written Qualifying Examination.
- *The Doctoral Committee*, who evaluate the student during the oral examination, dissertation defense, and any associated documents.

These committees are chosen by the student in consultation with his or her advisor, and must be approved by the Department Chair. A student’s advisor may, but will not necessarily, become chair of the dissertation committee, if research interests and activities are compatible. These persons and committees also evaluate the student’s progress, making decisions regarding the quality of his or her scholarly work.

**Formation of the Doctoral Guidance Committee:**
A Guidance Committee consists of an Advisor plus at least one other Department Academic Senate member. It must be formed within three months of student arrival in the Department if the student chooses this option on arrival. In any case, it must be formed within three quarters of arrival.

The Guidance Committee prepares the student for the Doctoral Written Comprehensive Qualifying Examination process. A Guidance Committee must meet formally with the student to review student progress at least once each year.

PhD students can formally nominate their Guidance Committee by submitting [PhD- Form 1](#) to the EHS Student Affairs Officer.

Once the student has passed the Written Qualifying Exam, Advancement to Candidacy is signaled by officially nominating the Doctoral Committee (see page 17 for more information).

**Doctor of Public Health in Environmental Health Sciences (Dr.P.H.):**
The Doctor of Public Health (DrPH) is a schoolwide degree and the highest professional degree for the public health generalist. Students are expected to focus on public health practice and to acquire broad knowledge related to professional skills. The dissertation is of an applied,
practical, problem-solving nature and must demonstrate ability for independent investigation. Environmental health sciences is one of the areas of specialization.

The doctoral program encompasses the following major elements:
- Course work in the major field and minor field
- Written qualifying examinations, including proposal for the dissertation
- Oral Qualifying Examination on the proposal for the dissertation (advancement to candidacy)
- Dissertation
- Oral defense of the dissertation

Time-to-Degree:
The normal time from initial enrollment to advancement to candidacy is six to nine quarters (two to three calendar years); from advancement to candidacy to filing of dissertation, the normal time is six to nine quarters (two to three calendar years).

Foreign Language Requirement:
There is no foreign language requirement for the DrPH.

Teaching Experience:
Teaching experience is strongly recommended, but not required for the doctoral degree.

Course Requirements:
Students select a course of study upon consultation with their Advisor and guidance committee. Six full courses (four must be at the 200 or 400 level) in at least two Fielding School of Public Health departments other than Environmental Health Sciences are required for breadth. The major requires an additional area of concentration (the minor) which may be either inside or outside the school.

The Department also requires additional courses in the major field as recommended by the advisor and guidance committee and courses in a minor field outside the department as recommend by the minor advisor.

If the student holds a master’s degree in a field other than public health, they must have taken the equivalent of the MPH mandatory core courses or include them in the course of study after admission.

EHS required courses include:
- EHS 100: Introduction to Environmental Health (Fall, Spring) OR
- EHS C200A (Fall) & C200B (Winter): Foundations of Environmental Health Sciences
- EHS 296: Research Topics in EHS (taken each quarter in residence)
- EHS 411: Environmental Health Sciences Seminar: (Fall/Winter). One quarter per year for the first two years)
- ENV 410A: Environmental Science & Engineering Workshop (Fall)
- One full course (4 units or more at the 100 or 200 level) in Epidemiology
Proficiency in biostatistics/statistics is also required. Each specific letter grade required course can be waived if the equivalent has been successfully taken previously with a grade of B or better.

**Major Fields or Subdisciplines:**
Students may choose to concentrate on any field of environmental health sciences. Such areas of academic focus may include: air quality; environmental biology; environmental chemistry; environmental health practice and policy; industrial hygiene; toxicology; or water quality. Interdisciplinary research is also recommended.

**Advising:**
An academic advisor is assigned to each new student when they are admitted to the program. Student and advisor together agree upon a study list for each academic quarter; any subsequent alterations must be approved both by the advisor and the Department Chair.

Students are advised by the following faculty:
- *The advisor* and later *the doctoral committee chair*, who assists the student in developing his or her particular career interests and who supervises the student’s course work, preparation for examinations, proposal and dissertation.

- *The Guidance Committee*, who assists the student to develop his or her particular career interests and who supervise the student’s course work and assist the student in defining his or her interests.

- *The Doctoral Committee*, who assist the student in the preparation of the proposal and the dissertation and who evaluate these documents during the oral examination. These committees are chosen by the student in consultation with his or her advisor, and must be approved by the Department Chair. A student’s advisor may, but will not necessarily, become chair of the dissertation committee, if research interests and activities are compatible. These persons and committees also evaluate the student’s progress, making decisions regarding the quality of his or her scholarly work.

**Formation of the Doctoral Guidance Committee:**
The DrPH Guidance Committee consists of at least three members, which must include the advisor in the major field and the advisor in the minor field. It must be formed within the first three quarters of study.

The Guidance Committee prepares the student for the Doctoral Written Comprehensive Qualifying Examination process. A Guidance Committee must meet formally with the student to review student progress at least once each year.

DrPH students can formally nominate their Guidance Committee by submitting [DrPH- Form 1](#) to the EHS Student Affairs Officer.

Once the student has passed the Written Qualifying Exam, Advancement to Candidacy is signaled by officially nominating the Doctoral Committee (see page 19 for more information).
Additional Information for Doctoral Students:

Written Doctoral Qualifying Exam:
The aim of the Written Doctoral Qualifying Examination is to verify that the candidate has state-of-the-art knowledge about the general areas of the major field (intended research and its relationships to environmental health sciences and to public health). For DrPH students, this examination may also include questions on the minor field.

The student must complete the minimum course requirements to the satisfaction of the Advisor and Guidance Committee before taking the Examination. The Guidance Committee administers and evaluates the Examination.

The Examination process is initiated by the student with the consent of the Guidance Committee. The student enrolls in EHS 597 Preparation for Master’s Comprehensive or Doctoral Qualifying Examination (2-8 units) and works with the Guidance Committee to select a date for the Examination.

Nomination of Ph.D. Doctoral Committee:
A doctoral committee, consisting of at least four faculty members who hold professorial appointments at UCLA, is nominated when students are ready to take the University Oral Qualifying Examination. At least two of the faculty must be tenured. Three of the four must hold appointments in Environmental Health Sciences; one must be an outside member who holds an appointment in another department at UCLA. After passing the University Oral Qualifying Examination, students may be advanced to candidacy and commence work on a dissertation in the principal field of study. The doctoral committee supervises the progress toward completion of the dissertation.

Nomination of Dr.P.H. Doctoral Committee:
A doctoral committee, consisting of at least four faculty members who hold professorial appointments at UCLA, is nominated when students are ready to take the University Oral Qualifying Examination. At least two of the faculty must be tenured. Two of the four must hold appointments in Environmental Health Sciences; the third member must be the Advisor of the minor field who holds an appointment in another department in the Fielding School of Public Health. The fourth member (outside member) must hold an appointment in another Department.
at UCLA (outside of the Fielding School of Public Health). After passing the University Oral Qualifying Examination, students may be advanced to candidacy and commence work on a dissertation in the principal field of study. The doctoral committee supervises the progress toward completion of the dissertation.

**Oral Doctoral Qualifying Exam:**
On successful completion of the written Qualifying Examination, the doctoral committee is named to administer the Oral Qualifying Examination.

The exam focuses on the proposal for the dissertation. It also includes the following as appropriate: theory and background research relevant to the proposed research beyond that reviewed in the proposal; methodological and analytic considerations pertinent to the proposed research, irrespective of whether these issues have been covered in the proposal; and feasibility. The proposed research must make an original contribution to the field.

The exam is administered by the student’s doctoral committee. The student presents a brief overview of the research, describing its significance, the contribution that the work will make to the field, the methods to be used to collect and analyze data, and the expected strengths and limitations of the work. This presentation is followed by an extended question-and-answer period. The exam typically lasts two hours and the student usually presents their intended focus area in the first 50 minutes.

All committee members **must** be present; there are no exceptions to this rule. The examination is evaluated on a Pass/Fail basis; at least three members of the committee must approve the proposal. It may be repeated once if a majority of the committee so recommends. Only the student and committee members may attend this examination.

**Advancement to Candidacy:**
Advancing to candidacy is also a requirement for those in the Ph.D. and Dr.P.H. programs. All doctoral students must fill out forms 1 and 2 before officially nominating their doctoral committees. Doctoral students should not schedule a date for the proposal until the official doctoral committee has been approved by Graduate Division (it takes 5 to 10 working days for approval once the nomination is submitted).

**Final Oral Examination (Defense of Dissertation):**
A final oral examination is required of all candidates.

**For detailed information on how to prepare and file your dissertation, visit:**
## Required Forms and Timing for Doctoral Students:

<table>
<thead>
<tr>
<th>Action</th>
<th>Form to File With Student Affairs Officer</th>
<th>When to File Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominate Guidance Committee</td>
<td>• PhD Form 1</td>
<td>Before second year of doctoral program (within first three quarters)</td>
</tr>
<tr>
<td></td>
<td>• DrPH Form 1</td>
<td></td>
</tr>
<tr>
<td>Report on Written Qualifying Exam &amp; Completion of Course Requirements</td>
<td>• PhD Form 2</td>
<td>After completion of exam</td>
</tr>
<tr>
<td></td>
<td>• DrPH-Form 2</td>
<td></td>
</tr>
<tr>
<td>Nomination of Doctoral Committee</td>
<td>• Nomination of Doctoral Committee</td>
<td>Minimum of 4 weeks before oral exam</td>
</tr>
<tr>
<td>Report on Oral Qualifying Exam &amp; Advancement to Candidacy</td>
<td>• See Department SAO</td>
<td>Request from SAO prior to exam. Submitted by SAO after completion of exam</td>
</tr>
<tr>
<td>Report on Final Oral Examination</td>
<td>• See Department SAO</td>
<td>When final oral defense is completed</td>
</tr>
<tr>
<td>File Dissertation</td>
<td>• See Graduate Division Website</td>
<td>By first week of June to participate in Commencement. See SAO for exact date.</td>
</tr>
</tbody>
</table>

**Research Credits:**
The student enrolls in EHS 596 for research before the Written Qualifying Examination under the Advisor during quarters acceptable to both student and Advisor. After the student has come into doctoral candidacy, the appropriate course for credit is EHS 599.

The student enrolls in EHS 597 Preparation for Master’s Comprehensive or Doctoral Qualifying Examination (2-8 units) while studying for the qualifying exam.
Student Services/Advising:

- **Environmental Health Sciences Department**: Rebecca Greenberg is the Student Affairs Officer for the Department. Her contact information is as follows:
  
  Office: 56-085 CHS  
  Phone: (310) 206-1619  
  Email: rgreenberg@ph.ucla.edu

- **The Environmental Health Sciences Department’s Faculty Graduate Advisors are**: Dr. Curtis Eckhert and Dr. Yifang Zhu. Students may meet with them 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/.

Academic Course Load:
A normal load is 12 units per quarter; a minimum of 8 and maximum of 17.5 units are permitted. Students must petition to take additional units above the quarterly maximum allowed. A blue petition (available in the Student Affairs Office) must be signed first by the student’s advisor, then by the Chair before it is filed in the Student Affairs Office.

Course Schedule and Classrooms:
Please visit http://www.registrar.ucla.edu/schedule/schedulehome.aspx for course schedule and room assignments.

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. Students can pay their BAR account electronically using Visa, MasterCard, PULSE, NYSE, STAR, Discover, or American Express. Students can also print a remittance document from the eBill webpage and mail payments with a check or money order. UCLA converts checks into electronic payments.

**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. The current cost for the filing fee is $162.00. Students must petition and be granted approval to pay the filing fee. The filing fee application must be submitted by the end of the second week of the quarter.

- Filing Fee Application

**Doctoral students may only pay the filing fee once.** If they do not file their dissertation during the quarter in which they paid the filing fee, then they must be readmitted and pay full registration fees in order to file their dissertation.

Masters students may be eligible to pay the filing fee a second time if they failed their comprehensive exam. For detailed information on the eligibility criteria and restrictions, visit: http://www.grad.ucla.edu/etd/filingfee.htm.

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

After week 10, requesting retroactive add or drop any courses 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 means 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 form, 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. Teaching assistants (TAs) 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).

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](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/faq/residencefaq.htm](http://www.registrar.ucla.edu/faq/residencefaq.htm)) or call the Residence Deputy at (310) 825-1091, option 5, 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. The College or school may extend the deadline in unusual cases (not applicable to graduate students).

**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](http://www.wp.ucla.edu/) at UCLA for more information.

**English as a Second Language:**
All non-native speakers of English new to UCLA are required to fulfill UCLA ESL requirements by taking the English as a Second Language Placement Exam (ESLPE). Based upon performance on this examination, students may be exempt from enrolling in UCLA ESL classes, or may be required to complete one or more courses in the English 33 series. Please do not delay as failure to sit for the ESLPE results in a hold on student records. ESL course(s) are designed and intended to facilitate your studies here at UCLA. If you do not fulfill your ESL requirement, you will not be permitted to graduate. Students may only take the exam twice. Graduate students wishing to take a second exam must wait at least one quarter before retaking the placement exam. Retakes during the same quarter will not be recognized and the second of the two scores will be used for placement decision. Graduate students, who plan to work as teaching assistants (TAs) and are nonnative English speaking international students, are required to take the Test of Oral Proficiency (TOP), which is administered by the Office of Instructional Development.

Please refer to [http://www.wp.ucla.edu/](http://www.wp.ucla.edu/) for more information.

Students who hold a bachelor’s or higher degree from a university located in the United States or in another country in which English is both the spoken language and the medium of instruction, or who have completed at least two years of full-time study at such an institution, are exempted from the ESLPE.

**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.
If you take a waiver examination or Blue Petition out of a School and/or Departmental Core Course you will need to make up the units with an elective course.

- **2014/15 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 (see Faculty Code of Conduct earlier in the Appendix). 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](http://www.oid.ucla.edu/programs/facultydev/teachersguide/academicdishonesty)

**Ordering Transcripts:**
Academic and verification transcripts can be ordered through MyUCLA, in person at 1113 Murphy Hall, or by sending a request to UCLA Registrar’s Office, Attn: [Academic or Verification] Transcripts, 1105 Murphy Hall, Box 951429, Los Angeles, CA 90095-1429.

Requests should include the student’s
1. Name under which he or she was registered at UCLA
2. Dates of attendance at UCLA
3. Date of birth
4. 9-digit student ID number, if available
5. Complete address and telephone number
6. Number of copies requested
7. Mailing instructions including all details and any special handling
8. Full signature

Transcript request forms containing this information are available in the Murphy Hall northwest lobby or at [http://www.registrar.ucla.edu/forms/](http://www.registrar.ucla.edu/forms/).

For UCLA Extension courses, order transcripts from UCLA Extension, P.O. Box 24901, Department K, Los Angeles, CA 90024-0910.
Requests are not processed if students have outstanding financial, academic, or administrative obligations (holds) to the University. Transcripts of work completed elsewhere must be requested directly from the campus or institution concerned.

More information on ordering transcripts is available by calling (310) 825-1091 or by contacting transcripts@registrar.ucla.edu.

Change of Name or Address:
Students who wish to change their name on official University records should fill out a UCLA Name Change or Correction form (available in the Murphy Hall northwest lobby) and submit it with documentation supporting the name change to Enrollment and Degree Services, 1113 Murphy Hall. All name changes are recorded on the transcript. If students change their address, they should update their address through MyUCLA.

Financial Support and Funding:
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 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 are eligible to receive fee remissions.
Academic apprentice appointees are eligible for fee deferrals, medical insurance, fee remissions, and TA Advance Loan checks. For details on these benefits and policies on employment, consult the [Academic Apprentice Personnel Manual](#).

**Requirements for Fee Remissions:**

1. The following standards must be met in order for students to receive apprentice fee remissions: Students must register and enroll by the third week of the quarter (registration and enrollment must also be maintained throughout the quarter)
2. Appointment(s) must total 25% time or more for the quarter
3. Students must work hours equivalent to 25% time in apprentice titles in a given quarter (usually 106-110 hours)
4. Students are expected to enroll in at least 12 units to receive health insurance and fee remissions.
5. Students must maintain a cumulative 3.0 GPA to be appointed as an apprentice and may not work more than 12 quarters as a TA or more than 18 quarters in all apprentice titles combined.

Graduate Students are allowed have a maximum of a 50% appointment in any given quarter. Special Graduate Division Fellowship Funding may have different restrictions. Please check your award letter for restrictions.

**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.

**How to Find Appointments:**

1. Information on anticipated student employee openings by department: [www.gdnet.ucla.edu/gss/ase/opportunities.pdf](https://www.gdnet.ucla.edu/gss/ase/opportunities.pdf)
2. Summer teaching assistant opportunities are available through Summer Sessions: [https://r.summer.ucla.edu/planning/ase.htm](https://r.summer.ucla.edu/planning/ase.htm)
3. Additional academic year and summer tutor opportunities are available through the College: [www.college.ucla.edu/ase](https://www.college.ucla.edu/ase)
4. Graduate Student Researchers (GSRs): Begin inquiries about appointments well before the beginning of the quarter. Ask faculty or staff about research projects that may need GSRs.

**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.
- **Academic Apprentice Personnel**
  Student manual & salary scales.
- **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:**

**2014-15 Academic Calendar:**

### Fall Quarter 2014

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Quarter begins</td>
<td>Monday, September 29</td>
</tr>
<tr>
<td>Instruction begins</td>
<td>Thursday, October 2</td>
</tr>
<tr>
<td>Study List deadline (becomes official)</td>
<td>Friday, October 17</td>
</tr>
<tr>
<td>Veterans Day holiday</td>
<td>Tuesday, November 11</td>
</tr>
<tr>
<td>Thanksgiving holiday</td>
<td>Thursday-Friday, November 27-28</td>
</tr>
<tr>
<td>Instruction ends</td>
<td>Friday, December 12</td>
</tr>
<tr>
<td>Common final exams</td>
<td>Saturday-Sunday, December 13-14</td>
</tr>
<tr>
<td>Final examinations</td>
<td>Monday-Friday, December 15-19</td>
</tr>
<tr>
<td>Quarter ends</td>
<td>Friday, December 19</td>
</tr>
<tr>
<td>Christmas holiday</td>
<td>Wednesday-Thursday, December 24-25</td>
</tr>
<tr>
<td>New Year’s holiday</td>
<td>Wednesday-Thursday, December 31-January 1</td>
</tr>
<tr>
<td>Winter campus closure (tentative)</td>
<td>December 26, 29, 30, January 2</td>
</tr>
</tbody>
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### Winter Quarter 2015

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Quarter begins</td>
<td>Monday, January 5</td>
</tr>
<tr>
<td>Instruction begins</td>
<td>Monday, January 5</td>
</tr>
<tr>
<td>Study List deadline (becomes official)</td>
<td>Friday, January 16</td>
</tr>
<tr>
<td>Event</td>
<td>Date</td>
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<tr>
<td>Martin Luther King, Jr, holiday</td>
<td>Monday, January 19</td>
</tr>
<tr>
<td>Presidents’ Day holiday</td>
<td>Monday, February 16</td>
</tr>
<tr>
<td>Instruction ends</td>
<td>Friday, March 13</td>
</tr>
<tr>
<td>Common final exams</td>
<td>Saturday-Sunday, March 14-15</td>
</tr>
<tr>
<td>Final examinations</td>
<td>Monday-Friday, March 16-20</td>
</tr>
<tr>
<td>Quarter ends</td>
<td>Friday, March 20</td>
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**Spring Quarter 2015**

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<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Quarter begins</td>
<td>Wednesday, March 25</td>
</tr>
<tr>
<td>Cesar Chavez holiday</td>
<td>Friday, March 27</td>
</tr>
<tr>
<td>Instruction begins</td>
<td>Monday, March 30</td>
</tr>
<tr>
<td>Study List deadline (becomes official)</td>
<td>Friday, April 10</td>
</tr>
<tr>
<td>Memorial Day holiday</td>
<td>Monday, May 25</td>
</tr>
<tr>
<td>Instruction ends</td>
<td>Friday, June 5</td>
</tr>
<tr>
<td>Common final exams</td>
<td>Saturday-Sunday, June 6-7</td>
</tr>
<tr>
<td>Final examinations</td>
<td>Monday-Friday, June 8-12</td>
</tr>
<tr>
<td>Quarter ends</td>
<td>Friday, June 12</td>
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</tbody>
</table>

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 International Center (http://www.internationalcenter.ucla.edu), which houses the Dashew Center for International Students and Scholars. The UCLA International Center can be found in the Tom Bradley International Hall, located at the central western entrance to UCLA. The Dashew Center for International Students and Scholars provides a mandatory orientation
program that helps international students and scholars pursue their goals while UCLA Graduate Student Orientation Handbook 15 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, and 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.

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.
Student Activities Center, Suite B11 (310) 267-4805
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:
As a condition of registration, the University requires that all graduate and professional students, including international students on non-immigrant visas, have medical insurance coverage that meets the University’s minimum requirements. Contact the Insurance Office on the fourth floor of the Arthur Ashe Student Health and Wellness Center for details regarding the campus Student Health Insurance Plan (SHIP) or regarding the campus minimum requirements.
Waiving SHIP:
Please visit the Arthur Ashe Health Center Website for more information regarding waiving SHIP. [http://www.studenthealth.ucla.edu/CustPages/Insurance.aspx](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/](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](http://ph.ucla.edu/current-students/career-development) or contact:

Arlecia Powell-Halley, M.S.
Career Services Office
UCLA Fielding School of Public Health
Box 951772
Los Angeles, CA 90095-1772
Phone: 310-206-7158
Fax: 310-825-0472
Email: aphalley@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
- Courtney Klipp: 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](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](http://www.bol.ucla.edu)

Walk-in Consulting: Kerckhoff Hall, Suite 124
Telephone Technical Support: (310) 267-HELP (4357) option 1
BruinTech:
The purpose of BruinTech is to help faculty, students, and staff navigate the diversity of UCLA information technology (IT) services and organizations. The website reflects the dynamic nature of IT on campus by spotlighting current views and events. In addition, BruinTech publishes a newsletter and offers seminars on relevant IT topics approximately four times a year.

Borrowing a CLICC Laptop:
Currently enrolled UCLA Students, currently employed UCLA Faculty and Staff Members, may check out a laptop using their valid UCLA Logon and Password. Laptop borrowing privileges may be revoked or suspended based on violations of policies at the discretion of Library Administration. Please visit http://www.clicc.ucla.edu/tiki-index.php?page=Borrow+a+Laptop for CLICC laptop lending locations.

Office for Students with Disabilities (OSD):
To register with OSD, please call (310) 825-1501, and they will make an appointment for you to meet with a disability specialist. If you are unsure if you qualify, they will explore with you what the issues are and make recommendations. All services provided by the OSD are free of charge, and information is kept strictly confidential. In order to register with the OSD, students fill out a general information form and provide current documentation of their disability/medical condition. For more information, visit: http://www.osd.ucla.edu/.

Transportation & Shuttle Services:

Campus Shuttles
The campus shuttle system incorporates the use of buses and vans that are clean, wheelchair accessible and well-equipped with air-conditioning and comfortable seating.

Campus Express
The Campus Express shuttle travels in a counter-clockwise direction providing round-trip service from: Weyburn Terrace and Lot 36 in the southwest corner of campus, through Westwood and the University to Macgowan Hall turnaround in the northeast region of campus. The schedule is as follows:

- Monday to Friday (excluding Holidays) 7 a.m. to 7 p.m.
  Stops approximately every 8 - 10 minutes
- Reduced Hours: Summer, Winter, & Spring Breaks: 7:30 a.m. to 6 p.m.

New Wilshire Center Route
The Wilshire Center shuttle travels in a counter-clockwise direction providing round-trip service from: Wilshire Center through Westwood Village, up Hilgard Avenue with stops at Parking Structure 2 (in front of Molecular Sciences), Gonda Research Facility, 100 Medical Plaza, completing the loop at the Wilshire Center. The schedule is as follows:

- Schedule: Monday to Friday (excluding Holidays) 7:30 a.m. to 5:30 p.m.
  Stops approximately every 8-10 minutes
Northwest Campus
The Northwest Campus shuttle travels in a counter-clockwise direction providing round-trip van service across the northern region of campus traveling on Charles Young Drive between: Macgowan Hall, Kreiger (Bellagio) Child Care Center, Southern Regional Library and Hedrick Hall. The schedule is as follows:

- Schedule: Monday to Friday (excluding Holidays) 11:30 a.m. to 2 p.m. Stops at MacGowan Hall at every half hour mark

Public Transportation
Refer to the website below to obtain more information regarding the ways to get around Los Angeles: https://main.transportation.ucla.edu/getting-to-ucla/public-transit

2014-15 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)
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)
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)
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)
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)
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)
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)
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)
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)
(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)
(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.

C180. Principles of Nanobiological Interactions and Nanotoxicology (4)
Lecture, four hours. Preparation: basic understanding of biology and chemistry at level required for admission to University of California at undergraduate level in engineering, physical, or natural sciences. Introduction to commonly used vocabulary in nanoscience required to appreciate biological interactions and potential toxicity of nanomaterials. Discussion of synthesis and physical-chemical characterization of engineered nanomaterials. Development of understanding of unique properties of engineered nanomaterials and how these properties contribute to biological interactions. Relation of properties of engineered nanomaterials to their potential for transport, reactivity, uptake, and toxicity in natural environments and in body. Concurrently scheduled with course C280. P/NP or letter grading.
C185A. Foundations of Environmental Health Sciences (6)

C185B. Foundations of Environmental Health Sciences (6)

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

C200B. Foundations of Environmental Health Sciences (6)

200C. Case Studies in Environmental Health Sciences (2)
Lecture, two hours. Requisites: courses C200A, C200B. Environmental and public health challenges of 21st century are changing so quickly and are so interdigitated with social, resource, economic, and global issues that it becomes necessary for environmental health professionals to be able to operate comfortably within contextual boundaries and under pressures of real-time decision making. Examination of headlines of last 12 months that offer examples of managing change and crisis. Letter grading.

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

**210. Public Health and Environmental Microbiology (4)**
Lecture, three hours. Preparation: one course each in biology, organic chemistry, and biochemistry. Basic principles: cycling of matter, fates of natural and man-made compounds in environment, wastewater and drinking water microorganisms and treatment, and public health microorganisms. S/U or letter grading.

**M211. Epidemiologic Methods in Violent Injury (4)**
(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)**
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)**
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)
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.

M220. Laboratory Literacy for Public Health Professionals (4)
(Same as Epidemiology M225.) Lecture, two hours; laboratory, four hours. Preparation: introductory microbiology. Requisites: Epidemiology 200A, 200B, and 200C (or 100). Designed to enable public health professionals with no laboratory knowledge to understand vocabulary and technologies of public health laboratories. Sample laboratory reports provided for discussion of implications for public health program actions. S/U or letter grading.

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

230A. Interdisciplinary Occupational Health Practice (2)
Activity, one hour; fieldwork, one hour. Course 230A is enforced requisite to 230B, which is enforced requisite to 230C. 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. In Progress (230A, 230B) and S/U (230C) grading.

230B. Interdisciplinary Occupational Health Practice (2)
Activity, one hour; fieldwork, one hour. Enforced requisite: course 230A. Multidisciplinary nature of occupational health practice featured and explored in this varied-activity course, 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. In Progress grading (credit to be given only on completion of course 230C).

230C. Interdisciplinary Occupational Health Practice (2)
Activity, one hour; fieldwork, one hour. Enforced requisite: course 230B. Multidisciplinary
nature of occupational health practice featured and explored in this varied-activity course, 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)**
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)**
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.

**M242. Toxicodynamics (2)**
( 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.

**M245. Laboratory in Toxicological Methods (2)**
( Same as Molecular Toxicology M245 and Pharmacology M234C.) Lecture, one hour; laboratory, four to five hours. Survey of experimental techniques used in study of toxic substances. Experiments conducted within known toxin to demonstrate its effects at molecular, cellular, and tissue levels. Presentation of principles of techniques and methods of data analysis at discussion session prior to laboratory. Letter grading.

**M246. Molecular Toxicology (4)**
( Same as Molecular Toxicology M246.) Lecture, four hours. Enforced requisite: course C240. Fundamental aspects of toxicology required for deep understanding of toxicological processes, with research-oriented outlook. Dissemination of information about important molecular toxicological topics to make students think about them from research perspective. Students learn about cutting-edge research areas of molecular toxicology, how to most optimally extract important information from research papers, how to critique papers, how to formulate alternative hypotheses for data in papers, how to formulate ideas for future research, and how to express their ideas effectively in oral settings. Letter grading.
250D. Industrial Hygiene Practice (2)
Seminar, two hours. Requisites: courses C200A, C200B. Presentation of topics that are relevant to current practice of occupational health. Topics include discussions of regulatory framework, risk assessment and risk communication, new legislation, and emergent occupational health issues. S/U grading.

251. Prevention of Disease in Workers and Workplaces (3)

C252D. Properties and Measurement of Airborne Particles (4)
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)
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)
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)
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)
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)
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/Environmental Health (4)
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)
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)
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)
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)
Lecture, two hours. The general objective of this 2 unit course is to introduce students to a broad range of topics in workplace safety. This will be accomplished through lectures on safety hazards, their classification, metrics, control philosophy, and control methods. Specific topics areas will include traditional safety rubrics, such as fall hazards, machine safety, and fire hazards. The student will also be introduced to concepts of safety culture and philosophy. Students will also be expected to review and present a peer-reviewed article on a topic relevant to the course material. Letter grading.

259C. Seminar Series: Occupational Ergonomics (2)
Seminar, two hours. Requisite: course 259A. Emphasis on research methodology as applied to prevention and control of worker-related musculoskeletal disorders. Topics include applied anthropometry, biomechanical modeling, strength measurement, postural analysis, fatigue, and medical surveillance of cumulative trauma disorders. S/U grading.

259G. Fire Prevention, Protection, and Facility Design (3)
Lecture, three hours. Requisite: course 259A. Introduction to application of fire sciences, engineering, and management principles to prevention, suppression, and control of fires and explosions and protection of persons and property from fire or explosion damage and injury. Letter grading.

M260. Occupational Epidemiology (4)
(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)

C264. Fate and Transport of Organic Chemicals in Aquatic Environment (4)
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)**
(Formerly numbered 270.) (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.

**C280. Principles of Nanobiological Interactions and Nanotoxicology (4)**
Lecture, four hours. Preparation: basic understanding of biology and chemistry at level required for admission to University of California at undergraduate level in engineering, physical, or natural sciences. Introduction to commonly used vocabulary in nanoscience required to appreciate biological interactions and potential toxicity of nanomaterials. Discussion of synthesis and physical-chemical characterization of engineered nanomaterials. Development of understanding of unique properties of engineered nanomaterials and how these properties contribute to biological interactions. Relation of properties of engineered nanomaterials to their potential for transport, reactivity, uptake, and toxicity in natural environments and in body. Concurrently scheduled with course C180. S/U or letter grading.

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

**296D. Research Topics in Environmental Health Sciences: Economic Impacts of Contamination and Remediation of Coastal Waters (2)**
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.

**296E. Research Topics in Environmental Health Sciences: Molecular Topics in Boron Biology (2)**
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.

**296F. Research Topics in Environmental Health Sciences: Toxicology and Exposure Assessment of Toxic Chemicals (2)**
Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences.
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)
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)
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)
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)
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)
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)
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)
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)
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)
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 (2 to 4)
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 44-unit minimum total required for M.P.H. degree.
Letter grading.

401. Environmental Measurements (4)
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.

405. Operations and Management of Public Health Laboratories (4)
Lecture, four hours. Preparation: bachelor's degree in science, engineering, or public health, at
least one microbiology, environmental microbiology, infectious diseases, public health
microbiology, or public health laboratory course. Designed for master's and doctoral students.
Principles of operations and management of public health laboratories and roles they play in
public health infrastructure. Basic knowledge of microbiology assumed. Topics include assays
and tests performed by public health laboratories, quality control, and leadership principles.
Students perform needs assessment for local public health laboratory. S/U or letter grading.

410A. Instrumental Methods in Environmental Sciences (4)
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)
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)
(Formerly numbered M411.) 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)
(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.

454. Health Hazards of Industrial Processes (4)
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)
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.

470. Environmental Hygiene Practices (2)
Lecture, two hours. Requisites: courses C200A, C200B, 401, Epidemiology 100. Field principles
and practices of environmental sanitation as applicable to sanitarians. Topics include theory, code enforcement, and inspection procedures for applicable environmental topic areas. S/U or letter grading.

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

**501. Cooperative Program (2 to 8)**
Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. No more than 8 units may be applied toward master's degree minimum total course requirement; may not be applied toward minimum graduate course requirement. S/U grading.

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

Curtis (Curt) Eckhert, Ph.D.
Co-Director of Nanotoxicology Training Program
Research Interests: Toxicology, ecotoxicology, and biology of boron
Email: ceckhert@ucla.edu
Phone: (310) 825-8429
Office: 76-080 CHS

Hilary Godwin, Ph.D.
Associate Dean for Academic Programs; Luskin Scholar
Research Interests: Nanotoxicology, nanoregulatory & toxics policy, high-throughput screening, infectious diseases, climate change and health, climate action plannings
Email: hgodwin@ucla.edu
Phone: (310) 794-9112
Office: 66-062B CHS

Richard J. Jackson, M.D., M.P.H. (Department Chair)
Director of the Center for Occupational and Environmental Health
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.
Research Interests: Chemical toxicology including mechanism, exposure sciences and the exposome, risk assessment and policy
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 (ERC)
Research Interests: Occupational safety and health, occupational epidemiology of musculoskeletal and cardiovascular diseases and associated disability
Email: niklaskrause@ucla.edu
Phone: (310) 825-2079
Office: 56-071B CHS

Shane Que Hee, Ph.D.
Director of the Industrial Hygiene Program
Research Interests: Industrial hygiene, environmental chemistry
Email: squehee@ucla.edu
Phone: (310) 206-7388
Office: 56-071A CHS

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

Associate Professors:

Jane L. Valentine, Ph.D.
Research Interests: Water quality
Email: jvalentin@aol.com
Phone: (310) 825-8751
Office: 66-062A 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
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:

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

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

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, M.D., Ph.D.
Chair of Epidemiology Department, UCLA
Professor of Epidemiology
Research Interests: Occupational epidemiology, pesticide exposure, Parkinson’s disease, radiation and cancer
Email: britz@ucla.edu
Phone: (310) 206-7458
Office: 73-320A CHS

Wendie Robbins, M.S.N., Ph.D.
Professor, School of Nursing
Research Interests: Toxicology, reproductive health, reproductive and environmental epidemiology, and gene-environment interactions
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

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)

Adjunct Professors:

Thomas Hatfield, Dr.PH., REHS
Department Chair- Environmental and Occupational Health Department, CSUN
Research Interests: Sustainability in environmental and occupational health
Email: Thomas.hatfield@csun.edu
Phone: (818) 677-7476
Adjunct Associate Professors:

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, 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., MPH
Research Interests: Occupational and environmental Health
Email: Gibson@ucla.edu
Phone: (310) 825-9362
Office: 38-137 E4

Nicole M. Green, Ph.D., D(ABMM)
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

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, pharmokinetics
Email: acho@mednet.ucla.edu
Phone: (310) 825-6567
Office: 21-297 CHS

John R. Froines, Ph.D.
Associate Director of the Southern California Environmental Health Sciences Center; Research Interests: industrial hygiene, exposure assessment, occupational health, toxicology
Email: jfroines@ucla.edu
Phone: (310) 206-6141
Office: 21-293C CHS

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