Program in Public Health

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Overview

The Program in Public Health was established in 2003 to provide institutional focus for existing academic strengths in various sub-disciplines of public health and to facilitate well-grounded education and innovative research in emerging cross-disciplinary topics in the field. Undergraduate degree programs in public health began enrolling students in 2006, and the Department of Population Health and Disease Prevention was established in 2007 to advance the collaborative interdisciplinary mission of public health research, education, service, and professional development. The Department offers a B.S. in Public Health Sciences, a B.A. in Public Health Policy, a minor in Public Health, a Master of Public Health (M.P.H.) in four emphases: Biostatistics, Environmental Health, Epidemiology, and Sociocultural Diversity and Health, a Master of Science (M.S.) in Public Health, and a Doctor of Philosophy (Ph.D.) in Public Health in two concentrations: Disease Prevention and Global Health. The Department also offers a dual-degree M.D./M.P.H., a concurrent J.D./M.P.H. with the School of Law, a concurrent J.D./Ph.D. with the School of Law, and a joint Doctor of Philosophy (Ph.D.) in Environmental Health Sciences with the School of Medicine. Future plans and information is available at the Program in Public Health website (http://publichealth.uci.edu). The Program is fully accredited by the Council on Education for Public Health (http://ceph.org). The Program is also a member of the Association of Schools and Programs of Public Health.

Department of Population Health and Disease Prevention

Oladele Ogunseitan, Department Chair

Overview

The mission of the Department of Population Health and Disease Prevention is to create, integrate, and translate population-based knowledge into preventive strategies to reduce the societal burden of human disease and disability through excellence in interdisciplinary research, education, and service. This is a forward-thinking mission that acknowledges and complements traditional discipline-based research and training in public health. It is a specific mission that is consistent with the “Framing the Future” exercise of the Association of Schools and Programs of Public Health, and increasingly recognized by eminent organizations such as the Institute of Medicine’s Board on Population Health and Public Health Practice, and by agencies that fund public health research and education.

New sources of funding for research and education are firmly established, including the NIH’s National Center for Advancing Translational Sciences, to support this multidisciplinary framework of public health. The societal challenges facing health care and the burden of diseases at the community, national, and international levels have increased the demand for experts capable of researching, developing, and implementing programs to prevent disease and to improve population health. The Department hosts activities that bridge disciplinary perspectives, methods, and practices to nurture new leaders in public health through research and training on risk factors that render people vulnerable to diseases in their communities and the development of strategies for preventing disease by separating risk factors from specific vulnerable populations.

Degrees

<table>
<thead>
<tr>
<th>Degree</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Policy</td>
<td>B.A.</td>
</tr>
<tr>
<td>Public Health Sciences</td>
<td>B.S.</td>
</tr>
<tr>
<td>Public Health*</td>
<td>M.P.H.</td>
</tr>
<tr>
<td>Public Health**</td>
<td>Ph.D.</td>
</tr>
</tbody>
</table>

* With emphases in Biostatistics; Environmental Health; Epidemiology; and Sociocultural Diversity.

** With concentrations in Disease Prevention and Global Health.
Honors
Honors Research Program in Public Health

The Public Health Honors Program provides an opportunity for selected outstanding students in the program to pursue advanced work in independent research and earn honors in Public Health upon graduation. Successful completion of the honors program requires three quarters of commitment, while enrolled in PUBHLMTH H192A-PUBHLMTH H192B-PUBHLMTH H192C. Students are also expected to enroll in supervised Undergraduate Research (PUBHLMTH 199) with their research mentor. The program concludes with a presentation and submission of an honors culminating thesis.

Eligibility and Application Process

In order to be considered, a student must have satisfied the following requirements: completion of all lower-division Public Health courses required for the major; completion of at least five upper-division Public Health courses; an overall UCI grade point average of a minimum of 3.5; and a minimum 3.5 grade point average in all required and completed Public Health courses. Acceptance into the program is based upon evidence of the student's ability, interest in research, and proposed thesis project with a faculty member.

Admission to the program is based on formal invitation and/or an application to participate in the Public Health Honors Program submitted by the student in the spring quarter of the junior year.

Requirements

Beyond fulfilling the regular courses required for either the Public Health Sciences or Public Health Policy major, honor students must take the following:

A. Fall Quarter
   - PUBHLMTH H192A: Public Health Honors Seminar and Thesis I (4 units)
   - PUBHLMTH 199: Undergraduate Research (4 units)

B. Winter Quarter
   - PUBHLMTH H192B: Public Health Honors Seminar and Thesis II (4 units)
   - PUBHLMTH 199: Undergraduate Research (4 units)

C. Spring Quarter
   - PUBHLMTH H192C: Public Health Honors Seminar and Thesis III (4 units)
   - PUBHLMTH 199: Undergraduate Research (4 units)

Graduation with Honors

Of the graduating seniors, no more than 16 percent will receive Latin honors: approximately 2 percent summa cum laude, 4 percent magna cum laude, and 10 percent cum laude. The selection for these awards is based on spring quarter rank-ordered grade point averages. To be eligible for honors at graduation, the student must, by the end of spring quarter of the senior year, be officially declared a Public Health major; submit an Application to Graduate by the end of winter quarter of the senior year; have completed at least 72 units in residence at a UC campus by the end of the spring quarter of the academic year in which they graduate; have all corrections to the academic record processed by the University Registrar’s Office by the end of spring quarter; if completing the Language Other Than English general education requirement with a language exemption test, pass the test by the end of spring quarter; and be able to verify completion of all course work by the end of the spring quarter of the senior year. For information on other important factors that are considered, please visit Honors Recognition.

Campuswide Honors Program

The Campuswide Honors Program is available to selected high-achieving students from all academic majors from their freshman through senior years. For more information contact the Campuswide Honors Program, 1200 Student Services II; 949-824-5461; honors@uci.edu; http://www.honors.uci.edu/.

Dean’s Honor List

The quarterly Dean’s Honor List is composed of students who have received a 3.5 grade point average while carrying a minimum of 12 graded units.

Public Health Honors, Scholarships, Prizes, and Awards

The following honors, scholarships, prizes, and awards are presented at the annual Public Health Honors and Awards Ceremony held in June.

Academic Excellence. This award is given to any student within the Program in Public Health, who graduates with a cumulative 4.0 UCI GPA.

Excellence in Public Health Practicum. This award recognizes a student whose project in public health practice contributes to the improvement of health and makes a significant contribution to public health.

Excellence in Public Health Research. This award is for research conducted by a student that is exceptional in quality.

Excellence in Undergraduate Leadership. This award recognizes a student who has demonstrated exemplary leadership in their execution of student activities that furthers the mission of the Program in Public Health, or the University of California, Irvine. This student has taken key leadership roles, inspired others to contribute, developed new programs to support students, and built relations that enable and grow the broader public health community.
Excellence in Writing. This award honors students who best demonstrate an ability to communicate ideas clearly through writing.

Outstanding Contribution to Public Health, Community and UCI Service. This award is given to an undergraduate who has made a significant contribution to the Public Health community, including the intellectual growth of others. This award signifies any work/research done by a student that benefits the campus community or the community-at-large.

Outstanding Contribution to the Program in Public Health. This award is presented to an outstanding undergraduate who has impacted and contributed significantly to the Program in Public Health.

Recognition of Preceptors. This award goes to nominated Practicum Preceptor Sites who have shown an outstanding commitment to UCI students or have been nominated for the award by student recognition.

Special Recognition. This award is given to undergraduates who deserve special recognition.

Requirements for the Bachelor's Degree

All Program in Public Health students must complete the following requirements.

All students must meet the University Requirements.

Program Requirements:

Grade Requirement: A minimum grade point average of at least C (2.0) is required (1) overall, (2) in all courses required for the major program, (3) in the upper-division courses required for the major, and (4) in PUBHLTH 195W.

Residence Requirement: After matriculation, all Public Health courses required for the major must be successfully completed at UCI. The Program in Public Health strictly enforces the UCI residence requirement. At least 36 of the final 45 units completed by a student for the bachelor’s degree must be earned in residence at the UCI campus. (The Program considers courses taken in the Education Abroad Program to be in-residence courses.)

Normal Progress: Students in the Public Health Program are expected to make progress toward their degree, and their progress will be monitored. If normal academic progress toward the degree in Public Health is not being met, students will be subject to probation.

Double Majoring and Minoring

Second majors and/or minors will not be approved unless the student can complete both the degree and double major/minor(s) in their allotted time permitted at UCI. Students must be in good standing and not on academic probation for acceptance as a double major/minor(s).

Students may not enter as a double major, but Public Health students interested in other areas may apply for a double major after their first quarter, if the Public Health Program approves.

Overlap Restrictions

Double Majoring in Public Health Sciences and Public Health Policy. Students may double major in Public Health Sciences and Public Health Policy; however there are only seven courses that may overlap between the two majors. Students may overlap PUBHLTH 1, PUBHLTH 2, PUBHLTH 101, MATH 2A, MATH 2B, STATS 7 or STATS 8, and PUBHLTH 195W. There are no other courses that can count for both majors.

Other Double Majors. In fulfilling degree requirements for multiple majors, a maximum of two courses may overlap between any two majors.

Major and Minor Requirements. In fulfilling minor requirements, a maximum of two courses may overlap between a major and minor. No course overlap is permitted between minors.

Students may not double major in Public Health Sciences, Pharmaceutical Sciences, Nursing Science, Biomedical Engineering: Premedical, or with any of the School of Biological Sciences majors or minors.

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• Practicum
• Requirements in Public Health
• Requirements for B.S. in Public Health Sciences
• Requirements for B.A. in Public Health Policy
• Minor in Public Health

Undergraduate Program

The B.S. in Public Health Sciences and the B.A. in Public Health Policy degree programs train students in multidisciplinary approaches to public health practice and research. The degrees explore both quantitative and qualitative aspects of public health at all levels of analysis. Graduates will
advance, through selective employment or further education, to become the new generation of public health professionals prepared to face the emerging challenges to human health from a population perspective using cutting-edge prevention approaches.

Students who are interested in pursuing a premedical program should note that additional courses will be needed beyond the requirements of the public health degrees to fulfill requirements for medical school.

Students considering the public health degrees should carefully evaluate their academic preparation and career goals before enrolling in either the B.S. or B.A. degree program. Changing from a degree program to the other is possible, but will require completion of the required lower- and upper-division courses specified for each program. It is also possible for a student to enroll in both the B.S. and B.A. degree programs (double major), provided the student completes all the requirements outlined under each degree.

The Department also offers an undergraduate minor.

**Academic Advising: Academic, Career, Public Health**

AIRB Suite 2010

Program in Public Health Student Affairs Office (http://publichealth.uci.edu/ph/_undergraduate/student_services)

**Academic Advising**

The Public Health Student Affairs Office coordinates the advising program and provides academic counseling. Undergraduate Public Health students should consult the Public Health Student Affairs Office for information on academic requirements for their degree(s), career opportunities, the Public Health 198/199 Research Program, the Public Health Honors Research Program, and student organizations such as the Public Health Association (https://phauci.wixsite.com/phauci) and G.H.R.E.A.T. (http://ghreat.uci.edu/gh/#). Students can also visit the Public Health Student Affairs Office to process change-of-major requests, apply for graduation, obtain information about public health alumni, professional development, or for any other help they might need related to their academic career at UCI.

**Peer Academic Advisors.** The Peer Academic Advisors are upper-division Public Health majors who bring with them valuable academic, social, and professional experiences. Their functions include counseling students in matters of major selection, program planning, petitioning, tutoring, learning skills problems, and participation in co-curricular and extracurricular activities. The Peer Advisors are located in the Public Health Student Affairs Office. Office hours are posted at the beginning of each quarter.

**Career Advising**

Information on graduate and professional schools in public health can be obtained from the Public Health Student Affairs Office. The UCI Career Center provides services to students and alumni including career counseling, information about job opportunities, a career library, and workshops on resume preparation, job search, and interview techniques. See the Career Center section for additional information.

Areas of opportunity open to those with a Bachelor of Science in Public Health Sciences degree include laboratory technology, publishing, technical editing, pharmaceutical sales, and training programs in county, state, and federal agencies. The bachelor’s degree is necessary to pursue studies leading to the M.S. and Ph.D. degrees. The B.S. degree, plus short training periods, may prepare students for employment in education, medical technology (usually one year), allied health professions, and various other areas.

Areas of opportunity open to those with a Bachelor of Arts in Public Health Policy degree include health care administration and planning, lobbying, corporate planning, health promotion, health education (in hospitals, clinics, government agencies, etc.), mental health, chemical dependency, case managing, insurance, health strategizing, fundraising, community organization, and social work. The B.A. degree, plus brief training periods, may prepare students for employment in education, medical technology, non-profit corporations, and various other areas.

Education (community colleges, state colleges, or private schools), medical illustration, and public health (which includes hospital administration, biostatistics, epidemiology, environmental health sciences, social work, public health education, maternal and child health, and chronic, infectious, and tropical diseases) are fields in which opportunities are available upon completion of a master’s program. Other areas where advanced degrees are necessary include medicine, dentistry, law, nursing, actuary, optometry, podiatry, osteopathy, physical therapy, and veterinary medicine.

**Health Sciences Advising**

Students desiring to enter the health sciences should have their majors checked in the Public Health Student Affairs Office. Admissions tests for medical, dental, pharmacy, and graduate schools should be taken in the spring, a year and one-half before the student plans to enter.

Leaders in nearly all health professional schools recommend that students preparing to seek admission to their schools plan to obtain a bachelor’s degree. Students who plan to enter a school of dentistry, medicine, or other areas of the health sciences may receive the required pre-professional training at UCI. This pre-professional training may be accomplished by (1) completing a major in Public Health Sciences and specializing the degree to complete specific course requirements of the dental, medical, or other professional school the student expects to attend: or (2) majoring in any school or department and fulfilling concurrently the specific course requirements of the dental, medical, or other professional school the student expects to attend.

**Practicum**

Public Health Practicum and Culminating Experience (PUBHLTH 195W) is an 8-unit required course for students majoring in Public Health Policy or Public Health Sciences. The course allows students to gain hands-on experience at an approved organization in the field of public health. Preparation for the Practicum course requires that each student interview at one of the approved Practicum sites. There is an online catalog of approved organizations
that have agreed to accept, train, and supervise Public Health students in the ongoing activities of the organization. Students must choose a placement site listed in the Practicum catalog. Unlisted sites may be considered at an approved organization through an application process. All students are required to spend 100 hours (10 hours per week) at the public health organization during the quarter in which they are enrolled in PUBHLTH 195W.

Practicum is open only to upper-division Public Health students who are in good academic standing, have completed all prerequisite course work, and have submitted a graduation application. Practicum must be taken for a letter grade. PUBHLTH 195W must be completed with a minimum letter grade of C. Additional information, including Practicum enrollment procedures and prerequisites, can be found at the Public Health website (http://publichealth.uci.edu).

**Change of major.** Students who wish to change their major to Public Health Sciences or Public Health Policy should contact the Public Health Student Affairs Office for information about change-of-major requirements, procedures, and policies. Information is also available at the UCI Change of Major Criteria website (http://www.changeofmajor.uci.edu).

**Requirements for the B.S. in Public Health Sciences**

All students must meet the University Requirements.

All students must meet the Program Requirements.

**Major Requirements**

**A. Lower-Division Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 1</td>
<td>Principles of Public Health</td>
</tr>
<tr>
<td>PUBHLTH 2</td>
<td>Case Studies in Public Health Practice</td>
</tr>
<tr>
<td>CHEM 1A-1B-1C-1LC-1LD</td>
<td>General Chemistry and General Chemistry and General Chemistry Laboratory and General Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 51A-51B-51C-51LB-51LC</td>
<td>Organic Chemistry and Organic Chemistry and Organic Chemistry Laboratory and Organic Chemistry Laboratory</td>
</tr>
<tr>
<td>BIO SCI 93</td>
<td>From DNA to Organisms</td>
</tr>
<tr>
<td>BIO SCI 94</td>
<td>From Organisms to Ecosystems</td>
</tr>
<tr>
<td>BIO SCI 97</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIO SCI 98</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>BIO SCI 99</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>MATH 2A-2B</td>
<td>Single-Variable Calculus</td>
</tr>
<tr>
<td>or</td>
<td>Calculus for Life Sciences</td>
</tr>
<tr>
<td>MATH 5A-5B</td>
<td>Calculus for Life Sciences</td>
</tr>
<tr>
<td>STATS 7</td>
<td>Basic Statistics</td>
</tr>
<tr>
<td>or STATS 8</td>
<td>Introduction to Biological Statistics</td>
</tr>
<tr>
<td>or PUBHLTH 7</td>
<td>Mainstream Statistics</td>
</tr>
</tbody>
</table>

And three Social and Behavioral Science courses, with at least two in the same discipline selected from the following:

**Psychology:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY BEH 9</td>
<td>Introduction to Psychology</td>
</tr>
</tbody>
</table>

**Sociology:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCIOL 1</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SOCIOL 2</td>
<td>Globalization and Transnational Sociology</td>
</tr>
<tr>
<td>SOCIOL 3</td>
<td>Social Problems</td>
</tr>
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</table>

**Economics:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1</td>
<td>Introduction to Economics</td>
</tr>
<tr>
<td>ECON 13</td>
<td>Global Economy</td>
</tr>
<tr>
<td>ECON 20A</td>
<td>Basic Economics I</td>
</tr>
<tr>
<td>ECON 20B</td>
<td>Basic Economics II</td>
</tr>
</tbody>
</table>

**Anthropology:**
### Program in Public Health

#### Lower-Division Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHRO 2A</td>
<td>Introduction to Sociocultural Anthropology</td>
</tr>
<tr>
<td>ANTHRO 2B</td>
<td>Introduction to Biological Anthropology</td>
</tr>
<tr>
<td>ANTHRO 2C</td>
<td>Introduction to Archaeology</td>
</tr>
<tr>
<td>ANTHRO 2D</td>
<td>Introduction to Language and Culture</td>
</tr>
<tr>
<td></td>
<td><strong>Political Science:</strong></td>
</tr>
<tr>
<td>POL SCI 11C</td>
<td>Introduction to Political Science: Micropolitics</td>
</tr>
<tr>
<td>POL SCI 31A</td>
<td>Introduction to Political Theory</td>
</tr>
<tr>
<td>POL SCI 51A</td>
<td>Introduction to Politics Around the World</td>
</tr>
<tr>
<td></td>
<td><strong>Social Ecology:</strong></td>
</tr>
<tr>
<td>SOCECOL E8</td>
<td>Introduction to Environmental Analysis and Design</td>
</tr>
</tbody>
</table>

#### B. Upper-Division Requirements

Select two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIO SCI D103</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>BIO SCI D104</td>
<td>Developmental Biology</td>
</tr>
<tr>
<td>BIO SCI E109</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>BIO SCI N110</td>
<td>Neurobiology and Behavior</td>
</tr>
</tbody>
</table>

Five additional upper-division courses with at least one course chosen from each of the three topic areas:

#### Epidemiology, Genetics, and Health Informatics:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO SCI D137</td>
<td>Eukaryotic and Human Genetics</td>
</tr>
<tr>
<td>BIO SCI D148</td>
<td>Development and Disease</td>
</tr>
<tr>
<td>BIO SCI D153</td>
<td>Molecular and Cellular Basis of Disease</td>
</tr>
<tr>
<td>BIO SCI E106</td>
<td>Processes in Ecology and Evolution</td>
</tr>
<tr>
<td>BIO SCI M123</td>
<td>Introduction to Computational Biology</td>
</tr>
<tr>
<td>BIO SCI M137</td>
<td>Microbial Genetics</td>
</tr>
<tr>
<td>COMPSCI 183</td>
<td>Introduction to Computational Biology</td>
</tr>
<tr>
<td>PSY BEH 183S</td>
<td>Social Epidemiology</td>
</tr>
</tbody>
</table>

#### Environmental and Global Health Sciences:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHRO 125B</td>
<td>Ecological Anthropology</td>
</tr>
<tr>
<td>ANTHRO 128B</td>
<td>Race, Gender, and Science</td>
</tr>
<tr>
<td>ANTHRO 134A</td>
<td>Medical Anthropology</td>
</tr>
<tr>
<td>ANTHRO 134C</td>
<td>Medicine, Food, and Health</td>
</tr>
<tr>
<td>ANTHRO 134F</td>
<td>Anthropology of the Body</td>
</tr>
<tr>
<td>ANTHRO 134G</td>
<td>HIV/AIDS in a Global Context</td>
</tr>
<tr>
<td>BIO SCI D124</td>
<td>Biology of Integrative Medicine</td>
</tr>
<tr>
<td>BIO SCI E118</td>
<td>Ecosystem Ecology</td>
</tr>
<tr>
<td>BIO SCI E151</td>
<td>Evolutionary and Ecological Principles in Medicine</td>
</tr>
<tr>
<td>BIO SCI E179</td>
<td>Limnology and Freshwater Biology</td>
</tr>
<tr>
<td>BIO SCI E179L</td>
<td>Field Freshwater Ecology</td>
</tr>
<tr>
<td>BIO SCI E189</td>
<td>Environmental Ethics</td>
</tr>
<tr>
<td>BIO SCI 191A-191B</td>
<td>Senior Seminar on Global Sustainability I and Senior Seminar on Global Sustainability II</td>
</tr>
<tr>
<td>BIO SCI 191CW</td>
<td>Writing/Senior Seminar on Global Sustainability III</td>
</tr>
<tr>
<td>CHEM 125</td>
<td>Advanced Organic Chemistry</td>
</tr>
<tr>
<td>CHC/LAT 176</td>
<td>Race, Gender, and Science</td>
</tr>
<tr>
<td>EARTHSS 164</td>
<td>Ecosystem Ecology</td>
</tr>
<tr>
<td>EARTHSS 190A-190B</td>
<td>Senior Seminar on Global Sustainability I and Senior Seminar on Global Sustainability II</td>
</tr>
<tr>
<td>EARTHSS 190CW</td>
<td>Writing/Senior Seminar on Global Sustainability III</td>
</tr>
<tr>
<td>PUBHLTH 126</td>
<td>Public Health Law: Fundamentals in Action</td>
</tr>
<tr>
<td>PUBHLTH 127</td>
<td>Public Health Programs for the Corporate World</td>
</tr>
</tbody>
</table>
### Program in Public Health

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PUBHLTH 160–179</td>
<td>Geographic Information Systems for Public Health</td>
</tr>
<tr>
<td>PUBHLTH 190</td>
<td>Ethics and Responsible Conduct of Research in Public Health</td>
</tr>
<tr>
<td>PUBHLTH 193</td>
<td>Nuclear Environments</td>
</tr>
<tr>
<td>SOCECOL E127</td>
<td>Senior Seminar on Global Sustainability I</td>
</tr>
<tr>
<td>SOCECOL 186A-186B</td>
<td>Senior Seminar on Global Sustainability II</td>
</tr>
<tr>
<td>SOCECOL 186CW</td>
<td>Writing/Senior Seminar on Global Sustainability III</td>
</tr>
</tbody>
</table>

**Infectious and Chronic Diseases:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO SCI D111L</td>
<td>Developmental and Cell Biology Laboratory</td>
</tr>
<tr>
<td>BIO SCI E112L</td>
<td>Physiology Laboratory</td>
</tr>
<tr>
<td>BIO SCI E124</td>
<td>Infectious Disease Dynamics</td>
</tr>
<tr>
<td>BIO SCI E136</td>
<td>The Physiology of Human Nutrition</td>
</tr>
<tr>
<td>BIO SCI M114</td>
<td>Advanced Biochemistry</td>
</tr>
<tr>
<td>BIO SCI M114L</td>
<td>Biochemistry Laboratory</td>
</tr>
<tr>
<td>BIO SCI M116</td>
<td>Advanced Molecular Biology</td>
</tr>
<tr>
<td>BIO SCI M116L</td>
<td>Molecular Biology Laboratory</td>
</tr>
<tr>
<td>BIO SCI M118L</td>
<td>Experimental Microbiology Laboratory</td>
</tr>
<tr>
<td>BIO SCI M121</td>
<td>Immunology with Hematology</td>
</tr>
<tr>
<td>BIO SCI M121L</td>
<td>Advanced Immunology Laboratory</td>
</tr>
<tr>
<td>BIO SCI M122</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>BIO SCI M124A-M124B</td>
<td>Virology and Viral Pathogenesis and Immunity</td>
</tr>
<tr>
<td>BIO SCI M125</td>
<td>Molecular Biology of Cancer</td>
</tr>
<tr>
<td>BIO SCI M143</td>
<td>Human Parasitology</td>
</tr>
<tr>
<td>PGRMSCI 170A</td>
<td>Molecular Pharmacology I</td>
</tr>
<tr>
<td>PGRMSCI 170B</td>
<td>Molecular Pharmacology II</td>
</tr>
<tr>
<td>PUBHLTH 150</td>
<td>Public Health and Wellness</td>
</tr>
<tr>
<td>PUBHLTH 180–189</td>
<td></td>
</tr>
</tbody>
</table>

### C. Practicum Requirement

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 195W</td>
<td>Public Health Practicum and Culminating Experience (8 units)</td>
</tr>
</tbody>
</table>

1. CHEM 1C and CHEM 1LC are corequisites. Series change effective for new students beginning fall 2011.
2. Series change effective beginning fall 2012. CHEM 1LD will be a prerequisite for CHEM 51LB.
3. Upon petition, PUBHLTH 100 may also be taken to fulfill upper-division course work in specific topic areas, depending on course content.
4. Note additional prerequisites.
5. Taken for upper-division writing credit.

### Requirements for the B.A. in Public Health Policy

All students must meet the University Requirements.

All students must meet the Program Requirements.

### Major Requirements

#### A. Lower-Division Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 1</td>
<td>Principles of Public Health</td>
</tr>
<tr>
<td>PUBHLTH 2</td>
<td>Case Studies in Public Health Practice</td>
</tr>
</tbody>
</table>

Select three of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO SCI 9A</td>
<td>Nutrition Science</td>
</tr>
<tr>
<td>BIO SCI 9J</td>
<td>Biology of Oriental Medicine</td>
</tr>
<tr>
<td>BIO SCI 9K</td>
<td>Global Change Biology</td>
</tr>
<tr>
<td>BIO SCI 10</td>
<td>The Biology of Human Diseases</td>
</tr>
<tr>
<td>BIO SCI 25</td>
<td>Biology of Cancer</td>
</tr>
<tr>
<td>BIO SCI 35</td>
<td>The Brain and Behavior</td>
</tr>
<tr>
<td>BIO SCI 36</td>
<td>Drugs and the Brain</td>
</tr>
<tr>
<td>BIO SCI 37</td>
<td>Brain Dysfunction and Repair</td>
</tr>
</tbody>
</table>
BIO SCI 38  Mind, Memory, Amnesia, and the Brain
BIO SCI 45  AIDS Fundamentals
BIO SCI 93  From DNA to Organisms
PUBHLTH 60  Environmental Quality and Health
PUBHLTH 80  AIDS Fundamentals
PUBHLTH 90  Natural Disasters
Complete:
MATH 2A- 2B  Single-Variable Calculus
and Single-Variable Calculus
STATS 7  Basic Statistics
or STATS 8  Introduction to Biological Statistics
or PUBHLTH 7A
And three Social and Behavioral Science courses, with at least two in the same discipline selected from the following:

**Psychology:**
PSY BEH 9  Introduction to Psychology

**Sociology:**
SOCIOL 1  Introduction to Sociology
SOCIOL 2  Globalization and Transnational Sociology
SOCIOL 3  Social Problems

**Economics:**
ECON 1  Introduction to Economics
ECON 13  Global Economy
ECON 20A  Basic Economics I
ECON 20B  Basic Economics II

**Anthropology:**
ANTHRO 2A  Introduction to Sociocultural Anthropology
ANTHRO 2B  Introduction to Biological Anthropology
ANTHRO 2C  Introduction to Archaeology
ANTHRO 2D  Introduction to Language and Culture

**Political Science:**
POL SCI 11C  Introduction to Political Science: Micropolitics
POL SCI 31A  Introduction to Political Theory
POL SCI 51A  Introduction to Politics Around the World

**Social Ecology:**
SOCECOL E8  Introduction to Environmental Analysis and Design

**B. Upper-Division Requirements**
PUBHLTH 101  Introduction to Epidemiology
PUBHLTH 122  Health Policy
PUBHLTH 144  Health Behavior Theory

Seven additional upper-division courses with at least two courses in each topic area selected from the following courses:

**Health Policy and Management:**
ASIANAM 150  Special Topics in Asian American Studies
CRM/LAW C126  Drugs, Crime, and Social Control
ECON 123A- 123B- 123C  Econometrics I and Econometrics II and Econometrics III
MGMT 101  Management Science
MGMT 107  Introduction to Management Information Systems
MGMT 160  Introduction to Business and Government
MGMT 165  U.S. Healthcare Systems
MGMT 166  Business of Medicine
MGMT 190  Special Topics in Management
UPPP 102  Urban Inequality
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPPP 112</td>
<td>Foundations of Community Health</td>
</tr>
<tr>
<td>UPPP 132</td>
<td>Environmental Sustainability II</td>
</tr>
<tr>
<td>UPPP 155</td>
<td>Urban Design Principles</td>
</tr>
<tr>
<td>UPPP 166</td>
<td>Urban Politics and Policy</td>
</tr>
<tr>
<td>PP&amp;D 169</td>
<td>Introduction to Global Health</td>
</tr>
<tr>
<td>POL SCI 171A</td>
<td>Law and Society</td>
</tr>
<tr>
<td>PUBHLTH 120–139</td>
<td>Introduction to Geographic Information Systems for Public Health</td>
</tr>
<tr>
<td>PUBHLTH 190</td>
<td>Geographic Information Systems for Public Health</td>
</tr>
<tr>
<td>PUBHLTH 193</td>
<td>Ethics and Responsible Conduct of Research in Public Health</td>
</tr>
<tr>
<td>SOCIOL 154</td>
<td>Medical Sociology</td>
</tr>
</tbody>
</table>

**Social and Behavioral Health Sciences:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHRO 134A</td>
<td>Medical Anthropology</td>
</tr>
<tr>
<td>ANTHRO 134C</td>
<td>Medicine, Food, and Health</td>
</tr>
<tr>
<td>ANTHRO 134G</td>
<td>HIV/AIDS in a Global Context</td>
</tr>
<tr>
<td>CRM/LAW C149</td>
<td>Violence in Society</td>
</tr>
<tr>
<td>PSY BEH 103H</td>
<td>Health Psychology</td>
</tr>
<tr>
<td>PSY BEH 136H</td>
<td>Behavioral Medicine</td>
</tr>
<tr>
<td>PSY BEH 137H</td>
<td>Human Stress</td>
</tr>
<tr>
<td>PSY BEH 138H</td>
<td>Child Health Psychology</td>
</tr>
<tr>
<td>PSY BEH 141H</td>
<td>Clinical Health Psychology</td>
</tr>
<tr>
<td>PSY BEH 171S</td>
<td>Environmental Psychology</td>
</tr>
<tr>
<td>PSY BEH 178S</td>
<td>Violence in Society</td>
</tr>
<tr>
<td>PSY BEH 183S</td>
<td>Social Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 102</td>
<td>Social Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 140–159</td>
<td>War and Public Health</td>
</tr>
</tbody>
</table>

**C. Practicum Requirement**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 195W</td>
<td>Public Health Practicum and Culminating Experience (8 units)</td>
</tr>
</tbody>
</table>

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1. Upon petition, PUBHLTH 100 may also be taken to fulfill upper-division course work in specific topic areas, depending on course content.
2. Course content requires approval by the Program.
3. Note additional prerequisites.
4. Taken for upper-division writing credit.

**Minor in Public Health**

The minor in Public Health provides students with the fundamental knowledge of principles, applications, and skills needed to develop a firm appreciation of health and disease prevention at the population level, and to use this special knowledge to transform the experience of their major education into innovative approaches for solving problems in health care and assessment.

**Teaching and learning.** Public Health education demands interdisciplinary engagement. The minor curriculum is intended to engage students from majors across the campus by introducing them to the main concepts and branches of public health, while also giving them the skills and values needed to translate their major education into meaningful projects in population health assessment and disease prevention. In concert with the major degrees in public health, the minor emphasizes learning through the ecological model of public health where the linkages and relationships among multiple determinants affecting health are examined to identify critical nodes of opportunities to improve the health of populations at various scales of analysis.

**Service.** Public Health education also demands community engagement. All students of Public Health are encouraged to incorporate public health impacts and benefit assessments into societal functions that ground their understanding of public problems. Experience in public health service may be acquired through participation in learning opportunities and by reflecting critically on those experiences under the auspices of vigorous campus organizations such as the Public Health Association (http://pha-uci.org).

**Requirements for the Minor**

Nine courses are required (36 units), no more than two of which may be taken on a Pass/Not Pass basis, distributed as follows:

A. Complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 1</td>
<td>Principles of Public Health</td>
</tr>
</tbody>
</table>
B. Seven upper-division courses in Public Health with at least one course from four of the five areas:

<table>
<thead>
<tr>
<th>Course Area</th>
<th>Course Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidemiology, Genetics, and Health Informatics</td>
<td>PUBHLTH 101–119</td>
</tr>
<tr>
<td>Health Policy and Management</td>
<td>PUBHLTH 120–139</td>
</tr>
<tr>
<td>Social and Behavioral Health Sciences</td>
<td>PUBHLTH 140–159</td>
</tr>
<tr>
<td>Environmental and Global Health Sciences</td>
<td>PUBHLTH 160–179</td>
</tr>
<tr>
<td>Infectious and Chronic Diseases</td>
<td>PUBHLTH 180–189</td>
</tr>
</tbody>
</table>

No more than two courses may overlap between the student’s major degree and the minor in Public Health.

Residence Requirement: A minimum of six courses required for the minor must be completed at UCI. Approved courses taken in the UC Education Abroad Program are considered to be in-residence courses.

Graduate Programs

The Program in Public Health offers a Master of Public Health (M.P.H.), a Doctor of Philosophy (Ph.D.) in Public Health, a dual degree M.D./M.P.H. with the School of Medicine, a concurrent J.D./M.P.H. with the School of Law, and a concurrent J.D./Ph.D. with the School of Law. Detailed information about the degree programs follows.

Master of Public Health

The distinctive mission of the UCI M.P.H. program is to create a motivated cadre of public health professionals who are prepared to implement effective strategies for reducing the burden of disease and disability in culturally diverse communities, and who are primed to draw from their broad training in the global dimensions of public health principles to lead and work collaboratively on precise assessments of health-risk factors and on the management of evidence-based prevention strategies.

In addition to meeting all the training requirements in the core competency subjects recommended by the Association of Schools and Programs in Public Health (ASPPH), students enrolled in the UCI M.P.H. program will have the opportunity for in-depth pursuit of one of four emphasis areas: Biostatistics, Environmental Health, Epidemiology, or Sociocultural Diversity and Health. The M.P.H. for the Environmental, Epidemiology, and Sociocultural Diversity and Health emphases is a 64-unit program. The M.P.H. in Biostatistics is a 63-unit program. A full-time student must enroll in at least 12 units per quarter. Part-time enrollment is also allowed upon approval from the department and UCI Graduate Division. To maintain residency, part-time students must enroll in four to eight units per quarter. All students are required to complete 240 hours of fieldwork at an approved public health practicum site after advancing to candidacy with UCI Graduate Division. The Program is fully accredited by the Council on Education for Public Health (http://ceph.org).

Further information may be obtained from the Public Health website (http://publichealth.uci.edu), by calling 949-824-7095, or by sending an email to phgo@uci.edu.

Career Information

Graduates of the UCI M.P.H. program will find employment in both public and private agencies committed to preventing disease and promoting health in all aspects of society. Earning a graduate degree gives new professionals a competitive edge over students who complete their education at the bachelor’s degree level. In particular, the curriculum of the M.P.H. program at UCI is specifically designed to create students who can combine knowledge of the five core disciplines in public health with leadership, communication, and problem-solving skills to meet the needs of culturally diverse communities. Earning an M.P.H. will allow graduates to pursue supervisory positions and career advancement opportunities that may be unattainable without an advanced degree. Students may also wish to combine an M.P.H. with a clinical degree in the health professions to increase opportunities for employment.

Coursework in the M.P.H. program can also prepare a student to pursue doctoral programs in public health. The Ph.D. is a research-based degree that prepares the candidate for research and teaching positions in institutions of higher education. The Dr.P.H. is a professional degree that prepares candidates for careers as practitioners in high-level administration or teaching. The UCI Program in Public Health offers a Ph.D. in Public Health with concentrations in Disease Prevention and Global Health. More information about careers and graduate school in public health can be obtained through the ASPPH (http://www.aspph.org/discover) and the Council on Education for Public Health (http://ceph.org).

General Admission Requirements

The M.P.H. program accepts students for the fall quarter only. Students are encouraged to begin the application process early to facilitate the timely submission of the application. The deadline for receipt of all application materials for the M.P.H. program is December 15. There are no specific course
prerequisites needed to enroll, and the program is open to students with bachelor’s degrees in a variety of disciplines. Individuals from diverse cultural, geographic, and socioeconomic backgrounds are encouraged to apply.

To be eligible to apply for the M.P.H. program, applicants must meet certain minimum academic requirements. Applicants must hold a bachelor’s degree from an accredited academic institution, have earned a minimum grade point average of 3.0 (B average) in undergraduate course work, and possess strong verbal and quantitative skills as reflected by Graduate Record Examination (GRE) General Test scores. Applicants may also submit standardized test scores from the MCAT, GMAT, or LSAT in lieu of the GRE. If the applicant has, from a UC-equivalent university, a Ph.D. in a health-related field, a medical degree, or is currently enrolled in medical school, a test score must be submitted, but the test score’s date does not need to be within the validity period. Evaluations of applicant files for admission to the M.P.H. program will consist of an assessment of transcripts of previous academic work, standardized graduate admission test scores, statement of purpose, letters of recommendation, and other relevant qualifications. Applicants must choose one of the four available emphases at the time of application.

Applicants must submit both the Application for Graduate Admission and the School of Public Health Application Service (SOPHAS) application in order to be considered for admission. For more information on admissions, visit the Public Health website (http://publichealth.uci.edu) or contact phgo@uci.edu.

Program Requirements

**M.P.H. with Emphases in Environmental Health, Epidemiology, or Sociocultural Diversity and Health**

The M.P.H. with emphases in Environmental Health, Epidemiology, or Sociocultural Diversity and Health, is a 64-unit degree program consisting of 16 courses taken over five to six quarters. Ten courses must be taken by all students. In addition, students choose three courses in their emphasis and three elective courses. All courses required for the M.P.H. must be taken for a letter grade. Any foundation or core competency courses in which a minimum grade of B is not achieved must be re-taken.

**Required Courses.** All students begin the program with the introductory course Foundations of Public Health (PUBHLTH 200). The six core competency courses are Probability and Statistics in Public Health (PUBHLTH 207A), Analysis of Public Health Data Using Statistical Software (PUBHLTH 207B), Introduction to Environmental Health Science (PUBHLTH 264), Introduction to Epidemiology (PUBHLTH 206A), Health Policy and Management (PUBHLTH 222), and Health Behavior Theory (PUBHLTH 244). Students must also complete at least two quarters (2 units each quarter) of (PUBHLTH 291), and the capstone course Graduate Practicum and Culminating Experience in Public Health (PUBHLTH 295) (eight units).

**Emphasis Courses.** Upon applying, students choose an emphasis for their M.P.H. degree. Three emphasis courses (four units each, all within the same emphasis) are required from the following list:

<table>
<thead>
<tr>
<th>Environmental Health</th>
<th>Epidemiology</th>
<th>Sociocultural Diversity and Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 260</td>
<td>PUBHLTH 205</td>
<td>PUBHLTH 208</td>
</tr>
<tr>
<td>PUBHLTH 265</td>
<td>PUBHLTH 208</td>
<td>Advances in Social Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 275</td>
<td>PUBHLTH 209</td>
<td>Methods of Demographic Analysis</td>
</tr>
<tr>
<td>PUBHLTH 277A</td>
<td>PUBHLTH 206B</td>
<td>Intermediate Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 277B</td>
<td>PUBHLTH 213</td>
<td>International Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 278</td>
<td>PUBHLTH 214</td>
<td>Surveillance Systems</td>
</tr>
<tr>
<td>PUBHLTH 279</td>
<td>PUBHLTH 281</td>
<td>Infectious Disease Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 283</td>
<td></td>
<td>Special Topics in Health Policy and Management</td>
</tr>
<tr>
<td>PUBHLTH 286</td>
<td></td>
<td>Theories of Health Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Research Methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Program Evaluation</td>
</tr>
</tbody>
</table>
Students in all M.P.H. emphases are required to pass the two-part comprehensive exam in order to advance to candidacy. The first part consists of a case-study analysis of current public health topics, which allows students the opportunity to analyze public health problems and apply theory to solve these problems. The second part is the "Certified in Public Health" (CPH) examination which covers the core areas of knowledge offered in CEPH-accredited schools and programs, as well as cross-cutting areas relevant to contemporary public health. Students who complete all of their core courses are required to take the CPH examination at the beginning of the fall quarter of their second year. Students who do not complete all of their core courses during their first year will be allowed an alternative testing date. In addition, by special petition, students may be approved to take the CPH examination during the spring quarter of their first year. Students must pass the CPH examination before they can be advanced to candidacy for the M.P.H. degree.

Practicum and Culminating Experience. Students are required to complete a supervised internship of 240 hours while registered in the Graduate Practicum and Culminating Experience in Public Health (PUBHLTH 295). The practicum experience follows the completion of all core competency courses, the comprehensive exam, and advancement to candidacy. A compendium of approved practicum sites is available online to enrolled M.P.H. students. The student’s work at the practicum site culminates in a comprehensive written report, with a presentation at the departmental poster seminar at the end of the academic year.

For students enrolled full-time, the normative time for completion of the M.P.H. degree is six quarters, and the maximum time permitted is nine quarters. For students enrolled part-time, the normative time is nine quarters, and the maximum is 15 quarters. Upon special petition, students admitted with advanced standing due to prior graduate-level training may receive credit for up to one-fifth of the total units required toward the M.P.H. degree. Students must be able to demonstrate competency associated with those courses. Such credits are not applicable to the graduate practicum and graduate seminar.

M.D./M.P.H. Dual Degree Program

The M.D./M.P.H. is a five-year program designed for medical students who wish to acquire competencies in public health and understand the broader determinants of health, including the environment, health promotion, preventive medicine, and health policy. Students in this program pursue a combined curriculum for an M.D. from the UC Irvine School of Medicine and an M.P.H. from the Program in Public Health.

Program Information

In order to apply, students must be currently enrolled in the M.D. program. The MCAT, along with the completion of three years of medical school training in good standing, serves as a waiver for the GRE entrance examination usually required for application to the M.P.H. program. During their second or third year of medical school, interested students submit both the Application for Graduate Admission and the School of Public Health Application Service (SOPHAS) application in order to be considered for admission. Final acceptance to the program is granted by the Program in Public Health. The total number of units required to graduate from each program separately are satisfied in the M.D./M.P.H. program. Enrollment in the M.D. program does not guarantee acceptance into the M.P.H. program.

M.P.H. coursework begins after the student’s third year of medical school, and ends during their fourth year of medical school. Students begin the accelerated M.P.H. degree track, which includes three full-time quarters (18 units during the fall and winter quarters, and 16 units during the spring quarter), and one full-time or part-time quarter the following year’s winter quarter where Graduate Practicum is taken.

Once all core competencies are complete, students take the M.P.H. comprehensive exam to advance to candidacy. Students incorporate their M.D. projects into their practicum requirement, which they present and write a report on during the spring quarter. Courses taken as part of a student’s medical school training cannot apply towards a student’s M.P.H. degree.

### Elective Courses

Three elective courses (four units each) are required. Students select electives in light of their educational and career goals.

### M.P.H. with an Emphasis in Biostatistics

The M.P.H. with an emphasis in Biostatistics, is a 63-unit degree program consisting of seventeen courses taken over five to six quarters. Fourteen core competency courses must be taken by all students. In addition, students choose three elective courses. All courses required for the M.P.H. with an emphasis in Biostatistics must be taken for a letter grade. Any core competency course in which a minimum grade of B is not achieved must be re-taken.

### Required Courses

The fourteen core competency courses are PUBH 200, PUBH 264, PUBH 206, PUBH 222, PUBH 244, STAT 201, STAT 202, STAT 203, and two quarters of STAT 295. Students must also complete at least two quarters (.5 units each quarter) of STAT 280, one quarter (2 units) of PUBH 291, and the capstone course PUBH 295 (eight units).

### Elective Courses

Three elective courses (four units each) are required. Students select electives in light of their educational and career goals.

### Students in all M.P.H. Emphases

### Comprehensive Examination - All M.P.H. students are required to pass the two-part comprehensive exam in order to advance to candidacy. The first part consists of a case-study analysis of current public health topics, which allows students the opportunity to analyze public health problems and apply theory to solve these problems. The second part is the “Certified in Public Health” (CPH) examination which covers the core areas of knowledge offered in CEPH-accredited schools and programs, as well as cross-cutting areas relevant to contemporary public health. Students who complete all of their core courses are required to take the CPH examination at the beginning of the fall quarter of their second year. Students who do not complete all of their core courses during their first year will be allowed an alternative testing date. In addition, by special petition, students may be approved to take the CPH examination during the spring quarter of their first year. Students must pass the CPH examination before they can be advanced to candidacy for the M.P.H. degree.

### Practicum and Culminating Experience

Students are required to complete a supervised internship of 240 hours while registered in the Graduate Practicum and Culminating Experience in Public Health (PUBHLTH 295). The practicum experience follows the completion of all core competency courses, the comprehensive exam, and advancement to candidacy. A compendium of approved practicum sites is available online to enrolled M.P.H. students. The student’s work at the practicum site culminates in a comprehensive written report, with a presentation at the departmental poster seminar at the end of the academic year.

For students enrolled full-time, the normative time for completion of the M.P.H. degree is six quarters, and the maximum time permitted is nine quarters. For students enrolled part-time, the normative time is nine quarters, and the maximum is 15 quarters. Upon special petition, students admitted with advanced standing due to prior graduate-level training may receive credit for up to one-fifth of the total units required toward the M.P.H. degree. Students must be able to demonstrate competency associated with those courses. Such credits are not applicable to the graduate practicum and graduate seminar.

### M.D./M.P.H. Dual Degree Program

The M.D./M.P.H. is a five-year program designed for medical students who wish to acquire competencies in public health and understand the broader determinants of health, including the environment, health promotion, preventive medicine, and health policy. Students in this program pursue a combined curriculum for an M.D. from the UC Irvine School of Medicine and an M.P.H. from the Program in Public Health.

### Program Information

In order to apply, students must be currently enrolled in the M.D. program. The MCAT, along with the completion of three years of medical school training in good standing, serves as a waiver for the GRE entrance examination usually required for application to the M.P.H. program. During their second or third year of medical school, interested students submit both the Application for Graduate Admission and the School of Public Health Application Service (SOPHAS) application in order to be considered for admission. Final acceptance to the program is granted by the Program in Public Health. The total number of units required to graduate from each program separately are satisfied in the M.D./M.P.H. program. Enrollment in the M.D. program does not guarantee acceptance into the M.P.H. program.

M.P.H. coursework begins after the student's third year of medical school, and ends during their fourth year of medical school. Students begin the accelerated M.P.H. degree track, which includes three full-time quarters (18 units during the fall and winter quarters, and 16 units during the spring quarter), and one full-time or part-time quarter the following year's winter quarter where Graduate Practicum is taken.

Once all core competencies are complete, students take the M.P.H. comprehensive exam to advance to candidacy. Students incorporate their M.D. projects into their practicum requirement, which they present and write a report on during the spring quarter. Courses taken as part of a student’s medical school training cannot apply towards a student’s M.P.H. degree.
The only emphases allowed in an accelerated M.P.H. degree program are Environmental Health, Epidemiology, or Sociocultural Diversity and Health. These are the only three emphases eligible for dual degree, joint, or concurrent programs.

Medical school students in the Prime LC program are allowed, by the School of Medicine, to complete the remaining units of their M.P.H. degree during the winter quarter of their last year in the School of Medicine.

For more information, please contact the M.P.H. Academic Advisor at 949-824-7095.

**Doctor of Philosophy in Public Health**

The distinctive mission of the Ph.D. in Public Health is to train graduate students to conduct original research on the determinants of health status of populations, and the translation of such knowledge to improve strategies for preventing disease and disability. Graduates of the Ph.D. program will be prepared for independent and collaborative research careers, and to teach at advanced levels of instruction. Students enrolled in the Ph.D. in Public Health must concentrate in either Global Health or Disease Prevention.

**Concentration in Global Health**

The focus of the Ph.D. research concentration in Global Health is to train excellence in research through engagement in hypothesis-driven projects to investigate the global context of disease burden and the improvement of population health status. The program will attract candidates who seek to analyze problems at the intersection of risk, vulnerability, and disease. Activities may include investigation of strategies to make research results that have already produced benefits in one country or region effective in underprivileged regions. The program trains students in integrative expertise essential for global health research with hypotheses in the nexus of content (risk analysis), context (vulnerability assessments), and process (translation of knowledge to reduce the burden of disease).

The specific learning objectives of the Concentration in Global Health are for graduates of the degree to:

1. Demonstrate knowledge of the major theoretical underpinnings of advances in global health research.
2. Explain the relationship between theory and research methods focused on understanding the association of risk, vulnerability, and outcome in global health.
3. Compare and contrast the health status of different populations with respect to their burden of disease.
4. Formulate research hypotheses in the intersection of risk factors, vulnerable populations, and burden of disease.
5. Compose research proposals and conduct original research resulting in discoveries that contribute to improved understanding of risk factors and variations in disease burden in a population, and strategies to alleviate the burden at the global level.

**Concentration in Disease Prevention**

The focus of the Ph.D. concentration in Disease Prevention is to train excellence in research to discover insights into how human behavior, social constraints, and other contextual factors influence strategies to prevent disease in populations that are vulnerable to risk factors. The program emphasizes the ecological model of disease prevention, with research hypotheses emerging through multi-layered analysis of determinants of health status, including individual, interpersonal, organizational, community, and overarching policy. Students generate the hypotheses for their research in the nexus of risk factors, health behavior, and vulnerable populations.

The specific learning objectives of the Concentration in Disease Prevention are:

1. Demonstrate knowledge of the major theoretical underpinnings of strategies for disease prevention.
2. Explain the relationship between theory and research methods focused on understanding the association of risk, behavior, and vulnerability with respect to disease pathways.
3. Analyze interrelationships among the determinants of illness and maladaptive health behaviors using theories of health behavior.
4. Formulate research hypotheses in the intersection of health risk factors, health behavior, and health promotion and policies toward disease prevention.
5. Compose research proposals and conduct original research resulting in discoveries that contribute to improved understanding of the role of behavior and health promotion strategies in mitigating the vulnerability to health risk factors in specific populations, with the goals of applying the knowledge to disease prevention.

**Career Information**

The Ph.D. in Public Health prepares graduates to initiate independent and collaborative research careers in academic institutions, to teach at advanced levels of instruction, and to lead research efforts at agencies dedicated to public health at all levels of organization. Graduates of the Ph.D. in Public
Health will gain employment at research universities, government agencies, or private sector organizations including research institutes, hospitals, and public health foundations.

**General Admission Requirements**

Students enroll in the Ph.D. in Public Health in the fall quarter of each year. Applicants are encouraged to start the application process early by consulting with faculty members whose research activities align with the applicant’s interests and academic background. The deadline for receipt of all application materials is December 1. Applicants must choose one of the two available concentrations at the time of application. Master’s level degrees in health-related disciplines are the preferred preparation for admission to the Ph.D. in Public Health. Applicants to the Ph.D. in Public Health who come with undergraduate degrees from other related majors might be required to take supplementary courses in addition to the preparatory module of the Ph.D. program.

All applicants must have an overall grade point average of B (3.0 on a 4.0 scale) or better and take the Graduate Record Examination (GRE) general test. Applicants must meet the general admission requirements of the UCI Graduate Division and submit both the Application for Graduate Admission and the School of Public Health Application Service (SOPHAS) application in order to be considered for admission.

Each Ph.D. student must serve as a teaching assistant for at least two quarters during the graduate program. If English is not the student’s first language, the student must pass a campus-approved oral English proficiency exam prior to serving as a teaching assistant.

For more information on admissions, visit the Public Health website (http://publichealth.uci.edu) or contact phgo@uci.edu.

**Program Requirements**

A main feature of the Ph.D. in Public Health is the situation of dissertation research in an ecological framework that considers multi-level analysis of public health questions. We integrate this feature in the two concentrations, each with knowledge modules and creative activity that must be satisfied in partial fulfillment of the degree requirements. All Ph.D. students are required to complete a minimum of 88 quarter-units according to the following modules:

### Preparatory Module

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PUBHLTH 205</td>
<td>Advanced Epidemiologic Methods</td>
</tr>
<tr>
<td>PUBHLTH 207A</td>
<td>Probability and Statistics in Public Health</td>
</tr>
<tr>
<td>PUBHLTH 207B</td>
<td>Analysis of Public Health Data Using Statistical Software</td>
</tr>
<tr>
<td>PUBHLTH 283</td>
<td>Geographic Information Systems for Public Health</td>
</tr>
<tr>
<td>PUBHLTH 287</td>
<td>Qualitative Research Methods in Public Health</td>
</tr>
<tr>
<td>PUBHLTH 288</td>
<td>Research Proposal Writing in Global Health</td>
</tr>
<tr>
<td>PUBHLTH 292</td>
<td>Ethics and Responsible Conduct of Research in Public Health</td>
</tr>
<tr>
<td>PUBHLTH 294</td>
<td>Research Communication in Public Health</td>
</tr>
<tr>
<td>PUBHLTH 297</td>
<td>Research Design</td>
</tr>
<tr>
<td>PUBHLTH 298</td>
<td>Directed Studies in Public Health</td>
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### Concentration Module: Disease Prevention

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PUBHLTH 208</td>
<td>Advances in Social Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 244</td>
<td>Health Behavior Theory</td>
</tr>
<tr>
<td>PUBHLTH 245</td>
<td>Health Promotion Planning</td>
</tr>
<tr>
<td>PUBHLTH 246</td>
<td>Social Research Methods</td>
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</table>

### Concentration Module: Global Health

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PUBHLTH 213</td>
<td>International Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 280</td>
<td>Global Burden of Disease</td>
</tr>
<tr>
<td>PUBHLTH 286</td>
<td>Advanced Geographic Information Systems and Spatial Epidemiology</td>
</tr>
<tr>
<td>PUBHLTH 289</td>
<td>Special Topics in Global Health and Disease Prevention</td>
</tr>
</tbody>
</table>

### Elective Module: Risk Factors and Vulnerable Populations

Select four courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BATS 210A</td>
<td>Introduction to Clinical Epidemiology</td>
</tr>
<tr>
<td>BATS 253</td>
<td>Disparities in Health and Health Care</td>
</tr>
<tr>
<td>CHC/LAT 210A</td>
<td>Cultural and Historical Precedents for Latinos and Medical Care</td>
</tr>
<tr>
<td>CHC/LAT 210B</td>
<td>Cultural and Historical Precedents for Latinos and Medical Care</td>
</tr>
<tr>
<td>CHC/LAT 211A</td>
<td>Latinos/Latinas and Medical Care: Contemporary Issues</td>
</tr>
<tr>
<td>CHC/LAT 211B</td>
<td>Latinos/Latinas and Medical Care: Contemporary Issues</td>
</tr>
<tr>
<td>CRM/LAW C219</td>
<td>Hate Crime</td>
</tr>
<tr>
<td>EHS 294</td>
<td>Occupational Health Psychology</td>
</tr>
</tbody>
</table>
EPIDEM 202 Genetic Epidemiology
EPIDEM 205 Environmental Epidemiology
EPIDEM 215 Introduction to Statistical Genetics
EPIDEM 232 Chronic Disease Epidemiology & Prevention
EPIDEM 244 Toxic Chemicals in Environment
EARTHSS 200 Global Physical Climatology
MOL BIO 205 Molecular Virology
MOL BIO 215 Integrative Immunology
MOL BIO 218 Clinical Cancer
PSY BEH P258 Health Psychology
PSY BEH P273 Biobehavioral Aspects of Health and Illness
PSY BEH P274 The Psychobiology of Stress
PUBHLTH 208 Advances in Social Epidemiology 2
PUBHLTH 209 Methods of Demographic Analysis
PUBHLTH 206B Intermediate Epidemiology
PUBHLTH 213 International Epidemiology 1
PUBHLTH 214 Surveillance Systems
PUBHLTH 222 Health Policy and Management
PUBHLTH 223 Risk Communication
PUBHLTH 242 Theories of Health Communication
PUBHLTH 244 Health Behavior Theory 2
PUBHLTH 245 Health Promotion Planning 2
PUBHLTH 246 Social Research Methods 2
PUBHLTH 247 Program Evaluation
PUBHLTH 248 Fundamentals of Maternal and Child Health - Programs, Problems, and Policy
PUBHLTH 250 Health Status and Care Disparities
PUBHLTH 260 Human Exposure Modeling
PUBHLTH 264 Introduction to Environmental Health Science
PUBHLTH 269 Air Pollution, Climate, and Health
PUBHLTH 270 Human Exposure to Environmental Contaminants
PUBHLTH 277A Target Organ Toxicology I
PUBHLTH 277B Target Organ Toxicology II
PUBHLTH 279 Special Topics in Environmental & Occupational Health
PUBHLTH 280 Global Burden of Disease 1
PUBHLTH 281 Infectious Disease Epidemiology
PUBHLTH 286 Advanced Geographic Information Systems and Spatial Epidemiology 1
PUBHLTH 289 Special Topics in Global Health and Disease Prevention 1
PUBHLTH 290 Special Topics in Public Health ((Global Health Law and Policy, Obesity Epidemiology, Theory Driven Data Analysis))
SOCIOL 269 Special Topics: Social Demography

Research Module
1. Establish a dissertation committe of faculty members.
2. Submit a research proposal and advance to Ph.D. candidacy by defending the proposal.
3. At least three quarters of PUBHLTH 296 under the supervision of the Chair of the dissertation committee.

Counts as a cluster course for Disease Prevention students only.
Counts as a cluster course for Global Health students only.

The qualifying examination consists of two parts. The first part is a written test based on the breadth of knowledge of subjects within the Ph.D. concentration. The second part is an oral defense of the student’s research proposal. Students must submit a detailed research proposal to a committee of five faculty members consisting of four members with formal appointments in Public Health, and an external member. Advancement to doctoral candidacy is contingent on passing the qualifying examination. We expect students to sit for the qualifying examination by the beginning of their third
year in the program. Ph.D. completion requires submission of an acceptable dissertation and oral defense. The normative time to degree is six years, and the maximum time permitted is eight years.

**Teaching Requirement**

Students enrolled in the Ph.D. in Public Health are required to serve as Teaching Assistants in public health courses for two quarters during their graduate study. Teaching is an important component of graduate training, as it helps graduate students learn how to communicate effectively about their field of knowledge. In addition, teaching experience is valuable to those planning for a career in academia. Graduate students with comparable prior teaching experience (e.g., through postgraduate degrees earned at UC Irvine or other comparable institution) may request a waiver of the teaching requirement.

**Program in Law and Graduate Studies (J.D./Ph.D./M.P.H.)**

Highly-qualified students interested in combining the study of law with graduate qualifications in Public Health are invited to undertake concurrent degree study under the auspices of UC Irvine’s Program in Law and Graduate Studies (PLGS). Students in this program pursue a coordinated curriculum leading to a J.D. from the School of Law in conjunction with a Master’s or Ph.D. in Public Health.

Additional information is available from the PLGS Program Director's Office at 949-824-9217, or by email at plgs@law.uci.edu. A full description of the program, with links to all relevant application information, can be found in the Law School section of the Catalogue.

**Faculty**

Alpesh N. Amin, M.D. Northwestern University, *Thomas and Mary Cesario Endowed Chair in Medicine and Professor of Medicine*; *Biomedical Engineering*; *Paul Merage School of Business*; Program in Public Health (hospital medicine, quality/safety, new technologies in healthcare)

Dean B. Baker, M.D. University of California, San Diego, *Professor Emeritus of Medicine*; *Environmental Health Sciences*; Program in Public Health

Scott Bartell, Ph.D. University of California, Davis, *Associate Professor of Program in Public Health*; *Environmental Health Sciences*; *Social Ecology*; *Statistics*

Hans-Ulrich Bernard, Ph.D. University of Goettingen, *Professor Emeritus of Molecular Biology and Biochemistry*; Program in Public Health

Zuzana Bic, Dr.P.H. Loma Linda University, *Lecturer with Security of Employment of Program in Public Health*

Stephen C. Bondy, Ph.D. University of Birmingham, *Professor of Medicine*; *Environmental Health Sciences*; *Pharmacology*; Program in Public Health

Tim-Allen Bruckner, Ph.D. University of California, Berkeley, *Associate Professor of Program in Public Health*; *Urban Planning and Public Policy*

Bharath Chakravarthy, M.D. Boston University, *Assistant Professor of Emergency Medicine*; Program in Public Health

Wayne Wei Chung Chang, M.D. Saint Louis University, *Health Sciences Associate Clinical Professor of Medicine*; Program in Public Health

Yunan Chen, Ph.D. Drexel University, *Associate Professor of Informatics*; Program in Public Health (medical informatics, human computer interaction)

Bongkyoo Choi, Sc.D. University of Massachusetts, *Assistant Professor of Medicine*; *Environmental Health Sciences*; Program in Public Health

Ralph W. Cygan, M.D. State University of New York Downstate Medical Center, *Health Sciences Professor of Medicine*; Program in Public Health

Robert Detrano, M.D. Sapienza University of Rome, *Health Sciences Clinical Professor of Radiological Sciences*; Program in Public Health

Karen L. Edwards, Ph.D. University of Washington, *Chair and Professor of Epidemiology*; Genetic Epidemiology Research Institute; Program in Public Health

Rufus D. Edwards, Ph.D. Rutgers, The State University of New Jersey, *Professor of Program in Public Health*; *Environmental Health Sciences*; *Epidemiology*

Daniel L. Gillen, Ph.D. University of Washington, *Department Chair and Professor of Statistics*; Program in Public Health

Michele B. Goodwin, J.D. Boston College, *Director, Center for Biotechnology and Global Health Policy* and UCI’s Chancellor’s Professor of School of Law; *Criminology, Law and Society*; *Gender and Sexuality Studies*; Program in Public Health

Lisa B. Grant Ludwig, Ph.D. California Institute of Technology, *Professor of Program in Public Health*

Suellen Hopfer, Ph.D. Pennsylvania State University, *Assistant Professor of Program in Public Health*

F. Allan Hubbell, M.D. Baylor University, *Professor Emeritus of Medicine*; Program in Public Health

Kamyar Kalantar-Zadeh, M.D. University of Bonn, *Professor of Medicine*; Program in Public Health
Michael T. Kleinman, Ph.D. New York University, Adjunct Professor of Community & Environ Medicine; Environmental Health Sciences; Program in Public Health

Elliott H. Kornhauser, M.D. University of Toronto, Health Sciences Professor of Medicine; Program in Public Health

Cynthia Lakon, Ph.D. University of North Carolina at Chapel Hill, Associate Professor of Program in Public Health

Alana Lebron, Ph.D. University of Michigan, Assistant Professor of Program in Public Health; Chicano/Latino Studies

Shahram Lotfipour, M.D. University of Iowa, Professor of Emergency Medicine; Program in Public Health

Yunxia Lu, Ph.D. University Tongi Medical College, Associate Professor of Program in Public Health

Ulrike Luderer, M.D., Ph.D. Northwestern University, Director of the Environmental Health Sciences Graduate Program and Professor of Medicine; Developmental and Cell Biology; Environmental Health Sciences; Program in Public Health (reproductive toxicology, developmental toxicology, developmental basis of ovarian toxicity, ovarian cancer)

Frank L. Meyskens, M.D. University of California, San Francisco, Daniel G. Aldrich, Jr. Endowed Chair and Professor of Medicine; Biological Chemistry; Program in Public Health

Michael J. Montoya, Ph.D. Stanford University, Professor Emeritus of Anthropology; Program in Public Health (social inequality and health, race and ethnicity, social and cultural studies of science, technology, and medicine, participation of ethnic populations in biomedical research, the U.S./Mexican border, critical bioethics)

Dana Mukamel, Ph.D. University of Rochester, Professor of Medicine; Program in Public Health

Andrew Noymer, Ph.D. University of California, Berkeley, Associate Professor of Program in Public Health

Oladele A. Ogunseitan, Ph.D. University of Tennessee, Department Chair and Professor of Program in Public Health; Environmental Health Sciences

Anamara Ritt-Olson, Ph.D. University of Southern California, Lecturer of Program in Public Health

Annie E. Ro, Ph.D. University of California, Los Angeles, Assistant Professor of Program in Public Health

Mirhya Gould Runnerstrom, Ph.D. University of California, Irvine, Lecturer with Potential Security of Employment of Program in Public Health

Mojgan Sami, Ph.D. University of California, Irvine, Assistant Project Scientist of Program in Public Health

Terry L. Schmidt, Dr.H.A. Medical University of South Carolina, Lecturer of Program in Public Health

Peter L. Schnall, M.D. Stanford University, Health Sciences Clinical Professor of Medicine; Program in Public Health

Tonya L. Schuster, Ph.D. University of California, Riverside, Lecturer of Sociology; Program in Public Health (sociology of medicine and alternative medicine, social relationships and health social psychology, research design)

Roxane C. Silver, Ph.D. Northwestern University, Professor of Psychology and Social Behavior; Program in Public Health (coping with traumatic life events (personal losses and collective traumas), stress, social psychology, health psychology)

Dara H. Sorkin, Ph.D. University of California, Irvine, Associate Professor in Residence of Medicine; Program in Public Health; Psychology and Social Behavior (close relationships, behavioral lifestyle interventions for chronic disease management, health disparities, program evaluation)

Lisa Sparks, Ph.D. University of Oklahoma, Adjunct Professor of Program in Public Health

Sharon M. Stern, Ph.D. University of Utah, Senior Lecturer with Security of Employment Emerita of Program in Public Health

Daniele Stokols, Ph.D. University of North Carolina, Chapel Hill, Professor Emeritus of Psychology and Social Behavior; Program in Public Health; Religious Studies; Urban Planning and Public Policy

Bryan Sykes, Ph.D. University of California, Berkeley, Assistant Professor of Criminology, Law and Society; Program in Public Health; Sociology (demography, criminology, research methods, health, social inequality, statistics)

David Timberlake, Ph.D. University of California, San Diego, Associate Professor of Program in Public Health

Veronica M. Vieira, D.Sc. Boston University, Professor of Program in Public Health; Environmental Health Sciences

Jun Wu, Ph.D. University of California, Los Angeles, Associate Professor of Program in Public Health; Environmental Health Sciences
Guiyun Yan, Ph.D. University of Vermont, Professor of Program in Public Health; Ecology and Evolutionary Biology; Program in Public Health

Courses

PUBHLTH 1. Principles of Public Health. 4 Units.
Introduces the major concepts and principles of public health and the determinants of health status in communities. Emphasizes the ecological model that focuses on the linkages and relationships among multiple natural and social determinants affecting health.

Restriction: Nursing Science Majors have first consideration for enrollment. Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

(III).

PUBHLTH 2. Case Studies in Public Health Practice. 4 Units.
Presents case studies in various themes of public health practice to demonstrate how the principles of public health were established and continue to evolve.

Prerequisite: PUBHLTH 1

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

(I)

PUBHLTH 7A. Public Health Statistics I. 4 Units.
Introduces the development and application of statistical reasoning and methods in addressing, analyzing, and solving problems in public health, health care, and biomedical, clinical, and population-based research and practice.

Overlaps with SOCECOL 13, STATS 7, STATS 8, MGMT 7.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

(Va)

PUBHLTH 7B. Public Health Statistics II. 4 Units.
Introduces the development and application of statistical reasoning and methods in addressing, analyzing, and solving problems in public health, health care, and biomedical, clinical, and population-based research and practice.

Prerequisite: PUBHLTH 7A

Restriction: Public Health Majors only. Public Health Sciences Majors only. Public Health Policy Majors only.

(Va)

PUBHLTH 10. Special Topics in Public Health. 2-4 Units.
Introduction to emerging topics in public health. Topics addressed vary each quarter.

Repeatability: Unlimited as topics vary.

PUBHLTH 30. Introduction to Urban Environmental Health. 4 Units.
Study of natural and physical components of earth's environmental problems due to human activities. Topics include global air, water, soil, biodiversity, rainforests, energy, demographics, agriculture, and urbanization. Theme is sustainability. Integrated into the science are social, legal, and economic considerations.

(II)

PUBHLTH 60. Environmental Quality and Health. 4 Units.
Overviews how pollution in the environment affects human health. Topics are toxicology, epidemiology, risk assessment, water, food, air, radiation, pesticides, solid and hazardous waste. Included are interdisciplinary elements of environmental regulations, education, and consumer protection.

(II)

PUBHLTH 80. AIDS Fundamentals. 4 Units.
Considers the biological and sociological bases of the AIDS epidemic. Topics include the history of AIDS, current medical knowledge, transmission, risk reduction, and how the community can respond.

Same as BIO SCI 45.

(II)
PUBHLTH 90. Natural Disasters. 4 Units.
Natural disasters are natural Earth processes that adversely affect humans. Topics include tectonics, earthquakes, tsunami, volcanoes, landslides, severe weather, flooding, coastal processes, wildfire, related topics, and use of GIS for hazard and risk assessment.

Overlaps with EARTHSS 17.

(I)
PUBHLTH 91. Disparities in Health Care. 2-8 Units.
Student participatory course practicing initiation, planning, and coordination of various speakers on the subject of Disparities in Health Care.

Grading Option: Pass/no pass only.
Repeatability: May be taken for credit for 8 units.

PUBHLTH 100. Special Topics in Public Health. 4 Units.
Studies in selected areas of public health. Topics addressed vary each quarter. Course may be offered online when topic is Public Health in the Corporate World.
Prerequisite: PUBHLTH 1
Repeatability: Unlimited as topics vary.

PUBHLTH 101. Introduction to Epidemiology. 4 Units.
The distribution of disease and injury across time, space, and populations. Covers basic concepts and methods of descriptive epidemiology including the natural history of disease, data, and indices of health.
Prerequisite: STATS 7 or STATS 8 or PUBHLTH 7
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 102. Social Epidemiology. 4 Units.
Overviews evidence linking environmental factors to mental and physical disorders including such variables as socioeconomic status, income inequality, work stress, job loss, social capital, location, and other demographic characteristics. Measurement and research design issues of both individual and aggregate levels.
Prerequisite: (PSY BEH 9 or PSY BEH 11C or PSYCH 7A or PSYCH 9C) and SOCECOL 10 and SOCECOL 13
Same as PSY BEH 183S.
Restriction: Psychology and Social Behavior Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 103. Introduction to Genetic Epidemiology. 4 Units.
Examines the methodological approaches for studying the importance of genetic factors and gene-environment interactions in human diseases. Topics include: genetic and epidemiological concepts, population studies, family studies, and applications in medicine and public health.
Prerequisite: PUBHLTH 101
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 104. Analytic and Applied Epidemiology. 4 Units.
Covers basic concepts of analytic epidemiology and applications, including experimental and observational designs, prevention, screening, treatment and rehabilitation, infectious disease, and injury prevention.
Prerequisite: PUBHLTH 101
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 105. Introduction to Medical Informatics. 4 Units.
Broad overview of medical informatics for students with varied backgrounds. Electronic medical records, online resources, mobile technologies, patient safety, and computational design. Legal, ethical, and public policy issues. Health systems management. Evaluation and fieldwork for health systems.
Same as IN4MATX 171.
Restriction: Upper-division students only.
PUBHLTH 106. Project in Health Informatics. 4 Units.
Students undertake significant quarter-long projects related to health informatics. Topics may include field evaluations of health care technologies, prototypes, iterative design, and system implementations.
Prerequisite: PUBHLTH 105 or IN4MATX 171
Same as IN4MATX 172.

PUBHLTH 107. Epidemiology of Drug Use and Misuse. 4 Units.
Applies epidemiologic concepts to the use and misuse of licit/illicit substances. Emphasizes descriptive aspects of drug use and determinants of progressing from experimental use to misuse. Assesses subgroups of abusers, risk factors, trends, and surveillance techniques for estimating drug prevalence.
Prerequisite: PUBHLTH 1
Restriction: Upper-division students only. Public Health Policy Majors have first consideration for enrollment. Public Health Sciences Majors have first consideration for enrollment.

PUBHLTH 115. Community, Social Justice, and Health Equity Research for Action. 4 Units.
Focuses on community as a unit of identity, community, well-being, and social justice perspectives and initiatives to promote community health. Addresses community change and improvements in community well-being, with a focus on health equity research for action.
Prerequisite: PUBHLTH 1 or PUBHLTH 2 or CHC/LAT 61 or CHC/LAT 62 or CHC/LAT 63
Same as CHC/LAT 152B.

PUBHLTH 119. Special Topics in Epidemiology and Genetics. 4 Units.
Studies in selected areas of epidemiology and genetics. Topics addressed vary each quarter.
Prerequisite: PUBHLTH 1
Repeatability: Unlimited as topics vary.

PUBHLTH 120. Nutrition and Global Health. 4 Units.
Global issues related to nutrition and public health. Evaluation of nutritional risk factors associated with the development of chronic diseases and the role of nutritional medicine in prevention. Topics include food safety, communicable diseases, supplements, and regulatory issues.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 121. Introduction to Complementary and Alternative Medicine. 4 Units.
Examines health and disease in contemporary American culture/society with definitions, models, and practices of what has come to be known as "orthodox" or "conventional" medicine. Selected "alternative" or "complementary" modes of promoting health and well-being including homeopathy, herbology, and chiropractic.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 122. Health Policy. 4 Units.
Considers social and economic aspects of health and disease in the United States. What are the proper roles of the individual, community, and government in improving health and health care? International comparisons will be made wherever possible.
Same as UPPP 170.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Urban Studies Majors have first consideration for enrollment.

PUBHLTH 124. Environmental and Public Health Policy. 4 Units.
Examines factors involved in shaping public health and environmental policy. Topics include the role of science in public health policy, the function of governmental regulatory agencies, citizen participation, and economic and sociopolitical aspects of controlling infectious diseases and regulating carcinogens.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.
PUBHLTH 125. Foundations of Community Health. 4 Units.
A social ecological framework for understanding community health is presented. Measures of individual and community health are compared, and the influence of personal and environmental factors on individual, group, and population health is examined. Community health promotion strategies are discussed.

Same as UPPP 112.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Urban Studies Majors have first consideration for enrollment.

Addresses the relationship of U.S. public health law to health systems at the individual and population levels. Examines legislative and judicial concepts and how they are applied to disease prevention strategies, health services, management, and policy.

PUBHLTH 127. Public Health Programs for the Corporate World. 4 Units.
International perspective on workplace health promotion. Strategies for developing programs to improve employee health and to decrease risks of chronic degenerative diseases. Case studies include assessment of employee health, program design, implementation, and evaluation. Emphasis on disease prevention.

PUBHLTH 129. Public Health Administration. 4 Units.
Examines historical aspects of public health administration including policies, procedures, trends, and development of organizations. Addresses information and skills necessary to succeed in public health leadership roles. Discusses strategic planning, collaborations, and ethical considerations for successful management in public health.

Prerequisite: PUBHLTH 1

Restriction: Upper-division students only. Public Health Policy Majors have first consideration for enrollment. Public Health Sciences Majors have first consideration for enrollment.

PUBHLTH 132. American Public Policy. 4 Units.
Focuses on the development and implementation of public policy in the United States. Lectures cover theoretical models of the policy process as well as significant problems facing contemporary American decision-makers.

Same as PP&D 129, POL SCI 121G, SOC SCI 152C.

PUBHLTH 139. Special Topics in Health Policy and Administration. 4 Units.
Studies in selected areas of health policy and administration. Topics addressed vary each quarter.

Prerequisite: PUBHLTH 1

Repeatability: Unlimited as topics vary.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 141. Clinical Health Psychology. 4 Units.
Behavioral role in etiology, treatment, and prevention of certain diseases. Behavioral intervention including biofeedback, stress-, pain-management, health habit counseling, and other skills to assist patients make cognitive, emotional, and behavioral changes needed to cope with disease or achieve better health.

Prerequisite: PSY BEH 9 or PSY BEH 11C or PSYCH 7A or PSYCH 9C

Same as PSY BEH 141H.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment. Psychology and Social Behavior Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment.

PUBHLTH 144. Health Behavior Theory. 4 Units.
Introduces theoretical perspectives from the social sciences to understand health behavior from the vantage point of individuals, their interpersonal contacts, communities, and ecological contexts. Application of theory to public health problems is a central focus.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.
PUBHLTH 146. Health Promotion Programs. 4 Units.
Examines ecological perspectives of health promotion programs and risk factors related to mortality/morbidity. Analyzes effectiveness of health promotion strategies and issues in the existing healthcare systems in light of sociocultural beliefs and economical/political conditions.
Prerequisite: PUBHLTH 1
Restriction: Upper-division students only. Public Health Policy Majors have first consideration for enrollment. Public Health Sciences Majors have first consideration for enrollment.

PUBHLTH 147. Drug Abuse and Its Prevention. 4 Units.
Theoretical and practical underpinnings of drug abuse and its prevention at the individual and population levels. Students practice developing drug abuse prevention schemes for specific populations. Recent developments in pharmacological and biobehavioral theories of drug dependence are explored.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 148. Public Health Communication. 4 Units.
Theoretical underpinnings and practical applications of communication sciences in public health practice. Techniques of effective communication, including fear appeal and deterrence; social marketing; public-private partnerships; health service delivery; and outreach in rural and urban settings, and for international health strategies.
Prerequisite: PUBHLTH 1 and PUBHLTH 2
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 150. Public Health and Wellness. 4 Units.
Presentation of information about wellness from both science and policy perspectives in order to demonstrate the role of wellness in public health. Emphasizes the conditions that create wellness in the individual, the community, the nation, and the world.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 151. Environmental Psychology. 4 Units.
Impact of the physical environment on individual and group behavior. Three basic concerns examined: (a) environmental determinants of behavior at the individual and interpersonal level; (b) social planning and urban design; (c) methodological approaches to the study of environmental issues.
Prerequisite: ENVIRON E8 and (SOCECOL 10 or PP&D 4)

PUBHLTH 159. Special Topics in Social and Behavioral Health Science. 4 Units.
Studies in selected areas of social and behavioral health sciences. Topics addressed vary each quarter.
Prerequisite: PUBHLTH 1
Repeatability: Unlimited as topics vary.

PUBHLTH 161. Environmental Geology. 4 Units.
Introduction to geologic principles and applications to environmental problems. Topics include: tectonic processes, earth materials, soils, river processes, groundwater, the coastal environment, slope failures, seismic hazards, mineral resources, and land-use evaluation based on geologic conditions. Examples from case studies.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 163. Introduction to Environmental Health Science. 4 Units.
Focuses on processes of exposure to environmental toxins/agents and their impact to human health and the environment. Media transport, exposure assessment, susceptibility, behavior, and health effect of several toxins are discussed.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 167. Air Pollution, Climate, and Health. 4 Units.
Introduction to how air pollutants are emitted into the atmosphere, how people are most exposed to air pollutants in developed and developing areas, physical and meteorological processes that affect transport, and the influence of air pollutants on global warming.
Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.
PUBHLTH 168. Nuclear Environments. 4 Units.
Understanding the impact of the nuclear age on the environment and human health through interrelated developments of nuclear power and nuclear weapons. The early years of weapon development, catastrophic environmental pollution, perils of nuclear power in the U.S. and Russia.

Same as INTL ST 122, SOCECOL E127.

PUBHLTH 169. Human Exposure Modeling. 4 Units.
Indirect methods in estimating human exposure to environmental agents. Topics include air, noise, dermal and ingestion exposure assessment, time-activity and micro-environmental approach, uncertainty and variability analysis, and the use of GIS and remote sensing in exposure assessment.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 170. Introduction to Global Health. 4 Units.
Provides a foundational interdisciplinary understanding of global health issues and their importance to various societal goals, including poverty reduction, economic productivity, and peace promotion. Covers major communicable and non-communicable diseases and demographic patterns of disease burden.

Prerequisite: PUBHLTH 1

PUBHLTH 171. Human Exposure to Environmental Contaminants. 4 Units.
Introduces origins of human's realization that chemicals in the environment may adversely affect health. Introduces the theory and principles of exposure assessment. Covers estimation of exposure, variability of measures, the way exposure assessment is incorporated into the risk-assessment paradigm.

PUBHLTH 172. Climate Change and Disaster Management. 4 Units.
Examines the social, economic, environmental, and health impacts of anthropogenic climate change through engaged learning that integrates practice and theory.

PUBHLTH 173. Health and Global Environmental Change. 4 Units.
Overview of scientific underpinnings of global environmental change and human health consequences. Provides an understanding of the fundamental dependency of human health on global environmental integrity. Encourages disciplinary cross-fertilization through interaction of students in environmental, health, and policy sciences.

Prerequisite: One upper-division course in environmental science, public health, environmental policy, and/or environmental management.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 174. Global Health Ethics. 4 Units.
Provides a foundation for understanding and application of key issues.

PUBHLTH 176. War and Public Health. 4 Units.
Explores how war impacts public health both globally and domestically in the United States. Focus on the link between war and the burden that it ultimately places on physical, mental, environmental, and societal health as well as on health systems.

PUBHLTH 179. Special Topics in Environmental and Global Health Science. 4 Units.
Studies in selected areas of environmental and global health sciences. Topics addressed vary each quarter.

Prerequisite: PUBHLTH 1

Repeatability: Unlimited as topics vary.

PUBHLTH 180. Epidemiology of Infectious Disease. 4 Units.
Examines the distribution of infectious disease and the health and disease risk among human populations. Introduces basic methods for infectious disease epidemiology. Case studies of important diseases, including HIV and malaria, are conducted.

Prerequisite: PUBHLTH 1
PUBHLTH 189. Special Topics in Infectious Diseases. 4 Units.
Studies in selected areas of infectious diseases. Topics addressed vary each quarter.

Prerequisite: PUBHLTH 1

Repeatability: Unlimited as topics vary.

Restriction: Public Health Sciences Majors have first consideration for enrollment. Public Health Policy Majors have first consideration for enrollment.

PUBHLTH 190. Geographic Information Systems for Public Health. 4 Units.
Provides a broad introduction to the use of Geographic Information Systems software to carry out projects for visualizing and analyzing spatial data to address significant issues of health care and policy-planning.

Overlaps with PUBHLTH 166, CRM/LAW C148.

Concurrent with PUBHLTH 283.

PUBHLTH 191A. Seminar: Advances and Challenges in Public Health. 2 Units.
Forum for exploring recent advances and challenges in all disciplines of public health research and practice. Features case studies exemplifying the integration of core competencies with cross-cutting interdisciplinary themes of public health.

Grading Option: Pass/no pass only.

Concurrent with PUBHLTH 291A.

PUBHLTH 191B. Seminar: Advances and Challenges in Public Health. 2 Units.
Forum for exploring recent advances and challenges in all disciplines of public health research and practice. Features case studies exemplifying the integration of core competencies with cross-cutting interdisciplinary themes of public health.

Grading Option: Pass/no pass only.

Concurrent with PUBHLTH 291B.

PUBHLTH 191C. Seminar: Advances and Challenges in Public Health. 2 Units.
Forum for exploring recent advances and challenges in all disciplines of public health research and practice. Features case studies exemplifying the integration of core competencies with cross-cutting interdisciplinary themes of public health.

Grading Option: Pass/no pass only.

Concurrent with PUBHLTH 291C.

PUBHLTH H192A. Public Health Honors Seminar and Thesis I. 4 Units.
Provides an opportunity for selected students to pursue advanced work in research and earn Public Health Honors. Students will conduct their honors research project with faculty through lectures, guest speakers, creating timelines and assignments.

Corequisite: PUBHLTH 199

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only. Public Health Policy Majors only. Public Health Sciences Majors only.

PUBHLTH H192B. Public Health Honors Seminar and Thesis II. 4 Units.
Students initiate and complete data collection for the honors thesis. In addition, students begin data analysis and summarize results at a class symposium at the end of the quarter. A faculty mentor provides supervision and feedback on thesis chapters.

Corequisite: PUBHLTH 199
Prerequisite: PUBHLTH H192A

Grading Option: Pass/no pass only.

Restriction: Public Health Policy Majors only. Public Health Sciences Majors only.
PUBHLTH H192C. Public Health Honors Seminar and Thesis III. 4 Units.
Students write their honors research project (PUBHLTH H192A-PUBHLTH H192B) and prepare an oral report to be presented at a class symposium at the end of the quarter. A faculty mentor provides supervision and feedback on thesis chapters.

Corequisite: PUBHLTH 199
Prerequisite: PUBHLTH H192B

Restriction: Public Health Policy Majors only. Public Health Sciences Majors only.

PUBHLTH 193. Ethics and Responsible Conduct of Research in Public Health. 4 Units.
Issues of scientific integrity and satisfies the requirements for training in public health ethics. Includes guidelines for responsible conduct of research, federal and international codes, administrative review and approval, conflict of interest, and privacy and safety of research participants. Course may be offered online.

Restriction: Upper-division students only. Public Health Sciences Majors only. Public Health Policy Majors only.

PUBHLTH 194A. Clinical and Translational Research Preparatory I. 4 Units.
Provides training for students with an interest in clinical and translational research in the health care setting. Cultivates skills for study design, research literature review, ethics, responsible conduct of research, and cultural competence while emphasizing professionalism and personal responsibility.

Prerequisite: BIO SCI 99 and BIO SCI 194S and CHEM 1C and CHEM 1LC and CHEM 1LD. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Upper-division students only.

PUBHLTH 194B. Clinical and Translational Research Preparatory II. 1-4 Units.
Provides opportunities for students to participate in clinical and translational research through rotations in at least two health care settings. Builds on preparation through the first course (194A) in the sequence to support exploration of various research topics.

Prerequisite: PUBHLTH 194A. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Upper-division students only.

PUBHLTH 194C. Clinical and Translational Research Preparatory III. 4 Units.
Provides opportunities for students to work closely in a particular clinical and translational research setting. Builds on preparation through the didactic instruction presented in first course of the sequence (194A) to support deeper engagement on a particular research topic.

Prerequisite: PUBHLTH 194B. Satisfactory completion of the Lower-Division Writing requirement.

Repeatability: May be repeated for credit unlimited times.

Restriction: Upper-division students only.

PUBHLTH 194D. Clinical and Translational Research Preparatory IV. 4 Units.
Provides opportunities for students to participate in clinical and translational research through placement in a research laboratory. This course is a continuation of 194C in which students have the opportunity to participate in a permanent research rotation.

Prerequisite: PUBHLTH 194C

Repeatability: May be repeated for credit unlimited times.

Restriction: Upper-division students only.

PUBHLTH 195W. Public Health Practicum and Culminating Experience. 8 Units.
Provides direct opportunities for Public Health majors to observe and participate in public health activities and/or research; and to cultivate skills for verbal and written communication of contemporary public health topics for an integrative culminating experience.

Prerequisite: PUBHLTH 1 and PUBHLTH 2. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Upper-division students only. Public Health Sciences Majors only. Public Health Policy Majors only.

(Ib)
PUBHLTH 196A. Clinical and Translational Research Preparatory I - Community-Based Research and Evaluation. 4 Units.
Provides training for students with an interest in clinical and translational research in a community-based setting. Cultivates skills for study design, research literature review, ethics, responsible conduct of research, and cultural competence while emphasizing professionalism and personal responsibility.
Overlaps with PUBHLTH 194A.

PUBHLTH 196B. Clinical and Translational Research Preparatory II - Community-Based Research and Evaluation. 4 Units.
Provides the unique opportunity for students to participate in research in two or more community-based settings. Builds on preparation through PUBHLTH 196A to support exploration of various research topics.
Prerequisite: PUBHLTH 196A

PUBHLTH 196C. Clinical and Translational Research Preparatory III - Community-Based Research and Evaluation III. 4 Units.
Final course in the 196 series where students have the unique opportunity to participate in permanent research rotation. Instructs students how to design, perform, interpret, and discuss independent research in a collaborative atmosphere.
Prerequisite: PUBHLTH 196B

PUBHLTH 197. Field Studies in Public Health. 2-12 Units.
For students who may either accompany faculty members on field trips or engage in post-practicum work at a field agency.
Prerequisite: PUBHLTH 1 and PUBHLTH 2
Grading Option: Pass/no pass only.
Repeatability: May be taken for credit for 12 units.

PUBHLTH 198. Directed Studies. 1-4 Units.
Student participation in a series of research-related activities performed in an individual or small-group setting under the guidance of a faculty advisor.
Prerequisite: PUBHLTH 1
Grading Option: Pass/no pass only.
Repeatability: May be repeated for credit unlimited times.

PUBHLTH 199. Undergraduate Research. 1-4 Units.
Original research with Public Health faculty. Attendance at regular research group meetings is also generally expected, and a quarterly written report is required. Strongly recommended for students considering research careers and/or graduate degree programs.
Repeatability: May be repeated for credit unlimited times.
Restriction: Upper-division students only.

PUBHLTH 200. Foundations of Public Health. 4 Units.
Presents the overarching framework, principles, and core responsibilities of public health research and practice from a multidisciplinary perspective. Provides necessary foundation for further studies toward advanced cross-cutting approaches essential for public health practice.
Restriction: Graduate students only.

PUBHLTH 204. Biostatistics I. 4 Units.
Designed to help students develop an appreciation for statistician's view of the research process, emphasizing biomedical research. Instills an understanding of how statistical models are used to yield insights about data that form evidence-based understanding of the world around us.
Same as EPIDEM 204.
Restriction: Graduate students only.

PUBHLTH 205. Advanced Epidemiologic Methods. 4 Units.
Advanced topics in the design and statistical analysis of epidemiologic studies. Topics include simulation methods, counter-matching and multiphase study designs, missing data, and Bayesian analysis. Published simulation studies are discussed and replicated using the R software package.
Prerequisite: PUBH 101B or STATS 111 or STATS 211
Same as EPIDEM 217.
Concurrent with PUBHLTH 119.
PUBHLTH 206A. Introduction to Epidemiology. 4 Units.
Presents descriptive and experimental approaches to the recognition of the causal association of disease in the general populations, as these approaches apply to populations using different student designs and models from the literature.

Restriction: College of Health Sciences students only. Program in Public Health students only. Master of Public Health Degree students only. Graduate students only.

PUBHLTH 206B. Intermediate Epidemiology. 4 Units.
Learn to design and conduct epidemiologic studies using common designs. Determine why bias and measurement error arise in observational studies, and how they influence effect estimates. Perform and interpret epidemiologic data analyses using statistical software.

Restriction: College of Health Sciences students only. Program in Public Health students only. Master of Public Health Degree students only. Graduate students only.

PUBHLTH 206C. Advanced Epidemiology. 4 Units.
Advanced topics in the design and statistical analysis of epidemiologic studies. Topics include stimulation methods, counter-matching and multiphase study designs, missing data, and Bayesian analysis. Published simulation studies are discussed and replicated using the R software package.

Prerequisite: PUBHLTH 206A and PUBHLTH 206B. PUBHLTH 206A with a grade of B or better. PUBHLTH 206B with a grade of B or better

Restriction: College of Health Sciences students only. Program in Public Health students only. Master of Public Health Degree students only. Graduate students only. Public Health Majors only.

PUBHLTH 207A. Probability and Statistics in Public Health. 4 Units.
An introduction to probability and statistical methods, using examples in public health. Topics include descriptive statistics, laws of probability, discrete and continuous probability distributions, estimation, confidence intervals, hypothesis testing, and power calculations for one- and two-sample comparisons.

Prerequisite: PUBHLTH 206

Restriction: Graduate students only.

PUBHLTH 207B. Analysis of Public Health Data Using Statistical Software. 4 Units.
Overview of common statistical methods in public health and how to implement them in R. Topics include linear regression, ANOVA, the Kruskal-Wallis test, logistic regression, missing data and censoring, Kaplan-Meier survival curves, log-rank tests, and Cox regression.

Prerequisite: PUBHLTH 207A

Restriction: Graduate students only.

PUBHLTH 208. Advances in Social Epidemiology. 4 Units.
Advances understanding of social distribution and social determinants of disease through multiple risk factor models and mechanisms that emphasize developmental and socio-environmental risk factors on mental and physical health across the life span.

Restriction: Graduate students only.

PUBHLTH 209. Methods of Demographic Analysis. 4 Units.
Introduces basic demographic methods used in social science and public health research. Topics include sources and limitations of demographic data; components of population growth; measures of nuptiality, fertility, mortality, and population mobility projection methods; and demographic models.

Same as SOCIOL 226A.

Restriction: Graduate students only.

PUBHLTH 213. International Epidemiology. 4 Units.
Explores methodological approaches in the literature on international trials and requires formulation of proposals to answer public health questions of interest in a developing country setting. Students develop case study aims, ideal teams, and budget in an international context.

Restriction: Graduate students only.

PUBHLTH 214. Surveillance Systems. 4 Units.
Surveillance as a fundamental element of the practice of public health is examined in terms of the application and evaluation of monitoring systems. Topics include surveillance of infectious and chronic diseases, environmental constituents, and other indicators of population health.

Prerequisite: PUBHLTH 206

Restriction: Graduate students only.
PUBHLTH 219. Special Topics in Biostatistics, Epidemiology, and Health Informatics. 4 Units.
Current research in biostatistics, epidemiology, and health informatics. Topics vary from quarter to quarter.

Repeatability: Unlimited as topics vary.

Restriction: Graduate students only.

PUBHLTH 222. Health Policy and Management. 4 Units.
Multidisciplinary inquiry into theory and practice concerned with delivery, quantity, costs of health care for individuals and populations. Explores managerial and policy concerns regarding structure, process, outcomes of health services including the costs, financing, organization, outcomes, and accessibility of care.

Same as UPPP 243.

Restriction: Graduate students only.

PUBHLTH 223. Risk Communication. 4 Units.
Examines theory and research related to the communication of scientific information in risk communication contexts, risk perceptions, and behavior as related to decision-making under risk.

Restriction: Graduate students only.

PUBHLTH 239. Special Topics in Health Policy and Management. 4 Units.
Current research in health policy and management. Topics vary from quarter to quarter.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.

PUBHLTH 242. Theories of Health Communication. 4 Units.
Explores the concepts, constructs, and theories of communication in health and risk contexts. Examines interpersonal, family, organizational, and mediated communicative processes about health care and conditions from a global perspective.

Restriction: Graduate students only.

PUBHLTH 244. Health Behavior Theory. 4 Units.
Introduces the field of Health Behavior and then segues into major theoretical perspectives. Focus on health behavior change from the vantage point of individual health behavior and theoretical abstraction. Explores how to relate theory to behavior-change intervention programs.

Restriction: Graduate students only.

PUBHLTH 245. Health Promotion Planning. 4 Units.
Introduces strategic planning integral to intervention planning in public health practice and research, emphasizing the fundamental domains of social and behavioral health science and practices. Students develop an intervention plan for a specific health problem, health behavior, and target population.

Restriction: Graduate students only.

PUBHLTH 246. Social Research Methods. 4 Units.
An interactive graduate seminar covering topics related to the research process and study design. Begins with conceptualizing research questions, hypotheses, and then turns to topics in measurement and concludes with experimental, quasi-experimental, and observational study designs.

Restriction: Graduate students only.

PUBHLTH 247. Program Evaluation. 4 Units.
Introduces methods, tools, and procedures for systematic investigation of the effectiveness of programs in health and social services for disease intervention, prevention, and health promotion. Includes development of program evaluation plans, logic models, contextual frameworks, study designs, and data analyses.

Restriction: Graduate students only.

PUBHLTH 248. Fundamentals of Maternal and Child Health - Programs, Problems, and Policy. 4 Units.
Overview of issues facing women, children, and families from a public health perspective. Discusses role of socio-economic, political, biological, environmental factors on population health. Studies historical foundations and current factors impacting Maternal Child Health programs and legislation in the US.

Restriction: Graduate students only.
PUBHLTH 250. Health Status and Care Disparities. 4 Units.
Expert health care providers present viewpoints and interdisciplinary strategies for addressing sociocultural, economic, gender, age, and other disparities in population health status and care provision.

Restriction: Graduate students only.

PUBHLTH 259. Special Topics in Social and Behavioral Health Sciences. 4 Units.
Current research in Social and Behavioral Health Sciences. Topics vary from quarter to quarter.

Repeatability: Unlimited as topics vary.
Restriction: Graduate students only.

PUBHLTH 260. Human Exposure Modeling. 4 Units.
Explores the basic principles and methods in estimating human exposure to environmental pollutants. Topics include source emissions, spatial/temporal aspects of human exposures, air pollution exposure modeling, time-activity patterns, micro-environmental exposure assessment, the uncertainty/variability analysis.

Restriction: Graduate students only.

PUBHLTH 264. Introduction to Environmental Health Science. 4 Units.
Convergence of agents (chemical, physical, biological, or psychosocial) in environment can emerge as diseases influenced by social, political, and economic factors, allowing them to become rooted in society. How these agents from various spheres come together and impact human health.

Same as EPIDEM 264, EHS 264.
Restriction: Graduate students only.

PUBHLTH 265. Advanced Environmental Health Science. 4 Units.
Explores the complex relationships among exposure processes and adverse health effects of environmental toxins focusing on specific chemicals, sources, transport media, exposure pathways, and human behaviors. Techniques of environmental sampling for exposure assessment are discussed.

Same as EPIDEM 265.
Restriction: Graduate students only.

PUBHLTH 269. Air Pollution, Climate, and Health. 4 Units.
Emission of air pollutants into the atmosphere, physical and meteorological processes that affect transport, and influence on global warming. Concepts of how and where people are most exposed, and how exposures and health effects differ in developed and developing regions.

Same as EPIDEM 269, EHS 269.

PUBHLTH 270. Human Exposure to Environmental Contaminants. 4 Units.
Introduces founders of conceptual thought that environmental contaminants can impact health. Theory and principles of exposure assessment, the continuum from emissions of a contaminant into the environment to evidence of health effects in a population.

Same as EPIDEM 270, EHS 270.

PUBHLTH 275. Environmental Modeling and Risk Management. 4 Units.
Surveys the general principles, basic mathematical methods, and practices of environmental modeling and human health risk assessment. Topics include advection-dispersion models, risk management, and risk perception. Students conduct an original risk assessment as a final group project.
Prerequisite: MATH 2A and STATS 7

Same as EHS 275.
Restriction: Graduate students only.

Concurrent with PUBHLTH 175.

PUBHLTH 277A. Target Organ Toxicology I. 4 Units.
Mechanistic analysis of responses occurring in various organ systems of experimental animals and humans exposed to environmental and occupational chemicals and radiation. Review distinctive cellular and tissue structure and physiological function of the various organ systems.

Same as EHS 206A.
Restriction: Graduate students only.
PUBHLTH 277B. Target Organ Toxicology II. 4 Units.
Mechanistic analysis of responses occurring in various organ systems of experimental animals and humans exposed to environmental and occupational chemicals and radiation. Review of distinctive cellular and tissue structure and physiological function of the various organ systems.

Prerequisite: PUBHLTH 277A or EHS 206A

Same as EHS 206B.

Restriction: Graduate students only.

PUBHLTH 278. Industrial Toxicology. 4 Units.
Analysis of responsibilities toxicologists have in industry, including product safety, generating material safety, data sheets, animal testing, ecotoxicological testing, risk/hazard communication, and assisting industrial hygienists and occupational physicians; emphasis on interdisciplinary nature of industrial toxicology and communication skills.

Prerequisite: PUBHLTH 277B or EHS 206B

Same as EHS 220.

PUBHLTH 279. Special Topics in Environmental & Occupational Health. 4 Units.
Current research in environmental and occupational health. Topics vary from quarter to quarter.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.

PUBHLTH 280. Global Burden of Disease. 4 Units.
Introduces composite measures of disease burden, including Disability Adjusted Life Years and their use in prioritizing disease burden at local, regional, and global levels. Focuses on WHO's landmark assessments and introduces DISMOD software for specific analyses.

Restriction: Graduate students only.

PUBHLTH 281. Infectious Disease Epidemiology. 4 Units.
Geographical distribution of infectious diseases and the health and disease risk in diverse human populations. Introduces basic methods for infectious disease epidemiology and case studies of important diseases. Includes surveillance, outbreak investigation, emerging pathogens, traditional and molecular epidemiology.

Restriction: Graduate students only.

PUBHLTH 283. Geographic Information Systems for Public Health. 4 Units.
Provides a broad introduction to the use of Geographic Information Systems software to carry out projects for visualizing and analyzing spatial data to address significant issues of health care and policy-planning.

Prerequisite: PUBHLTH 206

Restriction: Graduate students only.

Concurrent with PUBHLTH 190.

PUBHLTH 284. Graduate Field Studies. 2-12 Units.
Field studies with Public Health faculty.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be taken for credit for 12 units.

Restriction: Graduate students only.

PUBHLTH 286. Advanced Geographic Information Systems and Spatial Epidemiology. 4 Units.
Students expand their current knowledge of the ArcGIS software to develop advanced geographic-related research questions, learn how to apply spatial epidemiologic methods to public health data, and integrate their skills in a GIS project of their design.

Prerequisite: PUBHLTH 283

Restriction: Graduate students only.
PUBHLTH 287. Qualitative Research Methods in Public Health. 4 Units.
General introduction to qualitative research methods for investigating public health questions at various scales from community level to global populations. Emphasizes systematic approaches to the collection, analysis, interpretation of qualitative data.

Restriction: Graduate students only.

PUBHLTH 288. Research Proposal Writing in Global Health. 4 Units.
Overview of financial support for research in global health and disease prevention. Collaborative agreements, guidelines for proposal writing, team building, budgeting, peer-review process, and transitioning from proposal to research project implementation.

Restriction: Graduate students only.

PUBHLTH 289. Special Topics in Global Health and Disease Prevention. 4 Units.
Current research in global health and disease prevention. Topics vary from quarter to quarter.

Repeatability: Unlimited as topics vary.

Restriction: Graduate students only.

PUBHLTH 290. Special Topics in Public Health. 4 Units.
Studies in selected areas of public health. Topics addressed vary each quarter.

Repeatability: Unlimited as topics vary.

Restriction: Graduate students only.

PUBHLTH 291A. Seminar: Advances and Challenges in Public Health. 2 Units.
Forum for exploring recent advances and challenges in all disciplines of public health research and practice. Features case studies exemplifying the integration of core competencies with cross-cutting interdisciplinary themes of public health.

Grading Option: Satisfactory/unsatisfactory only.

Restriction: Graduate students only.

Concurrent with PUBHLTH 191A.

PUBHLTH 291B. Seminar: Advances and Challenges in Public Health. 2 Units.
Forum for exploring recent advances and challenges in all disciplines of public health research and practice. Features case studies exemplifying the integration of core competencies with cross-cutting interdisciplinary themes of public health.

Grading Option: Satisfactory/unsatisfactory only.

Restriction: Graduate students only.

Concurrent with PUBHLTH 191B.

PUBHLTH 291C. Seminar: Advances and Challenges in Public Health. 2 Units.
Forum for exploring recent advances and challenges in all disciplines of public health research and practice. Features case studies exemplifying the integration of core competencies with cross-cutting interdisciplinary themes of public health.

Grading Option: Satisfactory/unsatisfactory only.

Restriction: Graduate students only.

Concurrent with PUBHLTH 191C.

PUBHLTH 292. Ethics and Responsible Conduct of Research in Public Health. 4 Units.
Issues of scientific integrity and satisfies the requirements for training in public health ethics. Includes guidelines for responsible conduct of research, federal and international codes, administrative review and approval, conflict of interest, and privacy and safety of research participants.

Restriction: Graduate students only.

Concurrent with PUBHLTH 193.
PUBHLTH 293. Foundations of Clinical and Translational Science. 4 Units.
Introduces rationale and imperative for clinical translational science and various approaches being developed to speed-up discoveries and their transformation into health care practices. Compares and contrasts current impediments to clinical research with the potential and transformative power of translational science.

Restriction: Graduate students only.

PUBHLTH 294. Research Communication in Public Health. 4 Units.
Strategies for effective writing and oral presentation of research characteristics and results to various audiences. Includes exercises in writing for the public, for scholarly journals, and at conferences.

Restriction: Graduate students only.

PUBHLTH 295. Graduate Practicum and Culminating Experience in Public Health. 8 Units.
Provides opportunities for hands-on experience for graduate students at agencies or organizations engaged in public health practice. Students are matched with placement sites based on academic preparation and students' career goals. The practicum report is integrated into the culminating experience.

Prerequisite: PUBHLTH 200 and PUBH 291
Grading Option: Satisfactory/unsatisfactory only.
Restriction: Public Health Majors only.

PUBHLTH 296. Doctoral Dissertation Research and Writing. 1-12 Units.
Dissertation research with Public Health faculty.

Prerequisite: Advancement to candidacy.
Grading Option: Satisfactory/unsatisfactory only.
Repeatability: May be taken for credit for 12 units.
Restriction: Graduate students only.

PUBHLTH 297. Research Design. 4 Units.
Provides training in research design and methods. Students will learn how to evaluate the strength of research findings based on the methods used by researcher and learn to use lessons from the course to develop a research proposal.

Restriction: Graduate students only.

PUBHLTH 298. Directed Studies in Public Health. 2-8 Units.
Directed study with Public Health faculty.

Repeatability: May be repeated for credit unlimited times.
Restriction: Graduate students only.

PUBHLTH 299. Independent Study in Public Health. 2-8 Units.
Independent research with Public Health faculty.

Repeatability: May be repeated for credit unlimited times.
Restriction: Graduate students only.

PUBHLTH 399. University Teaching. 2-4 Units.
Limited to teaching assistants.
Grading Option: Satisfactory/unsatisfactory only.
Repeatability: May be repeated for credit unlimited times.