PUBLIC HEALTH MINOR

Overview
How do societies eradicate infectious diseases, from tuberculosis to polio to AIDS? Why are some economic and social groups more likely to get cancer, asthma, diabetes, and other diseases? How did the United States reduce the incidence of smoking and what can other societies learn from that success?

These and other questions are at the center of public health. Public health is a field geared toward serving others and improving people’s health and well-being. Public health seeks to improve human health through the development and application of knowledge that prevents disease, protects the public from harm, and promotes health throughout local communities, the state, the nation, and the world. The field of public health confronts complex health issues, such as improving access to health care, controlling infectious disease, and reducing environmental hazards, violence, substance abuse, and injury.

Through the Public Health Minor at Occidental College, students develop and apply knowledge from multiple disciplines for the promotion and protection of the health of the human population, giving due consideration to principles of human rights and cultural perspectives that abound in our multicultural country and world. The minor, like the field itself, is interdisciplinary, including the natural sciences and the social sciences. Students will learn about the scientific aspects of disease as well as the political and policy issues involved in improving people’s health and well-being. The minor is jointly administered by the departments of Biology, Kinesiology and Urban & Environmental Policy (UEP), with course offerings from multiple departments including Diplomacy and World Affairs, History, Philosophy, Psychology, Sociology, and Writing & Rhetoric.

The three (3) required Public Health Minor core courses provide students with an overview of core public health concepts and methodology while helping students to understand the patterns, effects and control of disease. The two (2) elective course offerings provide exposure to a variety of cross cutting issues in urban and global public health including political, ethical, economic, and environmental issues. A key goal of the public health minor is to provide students with practical, methodological and community engaged learning opportunities through internships with community partners including non-profit organizations, community clinics, health law organizations, and local county departments of public health.

Requirements
The three (3) required core courses are Public Health: Community and Environment (UEP 203), Statistics (BIO 268* or MATH 146), and Epidemiology (BIO 238*). It is recommended that students plan to take the core courses in order: first UEP 203, then Biology 268 or Math 146, then Biology 238.

In addition, students minoring in Public Health should take the two (2) elective course offerings. The electives provide students exposure to a variety of cross cutting issues in urban and global public health including scientific understanding of disease prevention and
treatment, politics and policy, ethical, and environmental issues. Each elective course selection must be from a different department. As new courses develop, more options may be added to this list. Students are strongly encouraged to participate in one or more internship, volunteer, or research opportunities within the field of public health before they graduate.

Students who want to learn more about the Public Health Minor should speak with Heng Lam Foong at the Urban & Environmental Policy Institute’s (UEPI) Community Health Engagement program. She can be contacted at 259-1457 or foong@oxy.edu. After that meeting students who wish to declare a Public Health Minor should fill out the minor declaration form and obtain a signature from Professor Peter Dreier in the Urban & Environmental Policy Department.

*Prerequisite required*

Approved elective classes include:
DWA 249 (Public Health & Human Rights: Global and Local Practices); DWA 295 (Topics in Diplomacy and World Affairs: Global Public Health); WRD 275 (Rhetoric in the Health Professions); HIST 274 (Medicine and Disease in Western Society); HIST 277 (Cross-Cultural Perspectives on Women and Community Health); KINE 104 (Introduction to Kinesiology); **KINE 307 (Human Physiology); **KINE 312 (Diet, Disease, and Exercise); PHIL 250 (Bioethics); **PSYC 334 (Health Psychology); **SOC 320 Health and Illness; UEP 201 (Environmental Health and Policy); and **UEP 307 (Public Health Practicum).

**Additional departmental prerequisites required**

**Core Courses**

**UEP 203 - Public Health: Community and Environment**
This course explores the nation’s public health challenges, the epidemiological basis of public health, and ways that public health functions as a combination of science and politics. The course examines the special vulnerabilities of low income and medically underserved populations, who often work, reside, attend school, and play in neighborhoods with disproportionate exposures and poor quality medical care. The goal is to acquaint students with current public health issues, especially as they concern community, societal, and environmental influences on health and well-being. CORE REQUIREMENT MET: UNITED STATES and US DIVERSITY

**BIO 268 – Biostatistics or MATH 146 – Statistics**

**BIO 268 – Biostatistics**
The application of statistical methods to the solution of biological problems. Focus will be on applied statistics (as opposed to mathematical statistics) to study variation in nature. This course will survey descriptive statistics, probability and probability distributions, and methods of hypothesis testing (e.g., analysis of variance, regression, correlation, goodness of fit as well as selected nonparametric procedures). Course includes laboratory workshops sessions. Prerequisite: Bio 130 and Bio 105, 106, 110, or 115 or permission of instructor. CORE REQUIREMENT MET: MATH/SCI
MATH 146 – Statistics
Comprehensive study of measures of central tendency, variation, probability, the normal distribution, sampling, estimation, confidence intervals and hypothesis testing. Introduction to use of technology in statistics. Real-life problems are used to illustrate methods. Weekly lab. Not open to students who have completed or are currently enrolled in Psychology 201, Biology 368, Mathematics 150, or any Mathematics course above 200. CORE REQUIREMENT MET: MATH/SCI

BIO 238 - Epidemiology
This course is designed to introduce the basic concepts, principles, and methods of epidemiologic research. In our pursuit to understand the interplay of risk factors and patterns of human disease and health, we will cover the history of epidemiology, the principles of epidemiologic thinking and of causal inference, and the basic measures of disease frequency and of association and how to compute them. We will also learn about the major types of epidemiologic study designs and explore the major fields of epidemiologic investigation (such as global health, infectious diseases, outbreaks, occupational and environmental epidemiology). Prerequisites: At least one of these core science classes (Bio 105, Bio 106, Bio 110, Bio 115, Bio 130, or permission of instructor), AND one statistics class (Math 146, Psyc 201, or Bio 268). CORE REQUIREMENT MET: MATH/SCI

Elective Courses
DWA 295 - Topics in Diplomacy and World Affairs/UEP 295 - Topics in UEP Global Public Health
The course will examine major global public health problems and the range of responses from international organizations, transnational networks, and domestic and community-based institutions. Despite improvements in the health status of low- and middle-income countries over the last half-century, the challenges to advance global public health remain daunting. What are the sorts of strategies these actors have used in addressing such health issues as HIV/AIDS, malaria, unsafe food and water, tobacco use, and others? What is the role of human rights in addressing the underlying determinants of ill-health? The course will present basic concepts for understanding global public health, including morbidity, mortality, demography, epidemiology, and the political, social and economic determinants of health. We will utilize a case study method to examine successful and less successful efforts to improve global health and to debate enduring political, economic, social and cultural controversies in the arenas of global health. Students can expect to gain knowledge of the major issues and actors in global public health and an introduction to the analytic and quantitative skills needed to monitor and evaluate evidence used in formulating policies and programs. CORE REQUIREMENT MET: INTERCULTURAL

DWA 249 - Public Health & Human Rights: Global and Local Practices
UEP 209 - Public Health & Human Rights: Global and Local Practices
This course explores core concepts in global public health, the development of human rights’ instruments, and how these two fields have increasingly intersected in global and local public health work. Specifically, we will review public health methods of
measurement and analysis -- spanning epidemiological, economic, and political approaches -- to understand if and how a rights-based approach to health can inform more critical and more productive approaches to issues such as HIV/AIDS and other sexual and reproductive health concerns. Finally, this course examines how global public health issues have generated dramatically different responses across and within regions and countries and communities. We will particularly focus on the experience of Brazil given its changing role in the global economy and its progressive public health approach.

HIST 274 - Medicine and Disease in Western Society
A study of three aspects of the history of medicine: theory and practice from ancient times to the present; great doctors and healers, both male and female, examined in their social contexts; the effects of epidemics, such as the Black Death, on the course of Western civilization. We will end with some historically based speculations about the medical future.
CORE REQUIREMENT MET: EUROPE • PRE-1800

HIST 277 - Cross-Cultural Perspectives on Women and Community Health
This course explores the history of women as promoters of community health in the diverse cultures of the nineteenth- and twentieth-century United States. Although women have not traditionally held power in mainstream biomedical occupations and institutions, women have nevertheless been critical to health and healing in local communities as caregivers, activists, and even scapegoats for disease. Furthermore, women’s role in community health has been heavily shaped by gendered constructions of the body, disease, and wellbeing. Thus, while the focus of the course is on the social history of women’s health and healing, the theoretical framework of the course also aims to explore how ideologies of gender, race, class, and sexuality shape the women’s relationship to community health as both caregivers and health-seekers. The course is organized by a set of common themes that cut across time, space, and racial/ethnic boundaries in U.S. History. Themes include: spirituality and healing; work and health; sexuality and reproduction; activism for health justice.
CORE REQUIREMENT MET: UNITED STATES and US DIVERSITY

KINE 104 - Introduction to Kinesiology
Survey of kinesiology sub disciplines: human anatomy, exercise physiology, nutrition, motor learning, sport and exercise psychology and public health issues. Not open to Seniors.
CORE REQUIREMENT MET: MATH/SCI

KINE 307 - Human Physiology
Introduction of principles of human physiology, with special emphasis on a systems approach. Presentation of an integrative approach to basic physiology of major organs and organ systems, covering aspects of cell function, including membrane transport, excitability, metabolism and functions of organs from the nervous, muscular, respiratory, cardiovascular, gastrointestinal, renal, endocrine and reproductive systems. Includes one three-hour laboratory per week. Prerequisite: Kinesiology 301 or Biology 115
CORE REQUIREMENT MET: LAB-SCI
KINE 312 - Diet, Disease, and Exercise
This advanced level course focuses on the etiology of the major degenerative diseases in our society and the role genetics, diet, and exercise play in their development and treatment. Diseases covered include heart disease, cancer, non-insulin dependent diabetes, osteoporosis, and hypertension. Focus of course will look into treatment and prevention of disease through diet, exercise, and lifestyle modifications. The current scientific research covering the metabolic, cellular and system changes involved in disease progression and treatment will be of particular focus. Prerequisites: Chemistry 120 and Kinesiology 307.

PHIL 250 - Bioethics
This course is an introduction to the methods of ethics developed for addressing moral issues in the practice of health care and research. Methods addressed will include: professional ethics (practice standards and professional norms), casuistry, the principles of biomedical ethics, applied normative theory, feminist bioethics, and narrative ethics. We will use these methods to address a host of topics of concern to those participating in health care institutions, either (directly) as providers or (somewhat less directly) as policy makers. Given in alternate years. CORE REQUIREMENT MET: UNITED STATES and US DIVERSITY

PSYC 334 - Health Psychology
Consideration of psychological influences on health and illness, including health-and illness-promoting behavior and lifestyles, cognitive and emotional processes, and social and institutional practices. Prerequisite: Psychology 200 with a grade of C- or better.

SOC 320 - Health and Illness
This course surveys sociological research and theories of health, illness, and medicine. Rather than focusing on the individual body as the site of disease, the course examines the role of social context in shaping health and access to the healthcare system across population groups. The course focuses especially on medical intervention and the medicalization of disease, social disparities in health, and contemporary healthcare changes and challenges in the United States. Prerequisite: SOC 101 CORE REQUIREMENT MET: UNITED STATES and U.S. DIVERSITY

UEP 201 - Environmental Health and Policy
This course is designed to provide students with an understanding of the environmental factors impacting human and ecological health, including consequences of natural and human-made hazards. Environmental health is a rapidly growing and interdisciplinary field that involves both science and public policy. It is integrated into numerous aspects of our lives, both directly and indirectly. Topics to be covered include food safety, water access and equality, pesticides, air quality, the identification of environmental hazards, the assessment of various risks (including exposure to dangerous chemicals used in toys, food, workplaces, and other activities), and the social and biological causes of disease (epidemiology). Students will gain an understanding of environmental health analytical and scientific methods. We will also explore ways that communities and policy-makers seek to address environmental health challenges. A common thread running through the
course will be an examination of how exposure to environmental and health risks vary among different population groups, in the Los Angeles area, in the United States, and around the world. We will also explore the role of science in environmental policy-making, the enforcement of regulations, and the efforts of community groups to influence public policy. (Students are encouraged to enroll in Geology 150, a laboratory science, that explores the spatial and geographic dimensions of environmental health) Prerequisite: UEP 101 or UEP 106 or Politics 106
CORE REQUIREMENT MET: MATH/SCI

UEP 307 - Public Health Practicum
The community health internship course is designed to provide students with real-world experiences to develop new skills and enhance insights into myriad community health issues, concerns and solutions. Under supervision of the course instructor in collaboration with a community proctor/partner, students will partner with a health focused non-profit organization, community clinic, or government agency to develop a mutually beneficial community-based learning project. A combination of internship experience, class discussions, written reports and journal entries will help students reflect on how health and health care are delivered in underserved communities. This course can be repeated one time. Prerequisite: UEP 203. UEP 203 may be taken concurrently with UEP 307
CORE REQUIREMENT MET: INTERCULTURAL and GLOBAL CONNECTIONS

WRD 275 - Rhetoric in the Health Professions
This class primarily prepares students to read critically in the multiple contexts necessary for a career in health, as well as guides students in developing a personal statement for post-graduate applications. The course emphasizes critical reading development generally, drawing readings from a variety of fields, and combines those skills with logical strategies for various applications, including communicating with multiple audiences and passing required tests. We will also discuss rhetoric of professional writing in the health professions. Not open to frosh. 2 units

Regular Faculty
Peter Dreier
Sharla Fett
Nina Gelbart
Alan Knoerr
Krystale Littlejohn
Lynn Mehl
Clair Morrissey
Dan Pondella
Marcella Raney
Stuart Rugg
Bhavna Shamasunder
Kerry Thompson

On Special Appointment
Heather Banis
Heng Lam Foong
Naomi Greene
Jane Schmitz
Eric Sternlicht
Nicole Vick