

## 2-year MPH Program in Global Health and Environment

### Background

Nearly 20 years ago, the [Division of Environmental Health Sciences](#) at the UC Berkeley School of Public Health launched the nation's first graduate program in Global Health and Environment. Our 2-year MPH Program in Global Health and Environment builds on our academic distinction and international reputation in this area, providing students an opportunity to study, and develop solutions to, the most profound global environmental changes that are affecting the health of populations around the world.

This [transdisciplinary MPH program](#) emphasizes the analytical and practical skills necessary to protect the local, regional, and global environment, while achieving sustainable development. Students develop skills in epidemiology, global environmental health, statistics, and risk analysis in a global context, and can apply what they learn to address some of the most pressing and complicated environmental health challenges facing the global community. The [curriculum](#) emphasizes a sophisticated understanding of the sources, pathways, exposures, health impacts, and control measures for global environmental pollutants—including **pesticides, air pollution, vector-borne diseases, greenhouse gases, waterborne infectious diseases, and industrial contaminants**—at the household, community, and global levels.

### Program features

- Learn and research how human populations—especially the most vulnerable members of society, such as young children, pregnant women, and the poor—are affected by microbial and chemical contamination of water, air pollution, climate change, industrialization and unplanned urbanization.
- Take advantage of our faculty's many international collaborations and [global research projects](#).
- Connect with global health leaders, apply for research funding, and network with peers through Berkeley's [Center for Global Public Health](#).
- Form partnerships to tackle major global health and environment challenges—such as TB in slums, dengue in megacities, and waterborne diseases in developing countries—through Berkeley's [Center for Emerging and Neglected Diseases](#).

### Competencies of the MPH Program in Global Health and Environment (GHE)

Upon completion of the GHE MPH program, graduates will be able to:

- Assess the major forces that influence the health of populations around the world.
- Critically evaluate major global health priorities and the reasons for their prioritization.
- Define environmental justice and how it relates to environmental health
- Explain climate change and potential impacts on health, as well as major mitigation and adaptation strategies.
- Identify the sources and health effects of major environmental and occupational hazards.
- Describe general mechanisms of toxicity relevant for these hazards and interpret data to assess hazards.
- Describe how environmental and occupational exposures are measured.
- Interpret epidemiologic data to assess evidence for health effects caused by environmental and occupational exposures.
- Identify factors that affect susceptibility and vulnerability of sub-populations to health effects of environmental and occupational exposures.
- Use risk assessment and other methods to assess hazards and identify ways to reduce them.
- Organize written and oral material for EHS presentations and communicate to diverse audiences.

## ***Curriculum of the MPH Program in Global Health and Environment (GHE)***

### **School of Public Health Basic Knowledge “Breadth” Courses**

Health Policy & Management	PH 200J (Fall)
Environmental Health	EHS Students do not take
Health and Social Behavior	PH 200L (Fall)

### **School of Public Health Coursework on Essential Methods for all students**

Epidemiologic Methods I or II	PH 250A & PH 250B
Biostatistics – Probability and Statistics	PH 142 (Fall and Spring)
Biostatistics – Continuous Outcome Data	PH 145 (Fall)

### **GHE MPH Core Courses**

Introduction to Environmental Health Sciences	PH 270 (Fall)
Toxicology	PH 270B (Fall) <b>OR (students choose one)</b>
Exposure Assessment and Control I	PH 270A (Spring)
Risk Assessment	PH 220C (Spring)

### **GHE MPH “Selectives” in EHS (GHE MPH students must take at least two)**

Global Burden of Disease	PH 271D (Spring)
Global Climate Change and Health	PH 271G (Spring)
Drinking Water and Health	PH 271C (Spring)
Science and Policy for Environmental Health	PH 271E (Spring)
Environmental Determinants of Infectious Disease	PH 273 (Fall)

### **GHE MPH “Selectives” outside EHS (GHE MPH students must take at least one)**

Principles of Infectious Disease	PH 260A (Fall)
Impact Evaluation for Health Professionals	PH 235 (Fall)
Family Planning, Population Change and Health	PH 213A (Fall)
Global Health Economics	PH 226D (Fall)
Global Poverty: Challenges and Hopes in the New Millennium	CRP 115 (Fall)
Housing in Developing Countries	CRP 251 (Fall)
Water and Development	ERG 275 (Spring, even years)
International Environmental Politics	ESPM 260 (Fall)
Quantitative Aspects of Global Environmental Problems	ERG 102 (Spring)

### **Required GHE MPH Seminar and Field Placement**

MPH Seminar	PH 292
(EHS MPH Capstone Seminar 3 <sup>rd</sup> and 4 <sup>th</sup> semester)	
Summer Field Placement	PH 297

### **Additional Global Electives and Advanced Coursework for GHE MPH**

PH 267B	Characterization of Airborne Chemicals (3) (Sp, alt.Odd yrs)
PH 290	Exposure Assessment & Control II (Sp. alt. even year)

*Additional Global Electives continued from previous page*

PH 269C	Occupational Biomechanics (3) (Sp)
PH 269D	Ergonomics Seminar (2) (F)
PH 269E	Current Topics in Environmental Medicine (3) (F)
PH 270C	Practical Toxicology (2) (Sp)
PH 271C	Drinking Water and Health (3) (Sp)
PH 271D	Global Burden of Disease (3) (Sp)
PH 271G	Global Environmental Change for Health Scientists (2) (Sp)
PH 212D	Global Health Core Course (3) (Sp)
PH 292	International Internship Seminar (1) (F, Sp)
PH 212A	International Maternal & Child Health (2) (F)
PH 256A	Human Genome, Environment and Health (3) (Sp)
PH 267B	Characterizations of Airborne Chemicals (3) (Sp, every odd yr)
CE 111	Environmental Engineering (3) (F, Lab offered in Sp)
CRP 256	Healthy Cities (3) (F)
ESPM 167/PH C160	Environmental Health and Development (4) (Sp)
PH 219E	Introduction to Qualitative Methods in PH Research (3) (Sp)
PH 205	Program Planning, Development, and Evaluation (3) (Sp)
PH 206D	Food/Nutrition Policies/Pgms in Dev. Countries (3) (Sp, even yrs)
PH 211	Health and Human Rights (3) (F)
PH 252C	Intervention Trial Design (3) (F)
CRP 220	Urban and Regional Economy (3) (F)
ESPM C234	Green Chemistry: Interdiscipl. Approach to Sustainability (3) (Sp)
ESPM 290-P009	Biodiversity and Human Health (3) (Sp)
PH 253B	Epidemiology and Control of Infectious Diseases (3) (Sp)

*All information current as of June 20, 2017*