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) OR (students choose one)
- 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)**
- Environmental Determinants of Infectious Disease PH 290 (Fall)
- Global Burden of Disease PH 271D (Spring)
- Health Implications of Climate Change PH 271G (Spring)
- Drinking Water and Health PH 271C (Spring)
- Science and Policy for Environmental Health PH 271E (Spring)

**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 3rd and 4th 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 October 27, 2016