

MPH-Occupational and Environmental Medicine, Capstone Option (Effective Autumn 2022)

Required Coursework

	Credits
MPH Common Core	
PHI 511 (<i>Foundations of Public Health</i> , Autumn)	3
Choose one of the following: PHI 512 (<i>Analytical Skills for Public Health I</i> , Autumn, 7 cr.) OR BIOST 511 (<i>Medical Biometry I</i> , Autumn, 4 cr.) AND EPI 512 (<i>Epidemiologic Methods I</i> , Autumn, 4 cr.)	7 or 8
PHI 513 (<i>Analytical Skills for Public Health II</i> , Winter)	3
PHI 514 (<i>Determinants of Health</i> , Winter)	3
PHI 515 (<i>Implementing Public Health Interventions</i> , Spring)	4
PHI 516 (<i>Public Health Practice</i> , Spring)	3
ENV H 599 (<i>Field Studies/Practicum</i>)	4
DEOHS Common Core	
ENV H 502 (<i>Assessing & Managing Risks from Human Exposure to Env. Contaminants</i> , Winter)	4
ENV H 503 (<i>Adverse Health Effects of Environmental and Occupational Toxicants</i> , Autumn)	4
ENV H 580 (<i>Env. & Occupational Health Sciences Seminar</i> , Autumn/Winter/Spring)	1
Degree Specific Course Requirements	
BIOST 512 (<i>Medical Biometry II</i> , Winter)	4
Choose one of the following: BIOST 513 (<i>Medical Biometry III</i> , Spring) ENV H 596 (<i>Current Issues in Environmental and Occupational Medicine</i> , Summer) ¹	4
Choose one of the following: EPI 513 (<i>Epidemiological Methods II</i> , Winter – preferred option for thesis students) ENV H 597 (<i>Case Studies in Env. and Occupational Health</i> , Autumn/Winter/Spring) ²	4
ENV H 550 (<i>Occupational and Environmental Disease</i> , Spring)	4
ENV H 564 (<i>Recognition of Health and Safety Problems in Industry</i> , Autumn)	2
ENV H 596 (<i>Current Issues in Environmental and Occupational Medicine</i> , Spring)	2
ENV H 597 (<i>Case Studies in Environmental and Occupational Health</i> , Autumn/Winter/Spring)	2 x 1 = 2
Elective Courses ³	0-1
Culminating Experience	
For students who choose to complete a RESEARCH THESIS	
ENV H 583 (<i>Thesis Proposal Preparation</i> , Spring)	1
ENV H 700 (<i>Master's Thesis</i> , All Quarters)	9
For students who choose to complete a CAPSTONE PROJECT	
ENV H 598 (<i>Degree Program Project/Portfolio</i> , All Quarters)	9
Total Minimum Credits	68

- ENV H 596 is offered as a 2-credit course in spring quarter and two, 2-credit modules in summer quarter. Students choosing this option take both the spring and summer offerings for a total of 6 credits.
- ENV H 597 is a 1-credit class. Students choosing this option take four quarters in addition to the required two quarters for a total of 6 quarters/credits.
- Students work with their faculty adviser to identify an additional course to reach or exceed the total minimum credit requirement. Elective courses can be ENV H courses or courses from other prefixes (e.g., EPI, BIOST, GH, etc.).

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Additional Requirements

- Students in this degree program are required to complete either a research thesis or a capstone project.

Sample Schedule (Capstone Option)

The schedule below includes non-elective courses only. Students work with their faculty adviser to identify additional elective courses to reach or exceed the total minimum credit requirement. Elective courses can be ENV H courses or courses from other prefixes (e.g., EPI, BIOST, GH, etc.).

FIRST YEAR		
Summer Quarter		
Choose either ENV H 596 (summer) or BIOST 513 (spring)		4 cr.
Non-Coursework Milestones:		
Autumn Quarter		
PHI 511	Foundations of Public Health	3 cr.
PHI 512	Analytical Skills for Public Health I (7 cr.)	
OR		
BIOST 511	Medical Biometry I (4 cr.)	7-8 cr.
AND		
EPI 512	Epidemiologic Methods I (4 cr.)	
ENV H 503	Adverse Health Effects of Environmental and Occupational Toxicants	4 cr.
ENV H 564	Recognition of Health and Safety Problems in Industry	2 cr.
ENV H 580	Environmental and Occupational Health Seminar	1 cr.
ENV H 597	Case Studies in Environmental and Occupational Health	1 cr.
Non-Coursework Milestones: Work 1-on-1 with your Initial Faculty Mentor to identify possible capstone and practicum (clinic) projects		
Winter Quarter		
PHI 513	Analytical Skills for Public Health II	3 cr.
PHI 514	Determinants of Health	3 cr.
BIOST 512	Medical Biometry II	4 cr.
ENV H 502	Assessing & Managing Risks from Human Exposure to Env. Contaminants	4 cr.
Choose either ENV H 597 (4 additional quarters) or EPI 513 (winter, year 1)		4 cr.
Non-Coursework Milestones: Continue working with your Faculty Mentor to identify possible capstone (clinic) and practicum projects		
Spring Quarter		
PHI 515	Implementing Public Health Interventions	4 cr.
PHI 516	Public Health Practice	3 cr.
ENV H 550	Occupational and Environmental Disease	4 cr.
Choose either ENV H 596 (summer) or BIOST 513 (spring)		4 cr.
Choose either ENV H 597 (4 additional quarters) or EPI 513 (winter)		4 cr.
Non-Coursework Milestones: Write thesis proposal and form Thesis Committee / Confirm practicum (clinic) site and complete associated learning contract		
Summer Quarter		
ENV H 596	Current Issues in Environmental and Occupational Medicine	2 cr.
Non-Coursework Milestones: Complete practicum (clinic) (≥160 hours) / Start work on capstone project proposal		

MPH-Occupational and Environmental Medicine, Capstone Option (*Effective Autumn 2022*)

SECOND YEAR

Autumn Quarter

ENV H 599	Field Studies/Practicum	4 cr.
ENV H 598	Degree Program/Project Portfolio	3 cr.
	Choose either ENV H 597 (4 additional quarters) or EPI 513 (winter)	4 cr.

Non-Coursework Milestones: Complete academic work related to practicum (paper, presentation, etc.) / Submit capstone project proposal, begin work on Capstone Report

(Continued next page)

Winter Quarter

ENV H 598	Degree Program/Project Portfolio	3 cr.
	Choose either ENV H 597 (4 additional quarters) or EPI 513 (winter)	4 cr.

Non-Coursework Milestones: Continue work on Capstone Report

Spring Quarter

ENV H 598	Degree Program/Project Portfolio	3 cr.
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Non-Coursework Milestones: Present practicum at MPH Symposium / Complete all capstone requirements including the written Capstone Report, an oral presentation of the project, and an oral examination conducted by your Capstone Project Committee

Degree Competencies

Upon completion of this degree program, you will be able to:

School of Public Health -- All MPH Students

Profession & Science of Public Health:

- Explain public health history, philosophy and values
- Identify the core functions of public health and the 10 Essential Services
- Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
- List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
- Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
- Explain the critical importance of evidence in advancing public health knowledge

Factors Related to Human Health:

- Explain effects of environmental factors on a population's health
- Explain biological and genetic factors that affect a population's health
- Explain behavioral and psychological factors that affect a population's health
- Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
- Explain how globalization affects global burdens of disease
- Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health)

Evidence-based Approaches to Public Health:

- Apply epidemiological methods to the breadth of settings and situations in public health practice
- Select quantitative and qualitative data collection methods appropriate for a given public health context
- Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
- Interpret results of data analysis for public health research, policy or practice

Public Health & Health Care Systems:

- Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
- Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

Planning & Management to Promote Health:

- Assess population needs, assets and capacities that affect communities' health
- Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
- Design a population-based policy, program, project or intervention
- Explain basic principles and tools of budget and resource management
- Select methods to evaluate public health programs

Policy in Public Health:

- Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
- Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
- Advocate for political, social or economic policies and programs that will improve health in diverse populations
- Evaluate policies for their impact on public health and health equity

MPH-Occupational and Environmental Medicine, Capstone Option (*Effective Autumn 2022*)

Leadership:

- Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
- Apply negotiation and mediation skills to address organizational or community challenges

Communication:

- Select communication strategies for different audiences and sectors
- Communicate audience-appropriate public health content, both in writing and through oral presentation
- Describe the importance of cultural competence in communicating public health content

Interprofessional Practice:

- Perform effectively on interprofessional teams

Systems Thinking:

- Apply systems thinking tools to a public health issue

SPH - All Student Competency

- Recognize the means by which social inequities and racism, generated by power and privilege, undermine health

DEOHS – All Graduate Student Competencies

- Apply the major components of the environmental and occupational health framework (problem formulation, hazard identification, dose-response assessment, exposure assessment, risk characterization, risk communication, risk management, evaluation, stakeholder engagement, and research) in order to address environmental public health problems experienced in the community or work environment
- Use epidemiological and statistical techniques to describe and analyze environmental and occupational health data
- **For students choosing the *THESIS option only*:** Formulate hypotheses and design experiments to test such hypotheses aimed at advancing knowledge in environment and health sciences (*for students choosing the thesis option only*)
- **For student choosing the *CAPSTONE option only*:** Identify a current, practical problem in environmental health sciences and collect, integrate and analyze relevant information to produce practical solutions.

DEOHS – MPH in Occupational and Environmental Medicine

- Evaluate injuries and illnesses that are occupationally or environmentally related within the occupational and environmental health regulatory environment and systems
- Apply evidence-based approaches to managing occupational and environmental injuries and diseases
- Recognize, evaluate, and treat human exposures to physical, chemical, or biological hazards at work or in the general environment
- Integrate aspects of surveillance and principles of exposure assessment into primary and secondary prevention of occupational and environmental disease
- Describe occupational health disparities and formulate a plan to mitigate individual and organizational factors in the workplace in order to optimize the health of the worker.