

MPH-Occupational and Environmental Medicine, Thesis 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.).

Additional Requirements

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

Sample Schedule (Thesis 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.)	7-8 cr.
OR		
BIOST 511	Medical Biometry I (4 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 thesis 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 thesis and practicum (clinic) projects / Identify a Thesis Adviser by the end of the quarter		
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.
ENV H 583	Thesis Proposal Preparation	1 cr.
ENV H 700	Master's Thesis	1 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 (≥160 hours) / Begin thesis project as outlined in thesis proposal		

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SECOND YEAR

Autumn Quarter

ENV H 599 Field Studies/Practicum 4 cr.

ENV H 700 Master's Thesis 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.) / Continue work on thesis project

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Winter Quarter

ENV H 700 Master's Thesis 2 cr.

Choose either **ENV H 597** (4 additional quarters) or **EPI 513** (winter) 4 cr.

Non-Coursework Milestones: Continue work on thesis project

Spring Quarter

ENV H 700 Master's Thesis 3 cr.

Non-Coursework Milestones: Present at Graduate Student Research Day / Defend and submit thesis / Present practicum at MPH Symposium

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

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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.