

## Requirements for the MPH in One Health (effective Autumn 2020)

MPH Core Requirements		Credits
PHI 511	Foundations of Public Health [A]	3
PHI 512	Analytical Skills for Public Health I [A]	7
PHI 513	Analytical Skills for Public Health II [W]	3
PHI 514	Determinants of Health [W]	3
PHI 515	Implementing Public Health Interventions [Sp]	4
PHI 516	Public Health Practice [Sp]	3
ENV H 599D	Field Studies (Practicum) [E]	3
<b>Minimum Credit Subtotal</b>		<b>26</b>
DEOHS Core Requirements		
ENV H 501	Foundations of Environmental Health [A]	4
ENV H 505	Fundamentals of Env. and Occ. Toxicology [Sp]	4
ENV H 551	Human Exposure to Env. Contaminants [W]	4
ENV H 580	Env. & Occupational Health Seminar [A,W,Sp]	1+1+1=3 <sup>1</sup>
<b>Minimum Credit Subtotal</b>		<b>15</b>
Degree Option Specific Requirements		
EPI 513	Epidemiological Methods II [W]	4
BIOST 512	Medical Biometry II [W]	4
BIOST 513	Medical Biometry III [Sp]	4
ENV H 539	One Health: Human & Animal Health in a Changing Environment [Sp]	3
ENV H 586	Current Issues in OHHA [A, Sp]	2+2+2=6 <sup>2</sup>
TBD	Minimum additional elective credits <sup>3</sup>	3
ENV H 583	Thesis Research Proposal Preparation [Sp]	1 (+2) <sup>4</sup>
ENV H 700	Master's Thesis	9
<b>Minimum Credit Subtotal</b>		<b>34</b>
<b>Total Minimum Credits =</b>		<b>75</b>

1. ENV H 580: Students are required to complete three quarters of this 1-credit course for a total of 3 credits.
2. ENV H 586: Students are required to complete three quarters of this 2-credit course for a total of 6 credits.
3. Students select electives in consultation with their faculty advisor.
4. ENV H 583 requires that students take 2 credits of either ENV H 700 (Thesis Preparation) or 600 (Independent Study) concurrently. If ENV H 700 is taken as part of this requirement, those 2 credits can count towards the minimum 9 credit ENV H 700 requirement. If a student takes ENV H 600 concurrently or chooses to take an additional 2 credits of ENV H 700 above the minimum 9 credit requirement, those 2 credits may count as elective credits.

[A] = Typically offered in autumn quarter  
[W] = Typically offered in winter quarter  
[Sp] = Typically offered in spring quarter  
[S] = Typically offered in summer quarter  
[E] = Available every quarter

# Degree Competencies for the MPH in One Health

## SPH/CEPH – MPH Foundational Public Health Knowledge Learning Objectives

### Profession & Science of Public Health

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

### Factors Related to Human Health

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

## SPH/CEPH – MPH Foundational Competencies

### Evidence-based Approaches to Public Health

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

### Public Health & Health Care Systems

5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings

6. 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 and Management to Promote Health

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

### Policy in Public Health

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

### Leadership

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

### Communication

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

### Interprofessional Practice

21. Perform effectively on interprofessional teams

### Systems Thinking

22. Apply systems thinking tools to a public health issue

# Degree Competencies for the MPH in One Health

## DEOHS All Graduate Student Degree Competencies

1. 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
2. Use epidemiological and statistical techniques to describe and analyze environmental and occupational health data
3. Formulate hypotheses and design experiments to test such hypotheses aimed at advancing knowledge in environment and occupational health sciences

## DEOHS Degree-Specific Competencies – MPH-OH

1. Create comprehensive diagrams of human-animal-environment systems and use them to identify important connections ranging from the micro to macro level using the **ECOHAB** (Exposure / Comparative Medicine / Occupational Health / Human-Animal-Nature Bond / Agriculture / Biodiversity) framework
2. Perform comparative **EXPOSURE** analyses of a wide variety of human/animal environmental exposures and develop comprehensive, interdisciplinary workplans to address these exposures
3. Use a **COMPARATIVE MEDICINE**, species-spanning approach to develop integrated clinical approaches to addressing environmental health challenges
4. Design comprehensive **OCCUPATIONAL HEALTH** programs for a variety of animal worker workforces/worksites
5. Evaluate the relevance of the **HUMAN-ANIMAL-NATURE BOND** when addressing environmental public health challenges
6. Analyze **AGRICULTURE** and food systems related public health issues from human, animal, and environmental health perspectives
7. Develop plans to optimize **BIODIVERSITY** at the human, animal, and environmental levels as part of a solution to an environmental public health challenge, and identify appropriate metrics to evaluate outcomes
8. Apply the COHERE (*Checklist for One Health Epidemiological Reporting of Evidence*) guidelines to determine whether research meets the definition of a one health study and, if so, to evaluate the quality of the OH methodology used