# Degree Requirements and Competencies for the PhD in Environmental Health Sciences Individualized Track (*effective summer 2022*)

## **Required Coursework**

	Credits
DEOHS Common Core	
BIOST 511 (Medical Biometry I, Autumn)	4
BIOST 512 (Medical Biometry II, Winter)	4
EPI 511 (Introduction to Epidemiology, Autumn)	4
ENV H 501 (Foundations of Environmental & Occupational Health, Autumn)	4
ENV H 502 (Assessing & Managing Risks from Human Exposure to Environmental Contaminants, Winter)	4
ENV H 503 (Adverse Health Effects of Environmental and Occupational Toxicants, Autumn)	4
ENV H 580 (Environmental and Occupational Health Sciences Seminar, Autumn/Winter/Spring)	6 x 1 = 6 <sup>1</sup>
ENV H 595 (Research Rotation, All Quarters)	$2 \times 3 = 6^2$
Individualized Track	
Student works with faculty adviser to design a course of study tailored to their research interests and career goals. Must include a minimum of 10 credits of ENV H courses.	≥10
Elective Courses <sup>3</sup>	varies
Culminating Experience (Thesis)	
ENV H 583 (Thesis Proposal Preparation, Spring)	1
ENV H 800 (Doctoral Dissertation, All Quarters)	27
Total Minimum Credits	90

- 1. Six quarters of ENV H 580 are required for a total of 6 credits.
- 2. Students who enter the program with a previous master's degree are required to do two rotations of 3 credits each for a total of 6 credits. Students who enter the program without a master's degree are required to do three rotations of 3 credits each for a total of 9 credits.
- 3. Student works with their faculty adviser to identify additional 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.).

## **Additional Requirements**

Students in this degree program are required to:

- Complete a minimum of two research rotations (see footnote #2 above).
- Pass a qualifying exam, typically at the end of their first year of study.
- Pass a general exam.
- Research, prepare, defend, and submit a dissertation.

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## **Degree Competencies**

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

#### School of Public Health -- All MS Students

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

### **DEOHS -- MS in Environmental Health Sciences**

- 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

#### **DEOHS -- PhD in Environmental Health Sciences**

• Conceive, develop, conduct, and document original research that advances knowledge in the field of environmental health sciences