Degree Requirements and Competencies for the MS in Environmental Health Sciences: Applied
Area of Emphasis: Environmental Toxicology (*effective summer 2022*)

Required Coursework

	Credits
DEOHS Common Core	
BIOST 511 (*Medical Biometry I*, Autumn)	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)	3 x 1 = 3[1]
Area of Emphasis: Environmental Toxicology	
ENV H 515 (*Organ System Toxicology*, Winter)	3
ENV H 516 (*Toxic Agents: Effects and Mechanisms*, Spring)	3
ENV H 577 (*Risk Assessment for Environmental Health*, Autumn)	3
ENV H 591 (*Current Topics in Toxicology*, Winter)	2
ENV H 593 (*Current Topics in Risk Assessment*, Autumn/Spring)	2
Elective Courses[2]	≥10
Culminating Experience (Thesis)	
ENV H 598 (*Degree Program Project/Portfolio,* All Quarters)	3
ENV H 599 (*Field Studies*, All Quarters)	3
Total Minimum Credits	**52**

1. Three quarters of ENV H 580 are required for a total of 3 credits.
2. 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 culminating project.

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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: Applied

- 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
- Identify a current, practical problem in environmental health sciences and collect, integrate and analyze relevant information to produce practical solutions.

DEOHS – Area of Emphasis: Environmental Toxicology

- Identify representative chemical, physical, and biological risk factors and their effects on health and safety
- Discuss the basic approaches to toxicity testing
- Discuss regulatory authorities responsible for assessing toxic hazards.

Degree Requirements and Competencies for the MS in Environmental Health Sciences: Applied Area of Emphasis: Environmental Toxicology (*effective summer 2022*)

- Describe relevant toxicology-related health and safety regulations
- Compare-Contrast relevant regulatory compliance strategies
- Discuss how science, values, technology, and economic systems interact in health and safety policy
- Apply effective strategies to communicate environmental, biomedical or occupational health risks and intervention strategies to regulators, business, labor, or professional groups.