MS-EHS-Applied, Area of Emphasis: Environmental Toxicology (*Effective Autumn 2022*)

Required Coursework

	Credits
DEOHS Common Core	
BIOST 511 (*Medical Biometry I*, Autumn)	4
EPI 511 (*Introduction to Epidemiology*, Autumn)	4
HSERV 579 (*Structural Racism and Public Health*, Autumn/Winter/Spring)	1
ENV H 501 (*Foundations of Environmental & Occupational Health*, Autumn)	4
ENV H 502 (*Assessing & Managing Risks from Human Exposure to Env. 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)	2 x 1 = 2[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 (Project)	
ENV H 598 (*Degree Program Project/Portfolio*, All Quarters)	3
ENV H 599 (*Field Studies*, All Quarters)	3
Total Minimum Credits	**52**

1. Two quarters of ENV H 580 are required for a total of 2 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 thesis.

MS-EHS-Applied, Area of Emphasis: Environmental Toxicology (*Effective Autumn 2022*)

Sample Schedule

The schedule below includes non-elective courses only. Students work 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.).

FIRST YEAR		
Autumn Quarter		
BIOST 511	Medical Biometry I	4 cr.
EPI 511	Introduction to Epidemiology	4 cr.
ENV H 501	Foundations of Environmental & Occupational Health	4 cr.
ENV H 503	Adverse Health Effects of Environmental and Occupational Toxicants	4 cr.
Non-Coursework Milestones: Work 1-on-1 with the Internship Manager and your Faculty Internship Adviser to identify possible internships / Work with Internship Manager to develop professional skills (resumes, cover letters, interviewing, etc.) / Begin applying for internships		
Winter Quarter		
ENV H 515	Organ System Toxicology	3 cr.
ENV H 580	Environmental and Occupational Health Seminar	1 cr.
ENV H 591	Current Topics in Toxicology	2 cr.
Non-Coursework Milestones: Continue to work on professional skills with the Internship Manager and your Faculty Internship Adviser / Continue applying to internships (if needed) / Once you have accepted an internship, identify a Faculty Project Adviser		
Spring Quarter		
HSERV 579	Structural Racism and Public Health	1 cr.
ENV H 516	Toxic Agents: Effects and Mechanisms	3 cr.
ENV H 580	Environmental and Occupational Health Seminar	1 cr.
ENV H 593	Current Topics in Risk Assessment	2 cr.
Non-Coursework Milestones: Continue applying to internships (if needed) / Once you have accepted an internship, identify a Faculty Project Adviser / Work with your Faculty Project Adviser to identify at least one other faculty member to serve on your Project Committee / Complete a scope of work plan for your project and a draft project proposal.		
Summer Quarter		
	Complete internship	
Non-Coursework Milestones: Submit the final draft of your project proposal to your Project Committee for approval / Complete all requirements for ENV H 599		
SECOND YEAR		
Autumn Quarter		
ENV H 577	Risk Assessment for Environmental Health	3 cr.
ENV H 598	Degree Program Project/Portfolio	3 cr.
ENV H 599	Field Studies	3 cr.
Non-Coursework Milestones: Complete all requirements for ENV H 598, including the written project report, an oral presentation of the project at a public meeting, and an oral examination conducted by your Project Committee		

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

- Define the major classes of toxicants present in the environment and the workplace and describe their sources, pathways, and routes of exposure
- Describe and analyze how toxicants interact with biological systems and the mechanisms by which they elicit adverse effects in humans and other organisms
- Explain the core principles of research ethics and apply these principles to specific research projects
- Discuss regulatory authorities responsible for assessing toxic hazards
- Describe relevant toxicology-related health and safety regulations