

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

Required Coursework

	Credits
DEOHS Common Core	
BIOST 511 (<i>Medical Biometry I</i> , Autumn)	4
EPI 511 (<i>Introduction to Epidemiology</i> , Autumn)	4
ENV H 501 (<i>Foundations of Environmental & Occupational Health</i> , Autumn)	4
ENV H 502 (<i>Assessing & Managing Risks from Human Exposure to Environmental Contaminants</i> , Winter)	4
ENV H 503 (<i>Adverse Health Effects of Environmental and Occupational Toxicants</i> , Autumn)	4
ENV H 580 (<i>Environmental and Occupational Health Sciences Seminar</i> , Autumn/Winter/Spring)	3 x 1 = 3 ¹
Area of Emphasis: Occupational Hygiene	
ENV H 550 (<i>Occupational and Environmental Disease</i> , Spring)	3
ENV H 553 (<i>Environmental Exposure Monitoring Methods</i> , Winter)	4
ENV H 555 (<i>Instrumental Methods for Industrial Hygiene Measurement: Laboratory</i> , Spring)	3
ENV H 557 (<i>Exposure Controls</i> , Winter)	4 ²
ENV H 560 (<i>Occupational Safety Management</i> , Winter)	4
ENV H 563 (<i>Health and Safety of Physical Agents in the Workplace</i> , Spring)	3
ENV H 564 (<i>Recognition of Health and Safety Problems in Industry</i> , Winter)	2
Elective Courses ³	≥ 6
Culminating Experience (Thesis)	
ENV H 583 (<i>Thesis Proposal Preparation</i> , Spring)	1
ENV H 700 (<i>Master's Thesis</i> , All Quarters)	9
Total Minimum Credits	62

1. Three quarters of ENV H 580 are required for a total of 3 credits.
2. Students in this Area of Emphasis complete an additional 1-credit ventilation module in ENV H 557 for a total of 4 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 research thesis.

Degree Requirements and Competencies for the MS in Environmental Health Sciences

Area of Emphasis: Occupational Hygiene (*effective summer 2022*)

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
- Formulate hypotheses and design experiments to test such hypotheses aimed at advancing knowledge in environment and health sciences

DEOHS – Area of Emphasis: Occupational Hygiene

- Develop comprehensive solutions to control health hazards associated with workplace exposures
- Design and implement effective exposure assessment strategies to assess the variability and magnitude of workplace exposures
- Demonstrate the use and limitations of accepted sampling and analysis methods for workplace hazards and use of quality control measures for exposure assessments in the workplace

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

- Explain the effects on the human body of exposures encountered in workplace settings
- Determine potential health hazards associated with processes, industries, and agents using observation skills and reviewing appropriate standards and literature in order to anticipate worker exposure and potential health risks
- Recognize and consider how ethical, social, structural, and cultural issues impact worker health
- Summarize exposure assessment data and communicate results and recommendations to diverse audiences.