

# Environmental Health (ENVH)

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## Courses

### **ENVH 5004. Environmental Health. 1.5 Credit Hour.**

ENVH 5004 is a required foundational, introductory course for the MPH degree programs, and as such serves as an introduction to the various aspects of the Environmental Health field. The course incorporates not only the common concepts associated with environmental exposures (air, water, soil, food, etc.) but also legacy and emerging issues associated with environmental threats to human health, including the potential impacts of emerging contaminants on human health. The emphasis is on biological, chemical, and physical sources of exposures, their salient characteristics, potential effects on human and ecological health, and the modern responses (methods, actions, and policies) for limiting exposures and effects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **ENVH 5013. Global Environmental Health. 3 Credit Hours.**

This is an intermediate-level graduate course for those interested in environmental health and global health. Other graduate students may attend the course with the instructor's permission, provided they meet the course prerequisites. This course does not meet the core requirement for environmental health in the MPH program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

#### **Pre-requisites:**

ENVH 5103|Minimum Grade of B-|May not be taken concurrently  
OR PBHL 5103|Minimum Grade of B-|May not be taken concurrently.

### **ENVH 5103. Environmental Health. 3 Credit Hours.**

This course explores the effects of interactions between the environment and human health, and the ways that adverse effects may be mitigated. Environmental health hazards, including chemical, biological, and physical pollutants in air, water, soil, and food are addressed, as are risk analysis and risk communication as applied to environmental health. The course examines how problems and solutions are identified globally, nationally, and locally. The use of biological and chemical agents as weapons is also explored. This course is available online.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

### **ENVH 5202. Man-Made Disasters: Radiological, Chemical & Biological Terrorism. 3 Credit Hours.**

This course is designed to introduce students to the concepts and models of public health preparedness, mitigation, and evaluation in the context of man-made disasters, including radiological, chemical and biological incidents. The course addresses identified core competencies of emergency preparedness for public health professionals that include disaster management, risk assessment, risk communication, governmental resources, functional roles, surveillance, and preparedness evaluation. Man-made disasters are looked at in a historical, environmental, and psychological context in order to elucidate the role of public health in man-made disaster preparedness and evaluation. In addition, the role of cultural competency and the needs of special populations are addressed. Public perception of risk and media views of man-made disasters are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

### **ENVH 5301. Industrial Hygiene and Safety. 3 Credit Hours.**

Anticipation, recognition, evaluation, and control of occupational and environmental health hazards are the focus of this course. Topics include recognition of hazards from chemical, physical, and biological agents; analytical and survey methods of hazard evaluation; and engineering solutions, administrative actions, and personal protective equipment for hazard control. This course is available online.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 5305. Environmental Toxicology. 3 Credit Hours.**

This course reviews the absorption, distribution, metabolism, and excretion of environmental toxicants. Methods used to measure acute and chronic toxicity, including carcinogenesis, are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 5306. Analytical Instrumentation. 3 Credit Hours.**

Sampling and analysis of chemical and physical agents using laboratory-based methods and real-time monitoring are studied as well as sample collection and proper handling. Analytical applications of absorption spectroscopy in the ultraviolet, visible and infrared; atomic absorption; emission spectroscopy; mass spectrometry; and separation methods, including liquid chromatography, are examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 5307. HVAC in Environmental Health. 3 Credit Hours.**

This course focuses on the use of ventilation to maintain suitable environmental conditions in work areas. Topics include dilution ventilation; comfort ventilation; local exhaust ventilation system design, including fan, duct, and hood selection; and ventilation system testing. This course is available online.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 5308. Emergent Environmental Diseases. 3 Credit Hours.**

This course focuses on the physiology and the relationship to occupational health of the following: allergies; cardiovascular system; ear, nose, and throat; eye; hematology; lung; neurology; neuromuscular-skeletal system; occupational hepatitis; psychiatry; and skin.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 5401. Curriculum Construction in Health Education. 3 Credit Hours.**

This in-depth examination of constructing, delivering, and evaluating curricula provides opportunity to develop curricular materials for teaching in school situations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 8016. Human Health Risk Analysis. 3 Credit Hours.**

This course is an introduction to the use of stochastic modeling to identify, assess, and manage environmental health hazards, risk assessment, and analysis through the lens of public health. Students will develop an understanding of the underlying sciences and mathematics that fall within exposure science and use Markov chain method to build exposure models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

EPBI 5002|Minimum Grade of B|May be taken concurrently

OR PBHL 5002|Minimum Grade of B|May be taken concurrently.

**ENVH 8019. Environmental Policy and Regulation. 3 Credit Hours.**

This is an upper-level graduate course that focuses on the concepts of policy and regulatory systems meant for the protection and management of the environment in the United States, including the evolution of the regulatory systems and policy making process to address both legacy and emerging environmental issues and the factors that shape these policies and regulations. Emphasis will be placed on the development of the standards, enforcement, and compliance of selected federal environmental regulations and their equivalent enforcements at the state and local levels, and ultimately, how those regulations influence public health. The course might be of interest to those interested in understanding environmental policy and regulation in the U.S., identifying means to facilitate changes in environmental policy for human health and environmental protection, and how it provides foundation for other international policies and laws pertaining to environmental management and sustainability. Students may find this as an applied policy- and decision-making course. The course will bring in other experts, either in the form of team teaching or guest speakers, who will offer relevant and timely perspectives on topics of significant interest.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PBHL 5005|Minimum Grade of B-|May not be taken concurrently  
OR SBS 5005|Minimum Grade of B-|May not be taken concurrently  
OR HPM 5005|Minimum Grade of B-|May not be taken concurrently)  
AND (PBHL 5103|Minimum Grade of B-|May not be taken concurrently  
OR ENVH 5103|Minimum Grade of B-|May not be taken concurrently)

**ENVH 8207. Environmental Epidemiology. 3 Credit Hours.**

This intermediate course will cover selected topics in occupational and environmental epidemiology through a focus on specific health outcomes, such as non-malignant respiratory diseases, cancer, and musculoskeletal disorders, within the context of particular study designs or exposures. Students will have the opportunity to critically examine the current literature and to study contemporary issues in research. Exposure assessment, biomarkers, and emerging diseases within the context of the workplace and the environment will be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

SBS 5102|Minimum Grade of B-|May not be taken concurrently  
OR PBHL 5102|Minimum Grade of B-|May not be taken concurrently  
OR EPBI 5201|Minimum Grade of B-|May not be taken concurrently  
OR PBHL 5201|Minimum Grade of B-|May not be taken concurrently.

**ENVH 8309. Exposure Assessment. 3 Credit Hours.**

Exposure assessment is the multidisciplinary field that identifies and characterizes exposure to environmental agents; develops estimates of exposure for epidemiology, exposure-response, trend and surveillance, and risk assessment studies; and evaluates the significance of exposure of effectiveness of intervention strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 9189. MPH Capstone Seminar. 3 Credit Hours.**

This seminar is required of M.P.H. students during final year of study. The seminar includes integration of coursework and practice skills to develop a fieldwork project or internship in a public health agency.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENVH 9289. MPH Fieldwork I. 3 Credit Hours.**

This course entails a fieldwork project or internship in a public health agency. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 9389. MPH Fieldwork II. 3 Credit Hours.**

This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.