

ENVH Environmental Hlth Scienc

ENVH 7090 Selected Topics in Environmental Health Sciences

1-3 Credit Hours. 1-3 Lecture Hours. 0 Lab Hours.

Allows the student the opportunity to receive specialized and/or focused instruction in an environmental health topic not generally offered by the department.

ENVH 7231 Air Quality

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

Introduces students to chemical, physical, and biological principles of air quality, as well as potential sources of contamination and the resulting effects. The course will also introduce environmental policies pertinent to air issues along with current remediation strategies to ameliorate pollution.

Prerequisite(s): A minimum grade of "C" in PUBH 6532.

ENVH 7232 Water Quality

3 Credit Hours. 2 Lecture Hours. 2 Lab Hours.

Introduces students to chemical, physical, and biological principles of water quality, as well as potential sources of contamination and the resulting effects. The course will also introduce environmental policies pertinent to water issues along with current treatment and remediation strategies to ameliorate pollution.

Prerequisite(s): A minimum grade of "C" in PUBH 6532.

ENVH 7233 Environmental Exposure and Impact Assessment

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

This course introduces students to appropriate design, implementation, and analysis of primary environmental exposures. Specific topics covered include designing risk profiles, analyzing field exposures of toxins, development of impact assessments, and evaluating dose-response relationships.

Prerequisite(s): A minimum grade of "C" in PUBH 6533 and ENVH 7231 or ENVH 7232.

ENVH 7234 Environmental Toxicology

3 Credit Hours. 3 Lecture Hours. 1 Lab Hour.

This course introduces students to concepts associated with the lethal and sub-lethal effects of environmental and occupational stressors on humans and other living organisms. The course also includes laboratory experiments designed to enhance comprehension, among students, in the area of toxicology.

Prerequisite(s): A minimum grade of "C" in PUBH 6532.

ENVH 7235 Field Methods in Environmental Health

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

This course introduces students to an overview of current and accepted standards of environmental and occupational exposure monitoring. Also examines the field methodology related to sample collection for water and air quality monitoring.

ENVH 7236 Spatial Analysis for Environmental Health Sciences

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

Introduces students to concepts and methods of spatial analysis related to environmental health problems and public health planning. Students will also employ basic concepts of mapping through the use of applicable Geographic Information Systems software.

ENVH 7237 Risk Assessment and Communication

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

Introduces students to the qualitative and quantitative skills necessary to evaluate the probability of injury, disease, or death in the general population from exposure to environmental contaminants. Hazard identification, exposure assessment, dose-response evaluation, and risk characterization are highlighted. Risk communication includes developing practical skills in assessing health concerns and explaining potential health risks or risk management to the general public.

Prerequisite(s): A minimum grade of "C" in ENVH 7233.

ENVH 7238 Environment, Ethics and Equity

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

Introduces students to theory, concepts and methods of ethics and equity related to one's location. Topics to be addressed include environmental justice, public health ethics, impacts on equity and disparities. Students will also employ basic concepts of spatial analysis through the use of applicable Geographic Information Systems (GIS) software.

ENVH 7239 Public Health Laboratory

3 Credit Hours. 0 Lecture Hours. 6 Lab Hours.

This course introduces students to the laboratory practices and skills necessary to sample, archive, transport, process and analyze environmental materials. Experiences include the design of laboratory experiments including the applications of contemporary laboratory microbiological, cell culture and molecular and instrumental tools used for testing environmental specimens. Experiences will also include silico analysis of laboratory test results, writing technical reports and presenting the outcomes of the research.

Prerequisite(s): A minimum grade of "C" in PUBH 6532 and BIOS 6541 and ENVH 7231 and ENVH 7232 or permission of instructor.

ENVH 7890 Directed Individual Study

1-3 Credit Hours. 1-3 Lecture Hours. 0 Lab Hours.

Provides the student with an opportunity to investigate an area of interest under the direction of a faculty mentor.

ENVH 8335 Global Water Quality and Health: Principles and Research

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

The global water crisis is the most serious threat to human health. Poor water quality, lack of sanitation and inadequate access to clean water resources are one of the major causes of global health disparities. Current issues such as changing climate, decaying infrastructure and reemerging waterborne diseases are also contributors for disease transmission within vulnerable populations. This course analyzes the key drivers that affect global water quality and human health. Real world case scenarios will be examined to develop sustainable and appropriate solutions that consider environmental, individual, cultural, and economic factors.

ENVH 8435 Toxicology and Health

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

This course primarily deals with the sources, exposure, fate, transport, and effects (lethal and sub-lethal) of environmental and occupational stressors on humans and other living organisms of public health significance. Emphasis is placed on the effects of pollutants/contaminants from air, water, soil, and/or food on humans; and historically relevant incidents of environmental contaminants and impact on health. This course also introduces students to the concept of risk assessment, communication, and management of hazardous materials typically encountered in the environment and associated toxicological and public health implications. Importantly, this course also gives students the opportunity to explore intervention strategies against various chemical exposure scenarios and define schemes to prevent future contamination issues related to toxic substances.

Prerequisite(s): A minimum grade of "C" in PUBH 6532.

ENVH 9133 Vector-Borne and Zoonotic Diseases: Biology

Epidemiology and Control

3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.

This course introduces students to important vector-borne and zoonotic diseases, including endemic and emerging zoonoses of historic and contemporary importance in the US A and from a global perspective. It provides an overview of the epidemiology of major vector-borne diseases, the biology of their vectors and animal reservoir and their interaction with pathogens. It discusses the dynamics and principles of pathogen transmission, examines current approaches to vector and disease surveillance, and summarizes the public health challenges associated with control and prevention of these diseases and proper use of pesticides and other environmentally safe methods.

Prerequisite(s): A minimum grade of "C" in PUBH 6541 and PUBH 8133.