

# MIEH - MARYLAND INSTITUTE FOR APPLIED ENVIRONMENTAL HEALTH

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## **MIEH240 Global Health Projects: Addressing Health Needs with a focus on Reciprocity and Relationships (3 Credits)**

Explore the needs of global communities, design interventions, and reflect on the potential outcomes in improving health in the communities served, while also focusing on students' own subjective experiences. Students will explore their roles as learners and the role of community members as local experts.

## **MIEH300 A Public Health Perspective: Introduction to Environmental Health (3 Credits)**

Environmental health is that branch of public health that deals with the human health effects of exposure to chemical, physical, and biological agents in the community, workplace, and home. Activities within Environmental Health Sciences are associated with recognizing, assessing, understanding, and mitigating the impacts of chemical, physical, and biological agents as well as understanding how human behavior and action impacts the environment. This course focuses on the central concepts, principles, issues, and applications of the essential scientific components and strategies of control of major environmental health problems.

**Prerequisite:** Minimum grade of C- in CHEM131 and CHEM132; and must have completed or be concurrently enrolled in SPHL100 or PHSC300.

**Restriction:** Must have earned a minimum of 60 credits; and must be in Public Health Science program; or permission of SPHL-School of Public Health.

**Credit Only Granted for:** SPHL498N or MIEH300.

**Formerly:** SPHL498N.

## **MIEH309 Environmental Health Research (1-3 Credits)**

This research-based course will provide undergraduates with the opportunity to work closely with one of the faculty researchers in the Maryland Institute for Applied Environmental Health (MIAEH) within the School of Public Health. Our research covers multiple fields within the environmental health sciences (e.g. environmental epidemiology, exposure science, risk assessment, environmental microbiology, environmental microbial genomics, food toxicology, airborne infection transmission, environmental justice, and children's environmental health) that involve either laboratory-based research or non-laboratory based studies. Students will not only gain invaluable research and interpersonal skills but also contribute to MIAEH's ongoing environmental health research programs.

**Restriction:** Must have completed a minimum of 45 credits; and must have permission of instructor.

**Repeatable to:** 9 credits if content differs.

## **MIEH321 Environmental Determinants of Emerging Infectious Diseases (3 Credits)**

Examines the influences of environmental factors, economic development, migration, and land use changes on emergence and reemergence of infectious diseases. Explores how population growth, development, and climate change impact natural reservoirs of infectious diseases and how they are transmitted through human populations. Includes historical accounts, newly emerging and reemerging diseases.

**Prerequisite:** Must have completed or be concurrently enrolled in SPHL100.

## **MIEH330 Environmental Justice, Racism, and Environmental Health Disparities: How where you live can kill you (3 Credits)**

Examination of environmental justice history, theory and science; discussion of linkages between the physical, natural, and social environments and environmental injustice; analysis of how environmental injustice can lead to adverse health conditions and environmental health disparities; discuss environmental justice case studies; and understanding of tools that can be used to understand and address environmental justice issues.

**Prerequisite:** Minimum grade of C- in MIEH300.

**Restriction:** Must be in a major in SPHL-School of Public Health.

**Credit Only Granted for:** MIEH210 or MIEH330.

**Formerly:** MIEH210.

## **MIEH331 The Built Environment, Sustainability, and Public Health: The Good, the Bad, and the Ugly (3 Credits)**

Provides students with a fundamental understanding of theory, concepts, and issues related to the built environment; how the built environment influences behaviors and health outcomes; and opportunities to improve the built environment through planning, zoning, and community development initiatives that can make communities healthier, just, and more sustainable.

**Prerequisite:** Minimum grade of C- in MIEH300; or permission of instructor.

**Credit Only Granted for:** MIEH215 or MIEH331.

**Formerly:** MIEH215.

## **MIEH333 Every Drop Counts: Water, Food and Global Public Health (3 Credits)**

In-depth interdisciplinary study of the public health issues related to water use for global food production. Topics will include accessibility and availability of safe water for agriculture worldwide, potential microbiological and chemical hazards in agricultural water, alternative water sources such as reclaimed wastewater and return flows, food safety approaches to managing agricultural water, and agricultural influences on surface and groundwater quality. Political, social, and economic factors relating to agricultural water will be addressed, with special focus on regions that are leaders in innovative water management and regions where access to clean water for agriculture is a major challenge.

**Prerequisite:** ENSP101 or MIEH300; or permission of department.

**Cross-listed with:** ENSP360.

**Credit Only Granted for:** MIEH333 or ENSP360.

## **MIEH400 Introduction to Global Health (3 Credits)**

Exploration of theoretical frameworks and practical perspectives on issues shaping the global health panorama. Determinants examined through: biological and epidemiological; social, cultural and economic; environmental and geographic; multi-section, legal and institutional perspectives with synopsis of how these issues are addressed by international and community organizations in developing countries.

**Prerequisite:** Minimum grade of C- in MIEH300; and 1 course with a minimum grade of C- from (SPHL100, PHSC300).

**Restriction:** Must be in the Public Health Science program or must have permission of the program director; and must have completed 60 credits.

**Credit Only Granted for:** MIEH400 or SPHL498A.

**Formerly:** SPHL498A.

**MIEH407 One Health: Food Safety and Security (3 Credits)**

This is a collaborative course with the University of Maryland and Cairo University, Cairo, Egypt to explore the One Health Foundation and its application to improving international food safety and security. The purpose of this global undergraduate class is to disseminate knowledge on One Health and its application to improving global food safety and security. Students will apply principles of One Health to ensure food safety and food security in Egypt.

**Jointly offered with:** MIEH607.

**Restriction:** Must have earned at least 75 credits .

**Credit Only Granted for:** MIEH607 or MIEH407.

**MIEH480 Introduction to Occupational Health (3 Credits)**

Work, the way it is organized, and the workplace environment has an impact on public health and workers' and their families' physical and psychological health. The course introduces students to the field of occupational health and safety, and ensures that workers' health is considered in all public health practice and policy. Basic concepts in occupational safety and health are discussed, as well as methods to anticipate, recognize, evaluate, and control environmental factors or stresses arising in or from the workplace. In addition to instructor-led lectures, guest speakers will be invited to discuss case studies and/or discuss workplace hazards unique to specific populations.

**Prerequisite:** Minimum grade of C- in MIEH300 and EPIB301.

**Recommended:** BSCI201.