

# Public Health

## Undergraduate Minor

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## Public Health Minor

A minor in Public Health is designed for students who wish to develop an introductory awareness and preparation for dealing with critical local, state, national and global issues important to improving population health. Because public health practice requires a foundation in the social and natural sciences, a minor in public health pairs well with a number of the undergraduate majors at UIS (e.g., biology, chemistry, biochemistry, sociology, psychology, environmental studies, global studies, and liberal studies or students pursuing nursing, the pre-med track, or allied health professions). A minor in public health will help students in these majors understand the application of their major in the betterment of environmental and public health.

The public health minor uses a foundation of policy, administration, environmental health, community health, and epidemiology for comparing and contrasting local and global public health issues and prepare the student for advanced study in program development and intervention. Students completing the minor in Public Health will be able to understand the basic principles of public health; assessment, policy development, and assurance; the role of population, poverty, and pollution on the well-being of populations; and methods for studying disease occurrence and patterns in populations.

To earn an undergraduate minor in Public Health, students must complete a minimum of 15 hours in public health courses (two core and three electives). Electives should be selected in consultation with a Public Health faculty member. Please contact mph@uis.edu.

### Required Core Courses

MPH 222	Global Public Health: Population, Poverty and Pollution	3
MPH 224	Epidemiology - Science of Disease Discovery	3

### Electives

Select three of the following, or a minimum of 9 hours		9
MPH 221	Environmental Facts and Fictions: The Mystery Genre	
MPH 301	Global Environmental Health	
MPH 408	ECCE: Addiction	
MPH 438	Monsters, Medicine, and Myths	
MPH 441	Human Well-Being <sup>1</sup>	
MPH 450	Chemicals and the Citizen	
MPH 471	Emerging Diseases <sup>1</sup>	
MPH 478	ECCE: Crisis in Environmental Health	

**Total Hours** **15**

<sup>1</sup> PH minor students should select the three-hour option of this course to meet the minor requirements.

## Courses

### MPH 221. Environmental Facts and Fictions: The Mystery Genre. 3 Hours.

Mystery fiction's role in shaping popular beliefs about environmental issues and science will be examined across cultures and around the globe.

### MPH 222. Global Public Health: Population, Poverty and Pollution. 3 Hours.

This course reviews the historical advancement of public health as the science of improving the well-being of populations. The course takes a global perspective and investigates in detail the interdependency of the world population and the need to address public health issues from an international perspective.

### MPH 224. Epidemiology - Science of Disease Discovery. 3 Hours.

This course focuses on epidemiologic concepts and methods critical to the understanding of how often disease occur in different groups of people and why. The students will be introduced to (1) epidemiologic technical terms, (2) elements of descriptive epidemiology, (3) disease outbreak investigation, and (4) sources of public health data. The role of epidemiology in improving local and international public health and through investigation and policy impact will be studied through use of critical case studies.

### MPH 301. Global Environmental Health. 3 Hours.

Compares major environmental health issues between developed and developing countries such as water sanitation; waste management; lead poisoning; pesticides; tobacco use; violence etc. This course uses case studies to relate environmental health issues to disease causation and prevention strategies.

### MPH 401. Introduction to the US Health System. 4 Hours.

This course is designed to acquaint interested students with the organization, structure, and contemporary issues in the U.S. health care industry. Students will analyze the historical, political, social and economic roots of the United States health care system; examine current forces shaping the health care system and efforts to ensure quality, availability, and access to health care while containing costs; and consider future options in organizing and financing health services from the study of state initiatives and the health systems of other countries.

### MPH 408. ECCE: Addiction. 4 Hours.

Examines the relationship between addiction and rationality. Presents an interdisciplinary approach; explores treatment and regulatory policies to prevent and treat addiction in the U.S. Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the area of U.S. Communities.

### MPH 419. Environmental Law. 4 Hours.

Surveys the major federal statutes and regulatory schemes relating to environmental quality; analyzes and compares the contrasting approaches to regulation that have been used. Focuses on the interaction of law and policy and considers the roles of Congress, the regulatory agencies, and the courts in defining and implementing environmental mandates. Course Information: Same as ENS 419, LES 419, and PSC 419.

**MPH 438. Monsters, Medicine, and Myths. 4 Hours.**

Mankind has sought explanations for health and illness through symbols, metaphors, mythology, poetry, and other forms of story telling. Join us in a social autopsy of Frankenstein, Werewolves, Mummies, Outer Space and the rise of Germism. Classic works of literature, popular culture, and film will be explored. For Mature Audiences.

**MPH 441. Human Well-Being. 3,4 Hours.**

This course introduces students to the studies of well-being and its importance in understanding health and quality of life. Students will learn about health topics from multidisciplinary perspectives. The course focuses on the determinants, consequences, prevention, and interventions of chronic diseases. Students will consider and discuss the public policies that have been designed to address personal and public health issues.

**MPH 449. Environmental Toxicology. 3,4 Hours.**

Study of the effects of chemical and physical agents on the health of the public and environment. Included are sources, transport, chemical behavior, and biochemical mechanisms for adverse health effects from environmental pollutants. Course Information: Same as CHE 465.

**MPH 450. Chemicals and the Citizen. 4 Hours.**

Provides the basic concepts and vocabulary to understand many of the hot environmental issues related to chemicals in our environment. Introduces public health and policy issues as well as technical aspects related to the broad topic of chemicals in the environment. A course about chemical issues, not chemistry, this course is designed to provide non-chemists with a basis for understanding contemporary issues such as safety testing of chemicals, air and water quality, and disposal of hazardous chemicals.

**MPH 471. Emerging Diseases. 3,4 Hours.**

Examines the global emergence of previously unknown or re-emergent infectious diseases. Historical and current diseases will be discussed by integrating the perspectives of medical science and public health in contexts of social systems, economics, politics, and geography. Challenges and remedies in an interdependent but unequal world will be discussed. Course Information: Same as MLS 471.

**MPH 478. ECCE: Crisis in Environmental Health. 4 Hours.**

Multidisciplinary approach to awareness and policies of environmental health issues using response strategies for natural, industrial, and manmade disasters; terrorism; food safety; biological, chemical, nuclear, and radiological threats; waste management; environmental health risk assessment; crisis communication; cultural competence; multijurisdictional legal issues; and environmental justice. Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the area of U.S. Communities.

**MPH 499. Independent Study. 1-4 Hours.**

This independent study provides students an opportunity to synthesize, integrate and apply knowledge and skills acquired through a special project relevant to public health. Students select a topic relevant to their career goals and interests with the approval of the supervising faculty member.

**MPH 501. Introduction to Public Health. 4 Hours.**

An introduction to population-based public health in the U.S. It provides an introduction to public health concepts and practice by examining the philosophy, purpose, history, organization, functions, tools and results of public health practice at international and local levels. It provides an overview of basic concepts/core functions of public health practice, the scope of applications, and the variety of service organizations that shape public health.

**MPH 503. Biostatistics. 4 Hours.**

Provides a general overview of statistical methods commonly used in the collection and analysis of health research data. Topics include descriptive statistics, basic concepts of probability, statistical inference, analysis of variance (ANOVA), correlation, regression, distribution free methods, and introduction to use of a statistical software. Emphasis is on understanding and applying statistical concepts intuitively to the interpretation of health research data. Course Information: Core course. Prerequisite: Undergraduate statistics course.

**MPH 506. Research Methods in Public Health. 4 Hours.**

Emphasizes the practical application of community health research to enhance the practice of public health. Public health practitioners engaging in administration, policy analysis, program development, and service coordination must be able to assess the needs of populations served and must be able to design and implement programs to meet those needs and evaluate program outcomes. The objective is to provide practical experience necessary for students to skillfully apply a variety of research methods and protocols, data collection, and analysis and interpretation skills to needs assessment and evaluation in public health. Core course. Course Information: Prerequisite: MPH 503.

**MPH 508. Program Evaluation for Public Health. 4 Hours.**

This course introduces students to the concepts and methods used in program evaluation with a particular emphasis on health programs. Topics include: research design (experimental, quasi-experimental and non-experimental approaches); needs assessment, assessment of theory, process evaluation, cost analysis, impact and outcome evaluation; the use of logic models and the use of an ecological model in planning and evaluation of health programs. Course Information: Prerequisite: MPH 506 or permission of instructor.

**MPH 511. Epidemiology. 4 Hours.**

Examines epidemiologic concepts and methods, disease causation models, and study designs. Uses morbidity, mortality, and other vital statistical data in the scientific appraisal of community health. Core course.

**MPH 512. Epidemiology of Infectious Diseases. 4 Hours.**

Presents a population-based perspective of the distributions and determinants of major infectious and chronic diseases. The chronic disease aspect focuses on cardiovascular disease and cancer in the United States and worldwide. The underlying objective is to identify and review methods of control and preventative measures for each of these diseases. Course Information: Prerequisite: MPH 511 or permission of the instructor.

**MPH 513. Epidemiology of Chronic Diseases. 4 Hours.**

Introduces students to the principles and practice of chronic disease epidemiology. Includes the prevention and control of chronic diseases and their effect on public health both nationally and internationally. Thus, the course covers selected topics in chronic diseases. Students are required to have knowledge of basic elementary biomedical concepts, epidemiologic terminology, and fundamentals of biostatistics. Course Information: Prerequisites: MPH 511.

**MPH 514. Analytical Epidemiology. 4 Hours.**

Presents the fundamental concepts, principles, and methods of observational epidemiologic research. Practical issues in the design, conduct, and analysis of epidemiologic studies, as well as theoretical issues in the analysis and interpretation of research findings will be discussed. Intended for students interested in advanced epidemiologic research. Course Information: Prerequisite: MPH 511 or permission of instructor.

**MPH 521. Introduction to Environmental Health. 4 Hours.**

Recognition, analysis, and control of major environmental and occupational diseases and issues. Examines policy, law, economics, politics, and liability as they relate to environmental and occupational health. Core course.

**MPH 526. Risk Management and Communication. 4 Hours.**

Organizations and individuals are faced with health risk decisions virtually every day. This course equips students with tools and techniques to manage and communicate these risks. Using current and past examples in Illinois and around the world, the economic, ethical, legal, social, political, and scientific consequences of these risks are explored to help students identify various issues that should be considered before health risk decisions are made. Public Administration, Emergency Management, Social Sciences, and Public Health professionals will be able to apply material from this class in their jobs and personal life.

**MPH 527. Environmental Risk Assessment. 4 Hours.**

Introduction to the many aspects of risk assessment, the relationship between risk assessment and public policy and the perception of risk. Students will be expected to work out elementary problems in risk and exposure assessment.

**MPH 528. Risk Assessment: Air, Land, and Water. 4 Hours.**

Investigates risk assessment methodologies of terrestrial, waterborne, and airborne pollutants. Case studies, computer models, and extant data considered. Course Information: Prerequisite: MPH 527.

**MPH 529. Risk Assessment Practicum. 4 Hours.**

Subject matter to include identification and assessment of hazardous and toxic materials, site assessment, cleanup, and management strategies, and legal, policy, and economic applications in a real situation using extant data. This is the final course in the risk assessment sequence. Course Information: Prerequisite: MPH 527 and MPH 528.

**MPH 531. Public Health Policy. 4 Hours.**

This course considers contemporary public health issues and policy; the role of the public health manager; and the fundamentals of public health program and policy development, implementation, and evaluation. It provides an introduction to public health concepts, policy and practice by examining the philosophy, purpose, history, organization, functions, tools, activities policies and results of public health practice at the international, national, state, and community levels. The course addresses important health issues and problems facing the public health system and the application of management theory and skills to the administration of public health programs, policies and facilities.

**MPH 535. Public Health in the Political Arena. 4 Hours.**

Examines the influence of politics on public health policy and practice. Presents a professional approach to engaging the political process at the local, state, and national levels. Course Information: Prerequisite: MPH 531.

**MPH 541. Social Determinants of Health. 4 Hours.**

This course introduces students to concepts of social determinants of health, health disparities, social epidemiology, and related interventions and policies. The goal of this course is to help students fulfill their social responsibilities to promote health within a large community. Students will practice awareness of cultural diversities among people in the United States and the world through the lens of population health.

**MPH 561. Public Health Education. 4 Hours.**

Program Planning, Implementation, and Evaluation. Theoretical foundations of health education; skills required to communicate effectively with various audiences in the community. Core course.

**MPH 575. Health Economics. 4 Hours.**

Introduction to the basic principles of economics, particularly as they apply to public policy issues. It provides students with a clear view of the applicability of some basic economics concepts and tools as they apply to public health issues and resource allocation decisions, including the market mechanism, efficiency, and optimization. The main objective is to enhance students' understanding of economics and demonstrating the power of economics as input to health and environmental policy issues, and ability to conduct cost-benefit analysis of public policy and programs.

**MPH 580. Seminar in Public Health. 4 Hours.**

This seminar course is designed to expose and stimulate students' interests in current and emerging global public health issues. Students will engage in critical thinking, public speaking, and in-depth research of pressing public health issues throughout the duration of the course.

**MPH 581. Internship. 1-4 Hours.**

Under faculty guidance, students gain practical experience in a public health setting relevant to their career goals and interests. Experience includes in-depth understanding of agency-specific mission, goals, and objectives, and working on special projects to demonstrate integration of public health competencies into practice. Requires periodic summary reports based on an activity log and reflective journal, and evaluative final paper. Requires a minimum of 50 contact hours for each credit hour taken. May be repeated to a maximum of 4 hours. Degree requires 4 hours of internship credit with minimum of 200 contact hours. Course Information: Prerequisite: completion of at least 24 hours of core courses. Internship Learning Agreement and instructor approval required.

**MPH 582. Independent Research Project. 1-4 Hours.**

An individual project to demonstrate ability to formulate, investigate, and analyze a problem in a practice setting. Students choose a topic with the advice and approval of the faculty members who agree to supervise and evaluate the students' work. Course Information: May be repeated to a maximum of 4 hours.

**MPH 583. Comprehensive Exam Continuing Enrollment. 0 Hours.**

Encourages students to maintain contact with the department and allows them to use campus facilities such as the library and computer laboratories while preparing to take the department's master's degree closure exercise -- the comprehensive examination. NOTE: If students do not earn a passing grade on the comprehensive examination during their final semester, they must enroll in MPH 583 for zero credit hours (one billable hour) in all subsequent semesters until they pass the exam. Course Information: May be repeated.

**MPH 584. Air and Water Quality. 3,4 Hours.**

Clean Air Act and amendments and their effect on improving ambient air quality. Analysis of administrative procedures, standards, and regulations.

**MPH 585. Introduction to Health Services and Administration. 4 Hours.**

An overview of the healthcare system and the healthcare industry with an emphasis on Public Health. An introduction to the regulatory complexity of the healthcare environment and an in-depth exploration of key federal and state laws including medical malpractice and patient care laws.

**MPH 586. Solid and Hazardous Waste. 4 Hours.**

An interdisciplinary approach is used to examine both the technological and public policy tools that can be used to address solid and hazardous waste management. Public health and social justice implications are examined.

**MPH 587. Food Safety Practice. 3,4 Hours.**

This course analyzes the political, social, and economic effects on food safety practice and enforcement; food production; marketing; and product development, while identifying problems facing the delivery of healthy food from growth to consumption. Course Information: Students will have the option of taking an exam to become certified in food service sanitation.

**MPH 588. Occupational Safety and Health. 3,4 Hours.**

This course examines the history and status of occupational safety and health regulation at the state and national level; studies policy development and trends in workplace health and safety; and evaluates how policies are translated to organizational and administrative operating procedures.

**MPH 599. Graduate Tutorial. 1-8 Hours.**

Intended to supplement, not supplant, regular course offerings. Students interested in a tutorial must secure the consent of the faculty member concerned before registration and submit any required documentation to him or her.