



MPH-Environmental Health

The environmental health concentration accommodates students with various backgrounds and interests, who desire careers related to the environmental aspects of public health. Specifically, this area of concentration provides the expertise and experience to analyze, monitor, interpret and mitigate the effects of chemical and physical contaminants, and microbial pathogens in water, air, soil, and food on public health. It prepares students in the M.P.H. program for technical and administrative jobs in the governmental and private sectors.

Curriculum

Core Curriculum Requirements: 15 SCH

BIOS	5210	Biostatistics for Public Health I	3 SCH
ENVR	5300	Environmental Health	3 SCH
EPID	5100	Principles of Epidemiology	3 SCH
HMAP	5210	Introduction to Health Management and Policy	3 SCH
SCBS	5110	Behavioral and Social Aspects of Public Health	3 SCH

Culminating Experience: 6 SCH*

SPH	5950	Thesis	6 SCH
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Environmental Health Concentration Curriculum

Practicum Requirement: 3 SCH

SPH	5855	Public Health Practice Experience	3 SCH
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Required Courses: 12 SCH

ENVR	5330	Environmental and Occupational Toxicology	3 SCH
ENVR	5345	Physical Hazards	3 SCH
ENVR	5380	Environmental Health Microbiology	3 SCH
ENVR	5410	Environmental Data Analysis	3 SCH

Elective Courses: 9 SCH with thesis or 15 SCH with the comprehensive exam*

ENVR	5310	Exposure and Risk Assessment	3 SCH
ENVR	5311	Air Pollution and Health	3 SCH
ENVR	5325	Industrial Hygiene	3 SCH
ENVR	5370	Arthropods and Public Health	3 SCH
ENVR	5420	Texas-Mexico Border Health Issues	3 SCH
ENVR	5500	Environmental Epidemiology and Biomarkers	3 SCH
ENVR	5550	Introduction to Genomics and Public Health	3 SCH

ENVR	5910	Independent Study in Environmental Health	3 SCH
ENVR	6600	Spatiotemporal Environmental Health Modeling	3 SCH
EPID	6690	Occupational Epidemiology	3 SCH

*Students are allowed to take courses offered at UNT-Denton.

*Environmental Health students are permitted to enroll in the thesis option, or take an additional 6 credit hours of courses plus a comprehensive exam.

Departmental Learning Objectives

1. Specify approaches for assessing preventing, and controlling environmental hazards (chemical, biological and physical) that pose risks to human health and safety.
2. Explain the general mechanisms of toxicity, and the roles that dose-response and time-response play in eliciting a toxic response to various environmental exposures (physical, chemical, biological, and psychosocial).
3. Describe current environmental risk assessment methods, including the types of evidence utilized, limitations, and the sources of uncertainty and variability.
4. Describe genetic, physiologic, and psychosocial factors that may result in certain individuals or populations being more susceptible to adverse health outcomes following exposure to environmental hazards.
5. Explain various risk management (regulatory, engineering and behavioral intervention options) and risk communication approaches in relation to issues of environmental justice/equity.
6. Describe the direct and indirect human, ecological, and safety effects of major environmental and occupational agents, including global climate and environmental changes.
7. Develop a testable model of environmental injury that relies on hypothesis generation, data collection, data analysis, and interpretation of data for research or program development.
8. Describe federal and state regulatory programs, guidelines, and authorities that control environmental health issues.

Environmental Health Concentration Learning Objectives

By the conclusion of the M.P.H. program, a student in the environmental health concentration will be able to:

1. Assess environmental health threats that affect the health of the public.
2. Understand the interplay between theory and practice of environmental health management.
3. Understand environmental protection strategies and approaches to reduce environmental health risks.
4. Identify, develop, apply and modify an appropriate research approach to an environmental health problem based on constraints and available resources.
5. Analyze quantitative and qualitative data to describe environmental conditions that have impacts on human health.
6. Synthesize data from a variety of sources, reflective of multidisciplinary perspectives, to develop strategies for addressing complex environmental health problems. Use biostatistics and statistical software to analyze an environmental health problem.
7. Interpret and present findings in written and verbal format from an environmental health and public health perspective.