Environmental Health Sciences (EHS)

Courses

EHS 201. Case Studies in Environmental Toxicology. 4 Units.
Explores toxicology principles through case-based discussions. Topics include exposure routes, absorption, metabolism, and mechanisms of toxicity. Lectures with discussions are delivered by invited faculty experts.

Prerequisite: EHS 206B. EHS 206B with a grade of B- or better

Restriction: Graduate students only.

EHS 202. Principles of Environmental Toxicology. 4 Units.
Explores molecular, biological, and structure-based toxicity of environmental toxicants. Topics include dose-response relationship, ADME, mechanisms of action, and its impact on the environment, wildlife, and human health. Covered through lectures, research papers, and discussion.

Restriction: Graduate students only.

EHS 203. Occupational Epidemiology. 4 Units.
The importance of work environment for workers' health and productivity has increased with changing technology, work organization, demographics, and occupation/industry structures. This advanced occupational epidemiology course focuses on work environment as exposures, and workers' health and productivity as outcomes.

Restriction: Graduate students only.

EHS 204. Neurotoxicology. 4 Units.
The effects of various harmful chemicals upon nervous system function. Emphasis given to the molecular events underlying neurological damage and to the relation of such processes to basic mechanisms of neurobiology.

EHS 206A. Target Organ Toxicology I. 4 Units.
Outlines vulnerability of selected organ systems to environmental and occupational chemicals. Reviews molecular aspects of toxicological damage. Topics include molecular toxicology and the following organ systems: nervous, cardiovascular, respiratory, dermal, and skeletal embryology.

Same as PUBHLTH 277A.

Restriction: Graduate students only.

EHS 206B. Target Organ Toxicology II . 4 Units.
Analyzes mechanistic responses in animals and humans to environmental and occupational chemicals and radiation, focusing on organ system physiology. Topics specifically covered include reproductive, endocrine, developmental, kidney, liver, pancreas, vascular, immune toxicology, radiation, and chemical carcinogenesis.

Prerequisite: PUBHLTH 277A or EHS 206A. PUBHLTH 277A with a grade of B- or better. EHS 206A with a grade of B- or better

Same as PUBHLTH 277B.

Restriction: Graduate students only.

EHS 207. Experimental Design and Interpretation of Toxicology Studies. 2 Units.
Introduction to methods of structuring toxicology experiments and analyzing data, including experimental design, data distributions, sample sizes, hypothesis testing, linear regression, analysis of variance, multiple comparison testing, and non-parametric tests.

Restriction: Graduate students only.

EHS 212. Inhalation Toxicology. 4 Units.
Explores laboratory inhalation toxicology principles and practices. Covers aerosols, gases, respiratory tract structure/function, lung defenses, exposure techniques, experimental designs, animal models, and regulations/guidelines.

Restriction: Graduate students only.

EHS 220. Industrial Toxicology. 4 Units.
Analysis of responsibilities toxicologists have in industry, including product safety, generating material safety, data sheets, animal testing, ecotoxicological testing, risk/hazard communication, and assisting industrial hygienists and occupational physicians; emphasis on interdisciplinary nature of industrial toxicology and communication skills.

Prerequisite: PUBHLTH 277B or EHS 206B. PUBHLTH 277B with a grade of B- or better. EHS 206B with a grade of B- or better

Same as PUBHLTH 278.

EHS 264. Introduction to Environmental Health Science. 4 Units.
Explores environmental health's role in disease prevention. Studies human-environment interaction, focusing on chemical, physical, and biological agents in community and occupational settings. Covers climate change, environmental justice, children’s health, exposure assessment, and policy for public health improvement.

Same as EPIDEM 264, PUBHLTH 264.

Restriction: Graduate students only. Environ Health Sci and Policy Majors only. Environmental Health Sciences Majors only. Epidemiology Majors only. Public Health Majors only.

EHS 269. Air Pollution, Climate, and Health. 4 Units.
Emission of air pollutants into the atmosphere, physical and meteorological processes that affect transport, and influence on global warming. Concepts of how and where people are most exposed, and how exposures and health effects differ in developed and developing regions.

Same as EPIDEM 269, PUBHLTH 269.

EHS 275. Environmental Modeling and Risk Management. 4 Units.
Learn general principles and basic mathematical methods for environmental modeling and human health risk assessment, including compartmental and advection-dispersion models for contaminants in air and water, uptake by plants and animals, exposure, assessment, dose-response modeling, risk management, and risk perception.

Prerequisite: MATH 2A and STATS 7

Same as PUBHLTH 275.

Restriction: Graduate students only.

Concurrent with PUBHLTH 175.

EHS 290. Independent Study in Environmental Toxicology. 4 Units.
With consent from a faculty member who will supervise the program, a student may receive credit for individual study in some area of toxicology, culminating in the completion of a scholarly paper on the subject.

Repeatability: May be repeated for credit unlimited times.

EHS 294. Health Psychology. 4 Units.
Focus on theory and research in health psychology as applied to major acute, chronic, and occupational health problems. Adopting the biopsychosocial model of health, emphasis is on understanding and influencing how biology, behavior, and the environment influence health and illness.

Same as PUBHLTH 272.

Restriction: Graduate students only.

EHS 297. Advanced Topics in Occupational Toxicology. 2 Units.
Discussions with clinical and research faculty in environmental toxicology and occupational medicine on current toxicology problems in the workplace and critical review of current publications in the field.

Repeatability: Unlimited as topics vary.

EHS 298. Seminar in Environmental Health Sciences. 2 Units.
Presentation and discussion of current research problems and issues by students, postdoctoral fellows, faculty, and guests, covering the broad research and policy areas of environmental health sciences.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.

EHS 299. Research Problems. 1-12 Units.
Research work for the M.S. thesis or Ph.D. dissertation.

Repeatability: May be repeated for credit unlimited times.