Environmental Health Sciences (EHS)

Courses

**EHS 201. Case Studies in Environmental Toxicology. 4 Units.**
Analysis of real problems involving toxic chemicals and the human food, air, water supplies, occupational exposures, and lifestyles. Formal problems will be considered by small groups of students and discussed by the class.

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

Restriction: Graduate students only.

**EHS 202. Principles of Environmental Toxicology. 4 Units.**
Introduction to basic principles of toxicology. Absorption, distribution, metabolism, and excretion (ADME) of xenobiotics are covered and illustrated with specific examples.

Restriction: Graduate students only.

**EHS 203. Psychosocial Occupational Epidemiology. 4 Units.**
Importance of psychosocial 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 psychosocial 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.**
Mechanistic analysis of responses occurring in various organ systems of experimental animals and humans exposed to environmental and occupational chemicals and radiation. Review distinctive cellular and tissue structure and physiological function of the various organ systems.

Same as PUBH 277A.

Restriction: Graduate students only.

**EHS 206B. Target Organ Toxicology II. 4 Units.**
Mechanistic analysis of responses occurring in various organ systems of experimental animals and humans exposed to environmental and occupational chemicals and radiation. Review distinctive cellular and tissue structure and physiological function of the various organ systems.

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

Same as PUBH 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.**
The principles and practice of laboratory inhalation toxicology. Topics include aerosols, gases, respiratory tract structure and function, lung defenses, aerosol deposition exposure techniques, characterization of exposure atmospheres, experimental designs, animal models, and regulations and 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: PUBH 277B or EHS 206B. PUBH 277B with a grade of B- or better. EHS 206B with a grade of B- or better
Same as PUBH 278.

EHS 264. Introduction to Environmental Health Science. 4 Units.
Convergence of agents (chemical, physical, biological, or psychosocial) in environment can emerge as diseases influenced by social, political, and economic factors, allowing them to become rooted in society. How these agents from various spheres come together and impact human health.
Same as EPI 264, PUBH 264.
Restriction: Graduate students only. Environmental Health Sciences Majors only. Epidemiology Majors only. Public Health Majors only. Environ Health Sci and Policy 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 EPI 269, PUBH 269.

EHS 275. Environmental Modeling and Risk Management. 4 Units.
Surveys the general principles, basic mathematical methods, and practices of environmental modeling and human health risk assessment. Topics include advection-dispersion models, risk management, and risk perception. Students conduct an original risk assessment as a final group project.
Prerequisite: MATH 2A and STAT 7
Same as PUBH 275.
Restriction: Graduate students only.
Concurrent with PUBH 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 PUBH 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.