

## ENVIRONMENTAL SCIENCE AND POLICY

### College of Social Science

- 801 Physical, Chemical, and Biological Processes of the Environment**  
Fall. 3(3-0) RB: Bachelor's or Master's in appropriate discipline for specialization. R: Approval of college. SA: SSC 801  
Interdisciplinary concepts in the natural sciences related to environmental problems. Ecology and human health.
- 802 Human Systems and Environment**  
Fall. 3(3-0) RB: Bachelor's or Master's in appropriate discipline for specialization. R: Approval of college. SA: SSC 804  
Anthropological, economic, geographical, legal, political, and sociological concepts of human systems and environmental change.
- 803 Human and Ecological Health Assessment and Management**  
Spring. 3(3-0) P:M: (ESP 801 and ESP 802) RB: Familiarity with the basic concepts of physics, chemistry and biology of environmental processes, and the relationships between human systems and the environment. R: Approval of college. SA: SSC 805  
Concepts and techniques used to evaluate human and ecological health impacts from anthropogenic activities. Policy formulation and management strategies to mitigate health effects.
- 804 Environmental Applications and Analysis**  
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. RB: Bachelor's or Master's in appropriate discipline for specialization. R: Approval of college SA: SSC 806  
Global, regional and local environmental issues. Use of systems approach to identify and solve environmental problems.

## EPIDEMIOLOGY

### Department of Epidemiology College of Human Medicine

- 390 Disease in Society: Introduction to Epidemiology and Public Health**  
Spring. 4(4-0) Interdepartmental with Social Science.  
Human epidemiology and population health issues facing contemporary society. Developed and less-developed settings. Health-related information in the mass media and scholarly publications.
- 546 Information Management: Fundamentals of Epidemiology and Biostatistics**  
Spring. 1(1-0) RB: Undergraduate mathematics and/or statistics R: Open only to graduate-professional students in the College of Human Medicine.  
Introduction to accessing, analyzing, and applying information to patients and to populations. Offered first ten weeks of the semester.

- 493 Professional Internship in Environmental Economics and Policy**  
Fall, Spring, Summer. 3 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (EEP 201 and EEP 255) R: Open only to juniors or seniors in the Environmental Economics and Policy major. Approval of department; application required. A student may earn a maximum of 6 credits in all enrollments for any or all of these courses: ABM 493, AEE 493, ANR 493, ANS 493, CSS 493, EEP 493, FIM 493, FW 493, HRT 493, PKG 493, PLP 493, PRR 493, and RD 493. SA: PRM 493

Supervised professional experience in agencies, organizations or businesses related to environmental economics and policy.

## ENVIRONMENTAL ENGINEERING

### Department of Civil and Environmental Engineering College of Engineering

- 427 Environmental Toxicology and Society**  
Spring of odd years. 3(3-0) Interdepartmental with Animal Science; Sociology. Administered by Department of Animal Science. RB: (ISB 200 or ISB 202 or ISB 204 or ISB 206H or BMB 200 or BS 111 or BS 110)  
Impact of environmental chemicals on health and modern society. Cellular and organ functions and their interface with the environment. Limitations of scientific investigation and environmental regulations.
- 800 Environmental Engineering Seminar**  
Fall, Spring. 1(1-0) R: Open only to Environmental Engineering majors.  
Current research in environmental engineering.
- 801 Dynamics of Environmental Systems**  
Spring. 3(3-0)  
Principles of mass balance, reaction kinetics, mass transfer, reactor theory in environmental engineering.
- 802 Physicochemical Processes in Environmental Engineering**  
Fall. 3(3-0) RB: (ENE 801)  
Physical and chemical principles of air and water pollution control and environmental contaminants in water, air and soils.
- 804 Biological Processes in Environmental Engineering**  
Fall. 3(3-0) RB: (ENE 801 or concurrently)  
Engineering of microbial processes used in wastewater treatment, in-situ bioreclamation, and solid waste stabilization.

- 806 Laboratory Feasibility Studies for Environmental Remediation**  
Spring. 3(2-4) RB: (ENE 802 and ENE 804) R: Open only to graduate students in Environmental Engineering, Environmental Engineering-Environmental Toxicology, and Environmental Engineering-Urban Studies. Not open to students with credit in ENE 803 or ENE 805.

Analysis and characterization of contaminants in soil or water. Conceptual and preliminary design of treatment systems. Use of treatability studies to evaluate treatment options. Oral presentations and preparation of consulting reports with design recommendations.

- 807 Environmental Analytical Chemistry**  
Fall. 3(3-0) R: Open only to Environmental Engineering majors.

Techniques for measurement and analysis in environmental engineering. Sample preparation. Quality assurance.

- 808 Environmental Analytical Chemistry Laboratory**  
Spring. 1(0-3) RB: (ENE 807) R: Open only to Environmental Engineering majors.

Laboratory work in environmental analytical chemistry.

- 880 Independent Study in Environmental Engineering**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Environmental Engineering majors.

Solution of environmental engineering problems not related to student's thesis.

- 890 Selected Topics in Environmental Engineering**  
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to Environmental Engineering majors.

Selected topics in new or developing areas of environmental engineering.

- 892 Master's Research Project**  
Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 5 credits in all enrollments for this course. R: Open only to master's students in the Environmental Engineering major. Approval of department.

Master's degree Plan B individual student research project. Original research, research replication, or survey and reporting on a research topic.

- 899 Master's Thesis Research**  
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 24 credits in all enrollments for this course.

Master's thesis research.

- 999 Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 72 credits in all enrollments for this course.

Doctoral dissertation research.