ENGLISH PEN ENGINEERING

Department of Civil and Environmental Engineering
College of Engineering

429 Environmental Toxicology and Society
Spring of odd years. 3(3-0) Interdepartmental with Animal Science, Sociology, Administration by Department of Animal Science. RB: (ISB 200 or ISB 202 or ISB 204 or ISB 206 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.

810 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.

811 Introduction to 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.

822 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.

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.

EPI—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.