453 Women and Work: Issues and Policy **Analysis**

3(3-0) Interdepartmental with Spring. Economics; Women's Studies. RB: (EC 201 or EC 202 or EEP 201 or concurrently) R: Not open to freshmen or sophomores.

Current and past quantity and quality of women's participation in the labor force. Gender differentials in earnings and occupations. Employment discrimination. Laws, especially affirmative action laws. Social policy effects. International issues.

Theory and Practice in Community and 470 **Economic Development**

3(3-0) Interueption Development; Interdepartmental with Sociology. Resource Administered by Department of Resource Development. P:M: (EC 201 or EC 202) SA: PRM 470

Concepts, principles, models, and skills for community and economic development. Community participation in local development initiatives.

Independent and Supervised Study

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 7 credits in all enrollments for this course. P:M: (EEP 201 or EEP 255) R: Open only to Environmental Economics and majors. Approval of department; application required. SA: PRM 490

In-depth independent study of topics affecting public management. Complementary resource previous coursework, adapted to career aspirations.

Professional Internship in Public Resource Management

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (EEP 201) 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 and businesses related to public resource management.

ENVIRONMENTAL ENGINEERING ENE

Department of Civil and **Environmental Engineering** College of Engineering

Environmental Toxicology and Society

3(3-0) odd years. 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 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.

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.

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

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. 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.

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.

Master's Research Project 892

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.

893 Master's Design Project

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 3 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 environmental engineering design project. student

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.

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.

EPI EPIDEMIOLOGY

Department of Epidemiology College of Human Medicine

Disease in Society: An Introduction to **Epidemiology and Public Health**

Spring. 3(3-0) Interdepartmental with Social Science.

Human epidemiology and population health issues facing contemporary society, in both developed and less developed settings. Health-related information in the mass media and scholarly publications.

Readings in the Historical Roots of Epidemiological Thought

Fall. 3(3-0) Interdepartmental with History. Historical evolution of models of disease causation and population perspectives on disease.

806 Workshop in History of Public Health

Spring. 3(3-0) Interdepartmental History.

Historical reasoning, research and writing on a significant event or theme in history of epidemiology and public health.

810 Introduction to Descriptive and

Analytical Epidemiology
Fall. 3(3-0) R: Open only to master's students in the Epidemiology major or approval of department. SA: HM 810

Study of disease from a population perspective as the interaction of host, agent, and environment. Fundamental concepts include case definition, measuring frequency of disease, mortality and morbidity data, and major study designs.