

ENVIRONMENTAL SCIENCES (ESCI)

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ESCI Courses

ESCI 500. Individual Study. 1-4 units

Term Typically Offered: F, W, SP

Prerequisite: Consent of instructor.

Advanced independent study planned and completed under the direction of a member of the NRES department faculty. Open only to graduate students who have demonstrated ability to do independent work. Total credit limited to 16 units; with a maximum of 4 units per quarter. Formerly NR 500.

ESCI 501. Research Planning. 4 units

Term Typically Offered: F, W

Prerequisite: Senior standing.

Problem solving and research planning for agriculture, natural resources and related sciences. Preparation of study plans that identify problems, review appropriate literature, formulate objectives, develop methods and provide for presentation and interpretation of results. Oral reports. 4 lectures. Formerly SS 501.

ESCI 502. Research Methods and Data Analysis. 4 units

Term Typically Offered: W

Prerequisite: Graduate standing or consent of instructor; ESCI 501; and STAT 217.

Quantitative and qualitative survey of research methods for environmental science and management including research design, sampling, data collection, analysis, and interpretation. 3 lectures, 1 laboratory.

ESCI 539. Graduate Internship in Environmental Sciences and Management. 2-4 units

Term Typically Offered: F,W,SP,SU

CR/NC

Prerequisite: Graduate standing.

Independent internship experience conducted under faculty supervision focusing on a discipline area of environmental science/management. Total credit limited to 4 units. Credit/No Credit grading only. Minimum of 60-120 hours required.

ESCI 550. Advanced Environmental Science. 4 units

Term Typically Offered: F

Prerequisite: Graduate standing or consent of instructor. Recommended: An environmental science/management course.

Advanced study of earth system processes and environmental problems. Advanced application of systems thinking to study of energy, geologic systems, groundwater and surface water resources, soils, environmental pollution and degradation, atmospheric and ocean dynamics, and the global climate system. 3 lectures, 1 activity.

ESCI 575. Teaching Strategies for College Environmental Sciences Laboratories. 2 units

Term Typically Offered: F, W, SP

Prerequisite: Graduate standing.

Concepts of teaching and learning related to instructor performance in college environmental science and natural resources laboratory classes. Introduction to teaching strategies, managing a classroom, writing laboratory exercises and quiz questions, science pedagogy for the laboratory, and laboratory/field safety. Total credit limited to 6 units. 2 seminars.

ESCI 581. Graduate Seminar in Environmental Sciences. 2 units

Term Typically Offered: SP

Prerequisite: Consent of instructor.

Student study and presentation of selected developments, trends and problems in environmental science, forest and natural resources, earth and soil sciences, and environmental management. Total credit limited to 4 units. 2 seminars. Formerly NR/SS 581.

ESCI 590. Advanced Environmental Management. 4 units

Term Typically Offered: W

Prerequisite: Graduate standing or consent of instructor; and ESCI 501.

Recommended: An environmental science/management course.

Scientific principles of environmental issues and environmental management practices focusing on sustainable development and systems thinking centered around the health of humans and ecosystems. Analysis of fundamental and emerging environmental factors that impact management practices. 3 lectures, 1 activity.

ESCI 596. Environmental Sciences and Management Project. 5 units

Term Typically Offered: SU

Prerequisite: Graduate standing or consent of instructor; ESCI 502; ESCI 550; ESCI 581; and ESCI 590.

Individual research or study toward a professional project that leads to an improved understanding of the physical environment, solution of an environmental problem, natural resources management, or an improved interaction between society and the natural environment. Course may be offered in classroom-based or online format. 5 lectures.

ESCI 599. Thesis. 1-9 units

Term Typically Offered: F,W,SP,SU

Prerequisite: Consent of instructor.

Individual research in environmental science, environmental management under the general supervision of faculty, leading to a graduate thesis. Degree credit limited to 9 units. Formerly NR 599.