

Environmental Science & Policy (ENV S&P)

Courses

ENV S&P 701. Perspectives in Environmental Science and Policy. 1 Credit.

Introduces new Environmental Science & Policy graduate students to program requirements, expectations, resources, and faculty members.

P: graduate status

Fall and Spring.

ENV S&P 702. Stable Isotopes in the Environment. 1 Credit.

Stable isotope analysis has become a standard tool in the sciences. The natural variability in non-radioactive (stable) isotopes corresponds to specific physical and biological processes throughout the global Earth System. This course explores the basics of stable isotope chemistry, with most of the course dedicated to examples of their application across several scientific fields.

P: None. REC: CHEM 211 and CHEM 212

Spring Odd.

ENV S&P 703. Critical Minerals for Green Energy. 1 Credit.

Humanity is dependent on energy to thrive in the modern world; however, "Green Energy" technologies require more critical minerals than traditional energy sources. This course explores the geology and geography of these minerals, their clean energy uses, and the environmental, political, and social consequences of their extraction. Students will read, evaluate, and discuss peer-review papers, government reports, and other relevant sources.

Spring Odd.

ENV S&P 715. Seminar in Environmental Science and Policy. 1 Credit.

The primary objective of this seminar is to provide a forum for discussing current ideas and issues in environmental science, environmental policy, ecology, evolutionary biology, environmental education and other topics related to the graduate program. The course also provides an opportunity for students and faculty to interact in an informal environment. The overall goal is to help students become more comfortable in the ability to articulate and express opinions and ideas about current scientific topics. Course is repeatable for credit; may be taken 3 times for a total of 3 earned credits.

Fall and Spring.

ENV S&P 724. Hazardous and Toxic Materials. 3 Credits.

The handling, processing, and disposal of materials which have physical, chemical, and biological properties that present hazards to human, animal, and plant life; procedures for worker safety and for compliance with regulations. The metals and nonmetals, carcinogens, radioactive materials, and pathogenic human, animal, and plant wastes.

P: Graduate status

Spring Odd.

ENV S&P 727. Radioactivity and the Environment. 3 Credits.

Radioactive isotopes play a significant role in many aspects of the natural and human environments. People are affected throughout their lives by natural and anthropogenic isotopes at local, national, and global scales. From radon in houses and radium in local drinking water supplies to fallout from Chernobyl, humans and the natural environment are directly impacted through health, economic, and technological pathways. We will discuss the science behind radioactivity and the issues that affect our society.

REC: high school chemistry or Earth science

Fall Even.

ENV S&P 731. Freshwater and Marine Policy & Law. 3 Credits.

This course examines fisheries policy, law, and administration in both freshwater and marine ecosystems. It covers environmental and administrative decision-making and various contemporary fisheries resource management problems and conflicts.

Fall Even.

ENV S&P 732. Wildlife Law and Policy. 3 Credits.

This course examines wildlife policy, law, and administration from multiple perspectives. It covers environmental and administrative decision-making and various contemporary resource management problems and conflicts.

Fall Odd.

ENV S&P 740. Ecology and Management of Ecosystems. 3 Credits.

This course addresses our current scientific understanding of ecosystems, and the application of this knowledge for the sustainable management of both human dominated and natural ecosystems and the biodiversity that they support.

P: gr st.

Spring Even.

ENV S&P 743. Ecology and Analysis of Communities and Landscapes. 3 Credits.

Community and landscape ecology move beyond the consideration of single species and their populations, emphasizing interactions among species and variation in space and time. Concepts and methods will be studied through lectures, readings, discussions, and practical analytical applications.

P: gr st; REC: prior cse in ecological studies and statistics.

Spring Odd.

ENV S&P 750. Fish and Wildlife Law and Policy. 3 Credits.

This course examines fisheries and wildlife policy, law, and administration from multiple perspectives. It covers environmental and administrative decision-making and various contemporary resource management problems and conflicts.

P: None. REC: ENV S&P 752

Fall Only.

ENV S&P 752. Environmental Policy and Administration. 3 Credits.

The political and institutional aspects of environmental policy-making and implementation, including issues in environmental policy analysis. Emphasis is on national policy processes in the United States, but attention is given also to global and state and local environmental problems and public policy.

P: gr st.

Fall Odd.

ENV S&P 755. Environmental Data Analysis. 4 Credits.

This course emphasizes the principles of data analysis using advanced statistical software (such as R, SAS, etc.). It employs primarily environmental examples to illustrate procedures for elementary statistical analysis, regression, analysis of variance and nonparametric statistics.

P: intro stats cse and grad st.

Fall Only.

ENV S&P 763. Capstone in Environmental Science and Policy. 3 Credits.

Capstone course of the program in Environmental Science and Policy. This course provides an overview of contemporary topics in global environmental change from the local to global scale, with emphasis placed on scientific evidence, policy approaches, public attitudes, and sustainable solutions. Both policy and scientific aspects of the topics are addressed.

P: major in Ms Env Sci and grad earned cr > or = 17.

Spring.

ENV S&P 767. Environmental Technology and Analysis. 3 Credits.

This course addresses our current scientific understanding of environmental remediation, waste transformation, utilization and disposal, as well as the chemical, biological and geological aspects of ground or surface water systems. Emphasis is on evaluating alternative technologies and strategies for generating ecologically sustainable systems.

P: enrollment in ES&P graduate program or instructor approval

Spring Odd.

ENV S&P 783. VARIABLE CONTENT. 1-4 Credits.

P: gr st.

ENV S&P 795. Special Topics. 1-3 Credits.

Topics vary.

P: graduate status.

ENV S&P 797. Internship. 1-6 Credits.

Field experience in Environmental Science & Policy.

P: gr st and internship proposal on file

Fall and Spring.

ENV S&P 798. Independent Study. 1-3 Credits.

P: gr st.

Fall and Spring.

ENV S&P 799. Thesis. 1-6 Credits.

P: gr st and thesis proposal on file.

Fall and Spring.