ENVIRONMENTAL STUDIES

College of Social Sciences and Interdisciplinary Studies

Program Description

Students learn how to understand environmental challenges and their solutions in the Environmental Studies program. Alongside learning disciplinary knowledge and practice, the degree teaches skills in research, evaluation, communication, cooperation, and service. The program offers a BS and a BA major. Both teach environmental issues in their scientific, social, legal, and political context. But the BA has an emphasis on environmental behavior, policy and law, while the BS focusses on environmental issues as scientific problems.

The program also offers a Minor that is designed to be useful to other majors, particularly: Engineering and Construction Management, Health Science and Services, Business and Economics, Education, Political Science, Sociology and Psychology. We also assist students who want to construct special majors and identify courses in other departments that concern themselves with environmental questions.

Graduates are typically employed as natural or social scientists, technicians, planners or policy-makers in state, federal, and local government, non-profit organizations (like The Nature Conservancy, Audubon Society, and Sierra Club), private consultancies, or industry. A few have created their own careers in such areas as organic farming, managing cooperatives, and social action in community-based organizations. Some graduates become teachers in elementary, middle or high schools, and universities.

The careers of graduates span an extraordinary diversity of fields including food and agriculture, fish and wildlife, pollution and toxic substances, forestry and fire, air and water resources, recycling and recovery, and environmental consulting or education, advocacy, enforcement, and regulation.
Environmental Studies students often go on to professional and graduate schools in such fields as law, public health, ecology, engineering, journalism, economics, political science, public administration, education, and environmental policy-making.

Degree Programs

BA in Environmental Studies (https://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/environmental-studies/ba-in-environmental-studies/)

BS in Environmental Studies (https://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/environmental-studies/bs-in-environmental-studies/)

Minor in Environmental Studies (https://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/environmental-studies/minor-in-environmental-studies/)

Minor in Sustainability (https://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/environmental-studies/minor-sustainability/)

Special Features

- Sacramento, as the state capital, offers excellent opportunities for study and employment. One of several ways to incorporate these opportunities into a student's academic program is through Environmental Studies internship experiences. The Major offers an Internship program to provide career-relevant experience for students and assist their transition to employment. Students find internships with a remarkable array of government agencies, non-government organizations, businesses and community groups.
- The faculty also carries on a field study program to introduce students to as many features as possible of the extraordinarily varied Northern California region.
- Faculty in the Environmental Studies Department represent disciplines including Biology, Ecology, Toxicology, Political Science, Environmental Engineering, among others.

Career Possibilities

Environmental Analyst · Pollution Analyst · Pollution Measurement Technician · Environmental Planner · Naturalist · Environmental Consultant · Energy Conservation Specialist · Environmental Journalist · Environmental Health Specialist · Lobbyist · Environmental Educator · Environmental Economist · Recycling Coordinator · Hazardous Materials Specialist · Legislative Researcher · Water Quality Technician · Park Interpretative Specialist · Transportation Planner · Waste Management Specialist · Levee Management Specialist · Conservation Analyst · Environmental Investigator · Environmental Interpreter · Environmental Resource Planner · Park Ranger · Permitting Officer · Ranger · Habitat Assessment Specialist · Environmental Compliance Officer · Legislative Aide · Air Pollution Specialist · Energy Manager · Game Warden · Wildlife Manager · Hazardous Waste Specialist · Pollution Prevention Specialist · Compliance Program Manager · Community Education Officer · Environmental Health and Safety Officer · Mosquito Control Technician · Public Works Program Manager · Water Conservation Manager · Environmental Impact and Review Assessment · Environmental Scientist · Environmental Policy Analyst

Contact Information

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Faculty

FLOWERS, CHRISTINE

FULTON, JULIAN

GAO, SI

GOLDSTENE, JAMES

LINKLATER, WAYNE

PAPOUCHIS, CHRISTOPHER

POPEJOY, GREGORY

REEDE, JAMES

SINGH, AJAY

ENVS 10. Introduction to Environmental Science. 3 Units
General Education Area/Graduation Requirement: Biological Science (5-B)
Term Typically Offered: Fall, Spring, Summer

This course introduces students to environmental science and the interdisciplinary field of environmental studies. The primary focus of the course is the earth, its ecosystems, and the influence of humans on ecosystems. Students will acquire a basic understanding of the types, structure, and function of ecosystems, the role of human activity in ecosystems, and the tools used to measure and manage human impacts.

ENVS 10H. Honors Environmental Science. 3 Units
General Education Area/Graduation Requirement: Biological Science (5-B)
Term Typically Offered: Fall, Spring, Summer

The earth as an ecosystem composed of biological, chemical, and physical systems. Focus is on the interaction of these systems with each other and with human population, technology, and production. Students should acquire the fundamentals of a scientific understanding of the ecological implications of human activities. Specific topics treated within the context of the ecosystem analysis include energy flows, nutrient cycles, pollution, resource use, climate change, species diversity, and population dynamics. Students read important original research on topics. All students participate in a semester long project that applies the principles.

ENVS 11. Environmental Issues and Critical Thinking. 3 Units
General Education Area/Graduation Requirement: Critical Thinking (1-B)
Term Typically Offered: Fall, Spring

Examines Western cultural values and personal beliefs toward the environment. Teaches critical thinking skills to analyze issues to make informed choices that may impact the earth, its resources and their management as consumers, leaders, professionals and moral agents.

ENVS 21. First Year Seminar: Becoming an Educated Person. 3 Units
Term Typically Offered: Fall, Spring

Introduction to the nature and possible meanings of higher education, and the functions and resources of the University. Designed to help students develop and exercise fundamental academic success strategies and to improve their basic learning skills. Provides students with the opportunity to interact with fellow classmates and the seminar leader to build a community of academic and personal support.

ENVS 110. Contemporary Environmental Issues. 3 Units
Term Typically Offered: Fall, Spring

Examination of a variety of environmental issues with emphasis on the social aspects of the problems and solutions. The class is conducted primarily through discussion, with an unusually high degree of student responsibility. Group and individual projects are designed to involve students in community affairs as well as to give them an opportunity to develop a personal perspective on environmental issues.

ENVS 111. Environmental Ethics. 3 Units
Prerequisite(s): ENVS 10 or ENVS 10H or ENVS 11 or permission from instructor.
General Education Area/Graduation Requirement: Humanities (3-B)
Term Typically Offered: Fall, Spring

Consideration of the ethical dimensions of human interactions with the natural world and with each other in the context of complex societal needs. Students will employ critical thinking skills to integrate insights from the biological sciences, social sciences, and humanities to make ethical decisions about controversial environmental topics. Students are encouraged to examine multiple perspectives on these issues through debate, discussion and personal reflection. No prior experience with philosophy is required.

ENVS 112. International Environmental Problems. 3 Units
Prerequisite(s): Environmental Studies major; Junior standing; a WPJ Portfolio score OR ENGL 109M or ENGL 109W
General Education Area/Graduation Requirement: Writing Intensive Graduation Requirement (WI)
Term Typically Offered: Fall, Spring

Global perspective on current problems of environmental protection and resource use. Population growth, food production, industrialization, technology and cultural change are considered, with heavy emphasis on the social dynamics of environmental problems. A variety of political views is studied, and an attempt is made to develop a perspective useful to students in personal and political decisions.
Note: PCR/IR students are encouraged to contact the department regarding enrollment into this course.

ENVS 120. Quantitative Methods for Environmental Science. 3 Units
Prerequisite(s): Must be an ENVS major or minor; STAT 1 or instructor permission.
Term Typically Offered: Fall, Spring

Research tools and methods used by environmental professionals including selected statistical procedures, data sources and presentation and interpretation of results. Students will become familiar with the wide range of equipment available to fit their special needs including the computer time-sharing system.

ENVS 121. Field Methods in Environmental Science. 2 Units
Prerequisite(s): Must be an ENVS major or minor
Term Typically Offered: Fall, Spring, Summer

This field course includes the direct observation of human impact on specific environments and examples of mitigation strategies. Students will learn information gathering and data presentation methodologies useful in environmental impact assessment. Lecture three hours per week; one-day and weekend field trips will be arranged.
Note: Course also substitutes for ENVS 175.

Field trip(s) may be required.

ENVS 122. Environmental Impact Analysis: CEQA and NEPA. 3 Units
Term Typically Offered: Fall only

Review of legislative and judicial requirements for environmental impact analysis. Students will be asked to review actual project environmental impact reports, analyze the methods employed, understand the relationship of the report to the planning process, and prepare such a document.
Note: It is recommended that students complete ENVS 128 or have some actual experience with environmental impact documentation before taking this course.

ENVS 128. Environment and the Law. 3 Units
Term Typically Offered: Spring only

Introduction to environmental law, including: the evolution of environmental legislation, environmental issues in the court system, environmental regulation and administrative law, and environmental torts. Emphasis is on understanding legal process and the special challenges environmental problems present to the legal system.
Cross Listed: POLS 128; only one may be counted for credit.

ENVS 130. Environmental Toxicology. 3 Units
Prerequisite(s): CHEM 1A or CHEM 6A or instructor permission.
Term Typically Offered: Spring only

Students will study the source and occurrence of contaminants in the environment; their fate and transport; and their adverse effects on humans and non-human species, populations and ecosystems. The course focuses on studying environmental issues concerning human and ecosystem health, the impact of human activity since World War II in contributing to human disease and ecosystem disruption. Risk perception and communication as it concerns environmental toxicology will also be discussed.

ENVS 135. California Water and Society. 3 Units
Term Typically Offered: Fall, Spring

This course provides the historical, scientific, legal, institutional, and economic background needed to understand the social and ecological challenges of providing water for California's growing population, agricultural economy, and other uses- all of which are made more complex by climate change. We will look at past and current debates around cases ranging from local issues on the American River to statewide issues that converge in the Sacramento-San Joaquin Delta. Both physical and social science research skills will be developed.

ENVS 137. Conservation and Society. 3 Units
Prerequisite(s): ENVS 10 or ENVS 10H, and BIO 1
Term Typically Offered: Fall, Spring, Summer

Course will introduce students to the interdisciplinary field of conservation biology through the lens of modern society. Students will acquire a basic understanding of the history of the field of conservation, and the values that drive our desire to preserve species and natural systems. Students will learn about conservation challenges, will analyze the scientific and social factors that contribute to addressing those challenges, and will learn to appreciate the diverse perspectives that are vital in modern conservation.

ENVS 138. Introduction to Environmental Sociology. 3 Units
Term Typically Offered: Fall, Spring

The study of human society, the natural environment, and their mutual interactions. Examines environmental sociology at several levels, from the micro level of individual communities to the meso level of government policies to macro theoretical considerations. Analyzes environmental issues in a global context also included.
Cross Listed: SOC 138.

ENVS 140. Energy, Society, and the Environment. 3 Units
Prerequisite(s): Upper division standing
Term Typically Offered: Fall, Spring

This course covers the concepts and tools necessary to understand society's diverse technology and policy choices around energy production and use. Students will apply both quantitative and qualitative methods to analyze opportunities and impacts of energy systems with consideration for environmental sustainability, international development, and social equity. We will consider a range of energy technologies, their historical trajectories, current drivers, and prospects for addressing energy challenges at different scales, from households to the global climate.

ENVS 144. Sustainability Science & Policy. 3 Units
Prerequisite(s): ENVS 10, BIO 1, or instructor permission
Term Typically Offered: Fall, Spring

Examines issues of environmental, social, and economic sustainability in domestic and international contexts. Students will study the science, policy, and implementation of sustainable practices regarding water, food, and energy resources. Students will learn the history of sustainability, definitions of sustainability, how sustainability is measured, and how sustainability applies to urban and rural landscapes.

ENVS 147. Urban Agriculture and Aquaponics. 3 Units
Term Typically Offered: Fall, Spring

This course uses campus initiatives in food and bio-waste recycling, combined with vermiculture and aquaponics, to address larger topics in urban food production. This subject has significance for addressing concerns about food access, security, quality, and even local economic development. The course will include hands-on activities on campus, projects with local urban agriculture organizations, and reports connecting the specifics of the course with core questions in environmental science and policy

ENVS 149. Agroecology. 3 Units
Term Typically Offered: Fall, Spring

Ecological aspects of the production of food and fiber, with emphasis on the sustainability and adequacy of the global food supply to meet the needs of a growing, urbanized population. Covers topics basic to all agricultural systems - soil development, fertility, irrigation, nutrient cycles, crop selection - while contrasting methods developed for large-scale industrial food production with traditional and/or organic farming methods.
Note: Required field trips.

Field trip(s) may be required.

ENVS 150. Soil Science & Sustainability. 3 Units
Term Typically Offered: Fall, Spring, Summer

Soil is the Earth¿s fragile skin that anchors all life. This course will cover the chemical, physical, and biological properties of soils, the formation and distribution of soils, and the functions of soils in participating major ecological processes. The course also explores issues and societal challenges underlying soil degradation, discusses exemplary sustainable soil health management and conservation practices, and addresses the interrelatedness of responsible soil use and climate mitigation.

ENVS 151. Restoration Ecology. 3 Units
Term Typically Offered: Spring only

Overview of concepts and practices in restoration ecology, emphasizing the application of ecological principles to restoration design, implementation, and monitoring. Major course topics will include historical ecology, soils and hydrology, plant and animal ecology, exotic species, endangered species concerns, mitigation, monitoring, planning, and assessment as they apply in a restoration context. Students will work in local restoration projects; field trips required.
Field trip(s) may be required.

ENVS 155. Environmental Management and Decision-Making. 3 Units
Prerequisite(s): ENVS 10 or the equivalent, or instructor permission.
Term Typically Offered: Fall only

Course investigates the motivations and barriers to engaging in pro-environmental behaviors. Focus on theories from multiple social and behavioral sciences to understand how individuals form judgments and decisions regarding natural resource and ecosystem management. Specific topics may include principal-agent theory, dual-process theory, multi-criteria decision-making, theory of planned behavior, norm-value-belief, community-based social marketing, and structured decision-making. Students will build skills in stakeholder engagement and science communication.

ENVS 158. Wetlands Ecology. 3 Units
Term Typically Offered: Fall only

Introduces and discusses characteristics of wetland systems; principles of wetland ecology; functions of wetlands; and regulations and permitting process regarding development near and within wetlands. Appropriate for students planning careers in natural resource management. Though not a substitute for professional training in wetlands delineation and functional assessment, students will gain a basis for such assessments. Familiarity with basic principles of chemistry, physics, and biology recommended.
Note: Field trips required.

Field trip(s) may be required.

ENVS 163. Ethnoecology. 3 Units
General Education Area/Graduation Requirement: Biological Science (5-B)
Term Typically Offered: Fall only

Evaluates sustainable management of ecosystems by local indigenous people, using traditional resource management, traditional ecological knowledge and Western science. Familiarizes students with the fields of ethnobiology, ethnoecology, and historical ecology. Students learn about the relationship between people and plants, with a focus on how traditional plant knowledge reflects and is reflected by environmental perceptions.
Note: Field Trip. Required field trip to Chawse Indian Grinding Rocks State Park. Fee Course. $15 per student.

Fee course.
Field trip(s) may be required.

ENVS 165. American Environmental History. 3 Units
General Education Area/Graduation Requirement: Social and Behavioral Sciences (4-A)
Term Typically Offered: Fall, Spring

Traces the development of the changing relationship between human society and the natural environment. Focuses on changing attitudes and behaviors toward the environment from the pre-colonial era through the present. Also examines the relationship between industrialization and the technological revolution and nature and examine past and present conservation and environmental movements.
Cross Listed: ENVS/HIST 165; only one may be counted for credit.

ENVS 170. Environmental Justice. 3 Units
Prerequisite(s): ENVS 10 or ENVS 10H or ENVS 11 or instructor permission.
Term Typically Offered: Fall, Spring, Summer

This course introduces students to environmental justice issues, and underrepresented perspectives and experiences. They are examined through a lens of social dynamics inherent to, or inspiring, environmental movements. Critical thinking skills will be applied to complex and challenging realities. The class seeks to deconstruct commonly-held notions of the environment, privilege and class, and government policy to deepen understanding. Students are offered opportunities to collaborate on projects, contribute to ongoing discussions, and reflect upon their own experiences within real-world scenarios.

ENVS 171. Environmental Politics and Policy. 3 Units
Prerequisite(s): instructor permission.
Term Typically Offered: Spring only

Politics of human interaction with land, air and water. Political analysis of agenda setting, policy formation and administration (national, state and local) of environmental programs. Focus on contemporary issues such as energy alternatives, management of toxics, land development, and pollution control. Course also substitutes for ENVS 128.
Cross Listed: POLS 171; only one may be counted for credit.

ENVS 175. Aquatic Pollution Assessment. 3 Units
Prerequisite(s): BIO 160, CHEM 1A or concurrent enrollment; or instructor permission.
Term Typically Offered: Fall, Spring

Examines both the negative and positive impacts that anthropogenic effects have on groundwater, streams, and lakes by utilizing the application of field sampling techniques and laboratory analysis currently used to assess pollution impacts. Introduces the interrelationships among plants, animals and environmental factors within polluted aquatic ecosystems. Emphasizes laboratory and field procedures used in strategies taken to assess and manage these impacts.
Note: Course also substitutes for ENVS 121.

ENVS 186B. Ecological and Environmental Issues Seminar. 1 Unit
Prerequisite(s): BIO 10 or both BIO 1 and BIO 2.
Term Typically Offered: Fall, Spring

Series of at least 10 seminars in ecological and environmental issues. Topics with each seminar will vary each semester.
Note: May be repeated for credit. No more than one unit of ENVS 186B may be counted toward the upper division major requirement. Cross Listed: BIO 186B; only one may be counted for credit.

Credit/No Credit

ENVS 187. Environmental Studies Seminar. 1 Unit
Term Typically Offered: Fall, Spring

Students will participate in the semester-long University seminar and will be exposed to a variety of environmental issues and topics presented by speakers from CSUS, the USGS, government and professional organizations, among many others. Topics include issues such as climate change, water use and conversation, environmental sustainability, environmental policy and decision-making, and many important regional issues.
Credit/No Credit

ENVS 190. Senior Thesis. 3 Units
Prerequisite(s): ENVS 112 (International Environmental Problems, writing intensive), or instructor permission.
Term Typically Offered: Fall, Spring

Explores an environmental problem or issue in great depth. It includes a detailed review of the scientific literature, synthesis, and integration of information from the literature, and evaluation of the information leading to conclusions and recommendations that address the problem or issue. Thesis subjects are chosen by the student and can be from a myriad perspectives addressed in the Environmental Studies curriculum including scientific, social, political, economic, and cultural issues. Enrollment ordinarily occurs in a senior's final semester.
Note: The course is usually taken in a student's final semester but might be taken in the penultimate semester with the instructor's permission.

ENVS 195. Environmental Studies Internship. 3 Units
Term Typically Offered: Fall, Spring

Supervised work experience in an approved legislative or administrative office at some level of local, state or federal government, or in a public or private organization that is concerned with the environment. Supervision is provided by the faculty instructor and responsible officials in the work situation.
Note: Open to majors only, subject to instructor permission.

Credit/No Credit

ENVS 195M. Mini Internship. 1 Unit
Term Typically Offered: Fall, Spring

This introductory work experience is designed for sophomores and juniors. The student must complete 45 hours of environmentally related work in a volunteer position with an environmental organization or participation in an environmentally focused event. Supervision is provided by the faculty instructor and responsible officials in the work situation.
Note: Open to majors only, subject to instructor permission.

Credit/No Credit

ENVS 196G. Youth Recreation in Camp Settings. 3 Units
This course examines camp programs in a wide variety of settings, for a variety of populations. Topics cover camp theories, camp management, risk-management, activity planning, inclusive programming, and staff training. Includes an emphasis on leadership, supervision, and organizational development of camp programs. Course uses lecture, field experiences, guest speakers, and service learning.

ENVS 199. Special Problems. 1 - 3 Units
Term Typically Offered: Fall, Spring

Individual projects or directed reading.
Note: Open only to students who are competent to carry on individual work. Admission requires permission of the Director and the faculty member who will direct the work.

Credit/No Credit

ENVS 200. Research Design and Methods in Environmental Science and Studies. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring

This course is designed to provide an understanding on how to develop research in the environmental sciences and studies. This will include an overview of the philosophy of science, interdisciplinary research approaches, creating research questions, literature searches, research design (sampling methods), and managing and analyzing data and representation in written form. Students will develop a research question and develop a literature review of current theory and research methods used to answer the question.

ENVS 210. Environmental Data Science. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring

This course introduces the field of data science in environmental research to help students develop skills and techniques to solve environmental problems. Students are introduced to various techniques to analyze and communicate environmental data through use of software for searching, cleaning, managing, and analyzing data. By the end of the course students will be able to: design a research proposal, develop environmental datasets, analyze environmental data, and communicate environmental data analysis through written and verbal methods.

ENVS 211. Seminar in Environmental Ethics. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring, Summer

This course is an exploration of the moral and philosophical dimensions of human interactions with the natural world. Students critically engage with complex ethical dilemmas and emerging ethical principles, theories, and frameworks. Through rigorous critical analysis, discussion and research, students develop advanced skills in ethical reasoning and apply them to pressing challenges in socio-ecological systems. Development of personal and professional ethics is emphasized as students attend to questions of value, duty, and the ethical implications of environmental decision-making.

ENVS 230. Environmental Policy Analysis. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring

This course is a foundational policy course in the graduate program and will introduce graduate students to theory and methods for environmental policy design and assessment. Students will gain an understanding of core concepts in economics and public policy related to understanding environmental decision-making. The course will evaluate the evolution of environmental policy analysis in the U.S., including key markers in federal and state environmental policies, the development of sustainability frameworks, and the emergence of ecological economics and regenerative concepts.

ENVS 232. Fish and Wildlife Law and Policy. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring

This course focuses on US federal and California state fish and wildlife law, policy, programs including their relations to international treaties. The course provides overview of case studies of historical, contemporary, and emerging issues. Students will gain understanding of state and federal laws, policies, and programs as well as an understanding of collaborative partnerships to protect and conserve threatened and endangered species.

ENVS 235. California Water and Society. 3 Units
Prerequisite(s): Graduate standing or Instructor permission.
Term Typically Offered: Spring only

This course provides the historical, scientific, legal, institutional, and economic background needed to understand the social and ecological challenges of providing water for California¿s growing population, agricultural economy, and other uses - all of which are made more complex by climate change. We will look at past and current debates around cases ranging from local issues on the American River to statewide issues that converge in the Sacramento-San Joaquin Delta. Both physical and social science research skills will be developed.

ENVS 236. Climate Change Science and Governance. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring

Climate change is one of the most pressing environmental and social issues of our lifetime. The course will cover the current scientific evidence for climate change, climate science communication, public perception, the role of risk and uncertainty in decision-making, current U.S. and state policies, actions being taken to address the issue, and the ethical dimensions of the policy choices.

ENVS 240. Human Dimensions of Nature Conservation. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring, Summer

Addressing the challenges of nature conservation requires an understanding of people, and the work of the social, alongside the natural, sciences. The course will investigate a diversity of conservation-issue case studies including, but are not limited to, wildlife tourism, criminal harvest, invasive species (so-called), human health, human-animal conflict, and conservation prioritization. The topics will be investigated within a critical scholarly framework that evaluates different worldviews (paradigms), ways of knowing (epistemology), and communication styles (rhetoric) in conservation.

ENVS 245. Solutions to Air Pollution and Climate Change. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring, Summer

This course explores the issues related to air pollution and climate change and the impact they have on the environment, public health, and society. This course explores policy solutions intended to reduce the burden and impact of air pollution and climate change and show the nexus between air and climate science and the political and legislative choices that attempt to address these issues.

ENVS 250. Soils and Global Change. 3 Units
Prerequisite(s): Graduate standing or instructor permission.
Term Typically Offered: Fall, Spring, Summer

This course is designed for students interested in learning basic soil processes as they relate to the larger ecosystem and global processes. The course will cover the soil food web and trophic dynamics, fundamentals of soil biogeochemical cycles, global carbon and nitrogen cycles, greenhouse gas emissions, soil health management practices, the role of soil in providing stability to the terrestrial ecosystems in a changing climate, carbon sequestration and nature-based climate change mitigation strategies.

ENVS 295. Practicum. 2 - 6 Units
Prerequisite(s): Permission of faculty advisor and director.
Term Typically Offered: Fall, Spring

Graduate internship experiences in practical setting.
Note: Open only to graduate students specializing in environmental studies.

Credit/No Credit

ENVS 296. Experimental Offerings in Environmental Studies. 1 - 3 Units
Prerequisite(s): Instructor permission.
Term Typically Offered: Fall, Spring

Courses offered on an experimental basis.

ENVS 299. Special Problems: Individual Study. 1 - 3 Units
Term Typically Offered: Fall, Spring

Individual projects or directed reading.
Note: Departmental petition required.

Credit/No Credit

ENVS 500. Environmental Studies Culminating Experience. 3 Units
Prerequisite(s): Advanced to candidacy or permission of the graduate coordinator.
Term Typically Offered: Fall, Spring, Summer

Supervisory course(s): Students will work with individual faculty to develop culminating project objective(s) and work toward completion of culminating thesis or project.