

# ENVIRONMENT AND SUSTAINABILITY (ENVS)

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## **ENVS 100. Introduction to Environment and Sustainability (GT-SS2). (3 Credits)**

An interdisciplinary, historical analysis of the development of environmental problems, movements, and philosophies. Students apply historical lessons to critically examine sustainable solutions locally and globally. GT-SS2

## **ENVS 197. Special Topics. (1-6 Credits)**

### **ENVS 200. Writing the Environment. (3 Credits)**

Students develop communication skills through presentations and writing on a variety of environmental issues appropriate to a wide variety of audiences. Through environmental essays, writing for nonprofit websites, grant proposals, and other forms of environmental writing, students are introduced to a broad range of skills needed for effective communication. Focus throughout the course on the analysis of arguments and texts further develops students' analytical and communication skills. Prerequisite: ENVS 100, or instructor permission; ENG 103 is recommended.

### **ENVS 210. Introduction to Climate Policy. (3 Credits)**

An introduction to policies and institutions that govern sectors most influential to climate change, including electricity, transportation, land use, and waste management. This class will offer a foundation to understand the actors and governing structures most relevant to climate action planning. Prerequisite: ENVS 100 or instructor permission.

### **ENVS 250. Environmental Justice. (3 Credits)**

This course introduces students to a perspective that understands injustice and inequality as fundamentally linked to environmental problems and outcomes. Students will study contested ideas about privilege, power, and marginalization, while examining their relationship to environmental problems. Prerequisite: ENVS 100 or SOC 101; or instructor permission.

### **ENVS 260. Introduction to Public Lands Management. (4 Credits)**

This course explores the field of public lands and resource management. A regional focus on the Western U.S. integrates with comparative examples from other regions. The course examines histories, current issues, and cultural trends in public lands agencies, as well as policies that govern land management. Prerequisite: ENVS 100 or instructor permission.

### **ENVS 292. Independent Study. (1-3 Credits)**

### **ENVS 297. Special Topics. (1-6 Credits)**

### **ENVS 301. Science of Sustainability and Resilience. (3 Credits)**

A holistic inquiry into how humans might live the next chapter of our history, guided by the ecological principles of sustainability and resilience. Environmental problems and their possible solutions are analyzed critically and quantitatively; field experiences on campus and in the community involve students directly in the application of these principles. Themes include sustainable agriculture, green building, renewable energy, and conservation and restoration. Prerequisites: BIOL 130 and BIOL 135, or instructor permission.

### **ENVS 315. Food Policy & Politics. (3 Credits)**

A review of the key actors and institutions in food and agricultural policy development at the local, state, and national level. The course covers the history of food policy and changes to the agricultural industry. Topics include the politics of nutrition, food as culture, and advocacy efforts to alleviate hunger and attain food justice. Prerequisite: ENVS 100 or instructor permission.

### **ENVS 320. Quantitative Skills for Climate Action Planning. (3 Credits)**

A review of quantitative tools used to measure vulnerability, assess priorities, and evaluate implementation plans for climate action. Skills in data analytics, modeling, and projections will be developed. Prerequisites: MATH 113 or MATH 213, and ENVS 301; or instructor permission.

### **ENVS 325. Introduction to Soil Science. (4 Credits)**

An introduction to soil formation, classification, morphology, chemistry, mineralogy, fertility, biology, and physical properties. Lectures and readings will be complemented by field trips and hands on activities as well as meetings with professionals. This course is suitable for undergraduate students interested in the importance of soils in agriculture, ecosystems, and engineering applications. Prerequisites: ESCI 105, or GEOL 101 and GEOL 105; CHEM 101; and either BIOL 130 and BIOL 135, or BIOL 151; or instructor permission.

### **ENVS 350. U.S. and Western Environmental Politics. (3 Credits)**

An historical and contemporary investigation of U.S. environmental policies with an applied focus on the impact of national policy on the ecosystems and cultures of the American West. Reciprocally, this course traces how public lands agencies, social movements, historical land uses, and diverse cultures in the West shape U.S. environmental policy. Students combine analysis and discussion of major U.S. policies, prominent theories and issues, and student-led environmental service projects to better understand environmental challenges. Prerequisites: ENVS 100, ENVS 200 or ENG 103, ECON 370. Or instructor permission.

### **ENVS 360. Global Environmental Policy. (3 Credits)**

A critical examination of key perspectives, economic and political processes, policy actors, and institutions involved in global environmental issues. Students analyze ecological, cultural, and social dimensions of international environmental concerns and governance as they have emerged in response to increased recognition of global environmental threats, globalization, and international contributions to understanding of these issues. The focus of the course encourages students to engage and evaluate texts within the broad policy discourse on globalization, justice, and the environment. Prerequisites: ENVS 100; ECON 201, ENVS 200 or SCI 202; junior standing or instructor approval.

### **ENVS 370. Water Policy and Politics. (3 Credits)**

Study of the history, politics and institutions related to water policy and administration with comparative reference to different regions of the United States and internationally. Attention is given to the industrial development of the East and the created water resources of the arid West as a way to understand changing social sentiments toward water and water policy. The course also examines water pollution laws and water management. Prerequisites: ENVS 100; ECON 201 or ENVS 200 or SCI 202; junior standing or instructor approval.

**ENVS 373. The Water Planet. (3 Credits)**

An advanced water science course specifically designed for students interested in water related environmental science and policy. Topics include the physical and chemical properties of natural fresh waters and the movement and reservoirs of fresh water within the water cycle. The course includes several hands-on exercises and field experiences where students investigate and analyze natural waters in the Gunnison Basin. Prerequisites: GEOL 101; GEOL 105 and one of the following: CHEM 101 or CHEM 111. Or instructor permission.

**ENVS 375. Seminar in Water Topics. (3 Credits)**

An occasional offering that may include water topics in politics and policy, ethics and philosophy, or science. Prerequisite: ENVS 200 and ENVS 301, or instructor permission.

**ENVS 376. The Colorado Water Workshop. (1 Credit)**

A three-day annual conference bringing students together with a variety of water users, managers, ranchers, environmentalists, regulators and others involved in water issues for presentations and discussion on matters ranging from specific municipal or water district projects to major basin-wide planning for the great rivers of the West to global issues of water use and protection. Topics vary from year to year. Prerequisite: ENVS 350 and ENVS 370, or instructor permission.

**ENVS 380. Advanced Climate Policy. (3 Credits)**

An advanced examination of climate change governance, which may include a focus on any one of the sectors most influential in shaping climate change including electricity, transportation, land use, and/or waste management. Designed as a work-shop style deep dive into a particular policy, or policies, this class prepares students to engage in policy analysis and advocacy. Prerequisite: ENVS 210; or instructor permission.

**ENVS 385. Sustainable Agriculture & Food Production. (4 Credits)**

An introduction to the skills, tools, and tactics required for sustainable food production, including raising vegetables and managing livestock. This applied course involves hands-on experience with crop and livestock planning, operation design, soil health management, pest control, and distribution strategies. Prerequisite: ENVS 100. Prerequisite or Co-requisite: ENVS 325. Or instructor permission.

**ENVS 390. Environmental Monitoring. (4 Credits)**

A field-work based study of local (Gunnison Basin) environmental problems. Numerous monitoring techniques are implemented based on principles of biology, chemistry, and geology. The emphasis is on collaborative and integrative group projects dealing directly with real-world environmental problems. Prerequisites: ENVS 301 and one of the following: ECON 216, MATH 113, MATH 213, or SOC 211. Or instructor permission.

**ENVS 392. Independent Study. (1-6 Credits)****ENVS 397. Special Topics. (1-6 Credits)****ENVS 399. Environment and Sustainability Internship. (1-6 Credits)****ENVS 400. Applied Sustainability. (3 Credits)**

A field-based, collaborative, problem-solving experience that addresses a current issue in environmental sustainability. Implementing frameworks such as resilient and systems thinking, students collect information, analyze results, write a report, publicly present their findings, and begin to implement solutions informed by their analysis. Students learn basic skills for transforming their ENVS education into compelling environmental professional career possibilities. Prerequisites: ENVS 350 and ENVS 390; or instructor permission.

**ENVS 410. Environmental Ethics. (3 Credits)**

A seminar on the complexities of environmental issues from a philosophical perspective. The course also offers a survey of the evolution of environmental moral philosophy as well as in-depth analysis of major thinkers in the field. Students confront ethical concerns from both historical and personal perspectives, with an emphasis on the ability to critically evaluate and apply these perspectives to their work in environmental fields. Prerequisite: ENVS 301 and 350; or PHIL 335; or instructor permission.

**ENVS 420. Natural History of the Gunnison Basin. (3 Credits)**

An overview of place-based natural history, current ecological research, and current environmental issues facing the region. Prerequisites: ENVS 100 and instructor permission.

**ENVS 430. Watersheds of the World. (3 Credits)**

This field course is designed to provide students with an introduction to important science and policy issues in selected watersheds throughout the world. Students receive an overview of place-based natural history, current ecological research, and current environmental issues and policy facing the region. Examples include the local and global effects of resource extraction, tourism, air and water pollution, land use changes, and global climate change. This is an expedition course (approximately 3 weeks) and is experiential in nature. Prerequisites: ENVS 100 and instructor permission.

**ENVS 435. Environmental Grant Writing. (1 Credit)**

Effective grant writing is critical to the success of many environmental organizations. In this course, students learn about the grant writing process and develop grant writing skills through an applied workshop. Topics include finding funding opportunities, understanding foundational elements of grant proposals, creating budgets, receiving feedback and revising. Prerequisite: ENVS 200; or instructor permission.

**ENVS 492. Independent Study. (1-6 Credits)****ENVS 497. Special Topics. (1-6 Credits)****ENVS 499. Internship in Environmental Studies. (1-6 Credits)**

An opportunity to apply skills and knowledge from course work to an employment setting. Prerequisite: approval from an Environmental Studies advisor and the Program Director.