ENVIRONMENTAL STUDIES (ENVS)

Courses

ENVS 1000 (4) Introduction to Environmental Studies
This course provides students with an introduction to natural science topics and skill sets necessary to address multi-dimensional human-environment interactions. Students will survey biological and physical science aspects of environmental change, examining ecological, biological, chemical, and technological factors that influence the quality of life on Earth. The focus of the class is on developing a stronger science-based understanding of Earth¿s environmental systems and how they are altered by human activity. Required for ENVS majors.
Additional Information: Arts Sci Core Curr: Natural Science Non-Sequence Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 1001 (4) Introduction to Human Dimensions of Environmental Studies
Examines the human dimensions of sustainability and environmental justice. Students examine a core set of human factors linked to the environment, including the production and use of knowledge, behavior, values, social movements, policy, market forces, and systems of power, exploitation, oppression, and inequality. Through hands-on activities, students learn how these factors impact and result from the human-environment interface. Students will build quantitative and writing skills to empirically study human dimensions of the environment.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 1150 (3) First-Year Writing in Energy, Environment and Sustainability
Provides development of effective writing skills, knowledge and habits for success in the campus culture using topics related to the environmental sciences, energy, sustainability and academic/career interests. Focuses on the processes in rhetoric, emphasizing skills in creative, analytical and critical thinking, as well as research and presentation using digital and "old fashioned" methods and materials.
Requisites: Restricted to Environmental Studies (ENVS) students with 0-56 credits (Freshman or Sophomore) only.
Grading Basis: Letter Grade
Additional Information: Arts Sci Core Curr: Written Communication Arts Sci Gen Ed: Written Communication-Lower

ENVS 2000 (4) Applied Ecology for Environmental Studies
Covers how ecological ideas and principles underlie both the problems and solutions of multiple environmental issues. Ecology of environmental concerns ranging from endangered species to global carbon cycling will be reviewed, including perspectives from physiological, behavioral, population, community and ecosystem ecology. Fulfills intermediate natural science requirement for Environmental Studies major.
Equivalent - Duplicate Degree Credit Not Granted: EBIO 2040 and EBIO 2640
Recommended: Prerequisites ENVS 1000 and a course in introductory statistics and two courses in introductory biology or physical geography.
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 2001 (3) Topical Seminar in Enivronmental Studies
Serves as an introductory seminar to topics in environmental studies. Topics are diverse and include such areas as climate and conflict, food production, land use change, and other emerging areas in environmental studies.
Grading Basis: Letter Grade

ENVS 2030 (3) Introduction to Human Dimensions of the Environment
Reviews social science concepts and research important to the understanding of human interactions with the environment. Serves as an introduction to the study of demographic processes, human decision making, approaches to environmental governance, consumption patterns, among other foundational topics. Content will be grounded in contemporary case studies that will vary with instructor. Positions students to participate in interdisciplinary dialogue and practice related to solving environmental problems.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 2100 (2-4) Topics in Applied Environmental Studies
Covers a variety of topics not currently offered in the curriculum: offered depending on instructor availability and student demand. Fulfills application requirement in Environmental Studies major.
Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.
Recommended: Prerequisite ENVS 1000.

ENVS 2840 (1-6) Independent Study
Students work with an approved faculty sponsor to explore a topic in greater depth and to pursue an interest that is not offered in the formal curriculum.
Repeatable: Repeatable for up to 8.00 total credit hours.
Recommended: Prerequisite ENVS 1000.

ENVS 3001 (3) Sustainable Solutions Consulting
Introduces students to green design, industrial ecology, and life cycle analysis. Students use basic techniques of environmental auditing to analyze the CU Boulder campus. Fulfills application requirement for Environmental Studies major.
Requisites: Requires prerequisite course of ENVS 1000 (minimum grade D-). Restricted to students with 57-180 credits (Junior or Senior) Environmental Studies (ENVS) majors only.
Recommended: Requisite any two-semester science sequence.
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3005 (3) Environmental Education: From Theory to Practice
Learning to teach about the environment is an essential skill for helping to create a sustainable world. From urban school programs to nature centers, to fostering social justice and international collaboration - becoming an effective environmental educator can support many professional pursuits. It's fun too! This class will help you gain essential knowledge and skills for starting on this path.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3007 (3) Animal Ethics and Policy
Explores the principles that underlie our treatment of and attitudes toward non-human animals. Analyzes how these principles impact environmental policy in the context of contemporary environmental issues and debates.
Additional Information: Arts Sci Gen Ed: Distribution-Arts Humanities

ENVS 3020 (3) Advanced Writing in Environmental Studies
Offers training in critical thinking and analytical writing skills appropriate to upper-division classes. Writing assignments integrate the subject matter of different topical areas. Fulfills writing requirement for Environmental Studies major.
Requisites: Restricted to students with 57-180 credits (Junior or Senior) Environmental Studies (ENVS) majors only.
Recommended: Prerequisite ENVS 1000.
Additional Information: Arts Sci Core Curr: Written Communication
Arts Sci Gen Ed: Written Communication-Upper

ENVS 3022 (3) Climate Politics and Policy
Engages students in exploring the realm of contemporary and historical climate policy at three major levels of government: international, national and local/regional. Through course lectures, discussions, readings and activities, students will become conversant with the actors, mechanisms and concerns involved in climate policy and politics and develop their own sense of how to judge the success of climate policies. Fulfills intermediate social science requirement in Environmental Studies Major.
Equivalent - Duplicate Degree Credit Not Granted: GEOG 3022
Recommended: Prerequisite ENVS 1000 or GEOG 1972.
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3030 (3) Topics in Environmental Social Sciences
Covers a variety of topics that may include human ecology, environment and society, and quantitative environmental social science. Offered depending upon instructor availability and student demand. Fulfills intermediate social science requirement for Environmental Studies major. Not repeatable for credit.
Recommended: Prerequisite ENVS 1000.
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3031 (3) Environmental Psychology
Examines how people interact with the environment by examining theories and methods from Environmental Psychology. How does nature impact human well-being? How do people make decisions that have environmental consequences? How can we promote behavior change to reduce environmental degradation? Fulfills intermediate social science requirement for ENVS major.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3032 (3) Environment, Media and Society
Examines how mass media influence our society, specifically with regard to environmental issues and outcomes. Focuses on media influence over environmental politics and policy, environmental public opinion, popular culture, and environmental/scientific knowledge. Fulfills intermediate social science requirement for Environmental Studies major.
Recommended: Prerequisite ENVS 1000.
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3033 (3) Governing the Environment
Examines how, when, and why human communities succeed in conserving environmental commons. Using a marine lens and taking a social-ecological systems approach, this course will provide foundations in environmental governance while examining case studies from local to global scale. Utilizes lecture, discussion, group work, literature, film, guest speakers, and class projects to study environmental problems and their solutions, including the student¿s personal role in governing natural resources. Fulfills intermediate social science requirement for ENVS major.
Recommended: Prerequisite ENVS 1000.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3034 (3) Foundations of Environmental Justice
Explores qualitative social science, forms of environmental inequality, and the underpinnings of environmental justice and social change. Environmental justice is the right to a safe and healthy environment for everyone, regardless of race, class, gender, or other considerations. Students engage in in-depth case study analysis and develop a social science research proposal on an environmental justice topic of their choosing. Previously offered as a special topics course.
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3040 (4) Conservation Biology
Applies principles of population ecology, population genetics, biogeography, animal behavior, and paleobiology to the maintenance of biodiversity and natural systems. The resulting theory is then applied to conservation policy and management techniques.
Equivalent - Duplicate Degree Credit Not Granted: EBIO 3040
Recommended: Prerequisite EBIO 2040 or EBIO 2640.
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3064 (3) Environmental Political Theory
Examines environmental discourses as conceptual means for theorizing environmental politics, and applies normative political theories to contemporary environmental policy issues. Considers the roles of political actors (individuals, groups, the state) in defining and addressing environmental problems on local, national, and global levels.
Equivalent - Duplicate Degree Credit Not Granted: PSCI 3064
Additional Information: Arts Sci Core Curr: Ideals and Values
Arts Sci Gen Ed: Distribution-Arts Humanities
Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3070 (3) Energy and the Environment
Examines contemporary issues in energy consumption and its environmental impact, including fossil fuel use and depletion; nuclear energy and waste disposal; solar, wind, hydroelectric, and other renewable sources; home heating; energy storage; fuel cells; and alternative transportation vehicles. Includes some basic physical concepts and principles that often constrain choices. No background in physics is required.
Equivalent - Duplicate Degree Credit Not Granted: PHYS 3070
Additional Information: Arts Sci Core Curr: Natural Science Non-Sequence
Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3100 (2-4) Topics in Applied Environmental Studies
Covers a variety of topics not currently offered in the curriculum; offered depending upon instructor availability and student demand. Fulfills application requirement for Environmental Studies major.
Repeatable: Repeatable for up to 8.00 total credit hours.
Recommended: Prerequisite ENVS 1000.

ENVS 3103 (3) Applied Environmental Studies: Mining in Four Corners
Explores mining related issues that have pronounced impact on the environment, economy and politics of the Four Corners region. Students apply their basic knowledge of environmental science, policy and values toward the understanding of and productive discourse about the conflicts and opportunities brought about by the mining industry in the Four Corners region. Course includes a seven day field trip, visiting mining and reclamation sites in New Mexico, Utah and Colorado. Fulfills application requirement for Environmental Studies majors.
Recommended: Prerequisite ENVS 1000 and one year natural science.
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3140 (3) Environmental Ethics
Examines major traditions in moral philosophy to see what light they shed on value issues in environmental policy and the value presuppositions of the economic, ecological, and juridical approaches to the environment.
Equivalent - Duplicate Degree Credit Not Granted: PHIL 3140
Requisites: Restricted to students with 27-180 credits (Sophomores, Juniors or Seniors) only.
Additional Information: Arts Sci Core Curr: Ideals and Values
Arts Sci Gen Ed: Distribution-Arts Humanities

ENVS 3173 (3) Creative Climate Communication
We generate multimodal compositions on the subject of climate change and engage with various dimensions of issues associated with sustainability. We work to deepen our understanding of how issues associated with climate change are or can be communicated, by analyzing previously created expressions from a variety of media (interactive theatre, film, fine art, television programming, blogs, performance art, for example) and then be creating our own work.
Equivalent - Duplicate Degree Credit Not Granted: ATLS 3173 and THTR 4173
Recommended: Prerequisite ENVS 1000.
Additional Information: Arts Sci Gen Ed: Distribution-Arts Humanities
Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3434 (3) Introduction to Applied Ecology
Emphasizes the integration of physical, chemical and biological processes in controlling terrestrial and aquatic ecosystems. Ecosystem concepts are applied to current environmental and water quality problems. Includes field trips and a group project.
Equivalent - Duplicate Degree Credit Not Granted: CVEN 3434
Requisites: Requires prereq courses of (CHEN 1201 or CHEN 1211 or CHEM 1113 or CHEM 1400 or MCEN 1024) and (CHEM 1114 or CHEM 1221) (all min grade C-).Restricted to students w/ 57-180 credits (Jr or Sr) Civil (CVEN), Environ (EVEN) or Arch Eng (AREN) or (IDEN) mjrs
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3520 (3) Energy and Climate Change: An Interdisciplinary Approach
Examines sources of energy and other resources in light of their availability, use, environmental impact, as well as their impact on policy, economics and values. As fossil fuels are the dominant energy source today, particular emphasis is placed on climate impacts and the carbon cycle. All material is assessed through the lenses of the physical sciences, policy, ethics and economics.
Equivalent - Duplicate Degree Credit Not Granted: GEOL 3520
Recommended: Prerequisite a two-course sequence in any natural science.
Additional Information: Arts Sci Core Curr: Natural Science Non-Sequence
Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3525 (3) Intermediate Environmental Problem Analysis: Topical Cornerstones
Engages students in in-depth study of a topic such as climate change, energy, natural resources or sustainability. Through lectures, discussions, readings and activities, students will become conversant with how science, policy and values are integrated in environmental problem solving, and develop their own sense of how to critically engage with proposed solutions. Fulfills cornerstone requirement for Environmental Studies Major.
Repeatable: Repeatable for up to 6.00 total credit hours.
Recommended: Prerequisite ENVS 1000.

ENVS 3555 (3) Sustainable Economies
Applies a holistic and transdisciplinary approach to answering the following questions: (i) What might an environmentally sustainable economy look like? (ii) What social and political challenges might such an economy face? (iii) What institutions might support an environmentally and socially sustainable economy? The course draws on concepts from several branches of economics¿especially macroeconomics, ecological economics, and public finance¿as well as other related disciplines, including history, psychology, politics, and evolutionary biology.
Recommended: Prerequisites ECON 2010 or ECON 2020 or other introductory-level economics course.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3600 (3) Principles of Climate
Describes the basic components of the climate system: the atmosphere, ocean, cryosphere and lithosphere. Investigates the basic physical processes that determine climate and link the components of the climate system. Covers the hydrological cycle and its role in climate, climate stability and global change.
Equivalent - Duplicate Degree Credit Not Granted: GEOG 3601 and ATOC 3600
Recommended: Prerequisites one semester of calculus and ATOC 1060 or ATOC 3300 or GEOG 3301 or GEOG 1001.
Additional Information: Arts Sci Core Curr: Natural Science Non-Sequence
Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3621 (3) Energy Policy and Society
Examines how society makes decisions about energy, and how these decisions affect the environment and the economy. Uses tools from policy analysis, economics, and other disciplines to build an in-depth understanding of energy's role in U.S. contemporary society. Fulfills Cornerstone requirement of ENVS majors.
Recommended: Prerequisites ENVS 1000 and ENVS 3070 or PHYS 3070.
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 3640 (3) Data Analysis for Global Environmental Affairs
Develops data analysis techniques for global environmental data including demographic, economic, agricultural, fisheries and energy sectors. Designed to support the development of basic and intermediate data analysis skills for students in the Global Environmental Affairs certificate program. Includes hands-on exploration of up-to-date global data sets from a variety of sources. Fulfills the application requirement for the ENVS major.
Equivalent - Duplicate Degree Credit Not Granted: IAFS 3640
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 3800 (3) The Art of Research: The Essential Elements of Research in Environmental Studies
Introduces students to the practice of doing research in environmental studies. Examines how to define a research problem, select methods, design research, construct arguments and evaluate others' research. Aims to familiarize students with the process of doing research and enable them to proceed with confidence in pursuing their own research topics. Recommended for juniors planning to write ENVS honors theses. Fulfills capstone requirement in Environmental Studies major.
Requisites: Requires prerequisite course of ENVS 1000 (minimum grade D-). Restricted to students with 57-180 credits (Junior or Senior) majors only.
Recommended: Prerequisite ENVS 3020.

ENVS 3930 (1-3) Internship
Relates classroom theory to practice. Provides academically supervised opportunities for environmental studies majors to work in public and private organizations on projects related to students' career goals. Fulfills application requirement in Environmental Studies major.
Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.
Recommended: Prerequisite ENVS 1000.

ENVS 4027 (3) Inequality, Democracy, and the Environment
Focuses on the structural forces affecting environmental degradation and environmental behavior by examining the relationships between (a) inequality and democratic decision making and (b) undemocratic decision making; U.S. and corporate food and energy policy; and global environmental degradation. The course also focuses on the role that global inequality plays in fostering environmental degradation.
Equivalent - Duplicate Degree Credit Not Granted: SOCY 4027
Requisites: Restricted to students with 57-180 credits (Juniors or Seniors).
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 4030 (3) Sociology of Climate Change
Examines the human drivers and causes of climate change, the health and security risks it creates and the efforts of societies to mitigate and adapt to its effects.
Equivalent - Duplicate Degree Credit Not Granted: SOCY 4030
Requisites: Restricted to students with 57-180 credits (Juniors or Seniors).
Additional Information: Arts Sci Gen Ed: Distribution-Social Sciences

ENVS 4050 (2-4) Field Methods in Ecosystem Science
Studying the relationships among organisms, physical features, biogeochemistry and humans in ecological communities - this is ecosystem science. This course provides conceptual understanding and practical experience conducting research. Students will pose their own scientific questions, learn several field and lab methods, analyze data and design a project. Upon completion, they will have useful skills for internships, jobs and graduate school. Fulfills application requirement in ENVS major. Department enforced prerequisite: ENVS 1000 or two semesters of natural sciences; such as chemistry, geology or biology.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sci Lab Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 4100 (3) Special Topics in Environmental Studies
Various topics not normally covered in the curriculum: offered depending on student demand and specialties of faculty. Applied to specialization requirement for Environmental Studies major.
Repeatable: Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.

ENVS 4135 (3) Dogs, Wolves, and Humans
Humans have a closer and longer history with ancestral and domestic dogs than any other animal species. Ironically, the closest living relative of dogs (wolves) remain one of the world¿s most persecuted species ¿ an issue that rages today throughout the United States, including Colorado. This class centers on the biology of domestication, evolution of behavior, canid paleontology and genetics, wolf conservation, and the evolutionary, social, and cultural significance of wolves and dogs to humans. Formerly offered as a special topics course.
Equivalent - Duplicate Degree Credit Not Granted: ENVS 5135
Recommended: Prerequisite ANTH 2010 or EBIO 1030 or EBIO 1210 or EBIO 1220 or EBIO 2040 or ENVS 2000.

ENVS 4155 (4) Ecosystem Ecology
Integrates information from physics (energetics), chemistry (element properties) and biology (evolutionary traits, photosynthetic pathways) to understand the structure and functioning of ecosystems. Provides an analysis of biotic community responses and feedbacks to environmental change drivers. Strong focus on water, nutrient cycling and carbon dynamics of diverse terrestrial and aquatic landscapes.
Equivalent - Duplicate Degree Credit Not Granted: EBIO 4155, EBIO 5155 and ENVS 5155
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 4160 (3) Introduction to Biogeochemistry
Covers fundamentals of biogeochemical cycling, emphasizing water, carbon and nutrient dynamics in terrestrial ecosystems; chemical interactions of atmosphere, biosphere, lithosphere and hydrosphere; natural and human-managed environments.
Equivalent - Duplicate Degree Credit Not Granted: EBIO 4160 and GEOL 4160
Requisites: Requires prerequisite courses of GEOL 3320 or EBIO 3270 and CHEM 1011 (all minimum grade D-).
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 4185 (3) Geomicrobiology
Examines how microbial and chemical processes interact on the Earth¿s surface today and have shaped the planet throughout its history. Emphasis will be placed on how the life styles and chemical ingenuity of microorganisms drive key biogeochemical processes including weathering and transformations of carbon, oxygen, sulfur, iron and nitrogen. Towards this goal, major geologic and evolutionary events will be examined through the lens of microbial diversity, metabolic energetics, microbe-mineral interactions, and molecular biomarkers.
Equivalent - Duplicate Degree Credit Not Granted: GEOL 5185, GEOL 4185, and MCDB 4185
Requisites: Requires prerequisite courses of CHEM 1113 and CHEM 1114 or CHEM 1400 and CHEM 1401 (minimum grade C-).
Recommended: Prerequisites GEOL 1180 or MCDB 1150 or GEOL 3320 or EBIO 3400 or ENVS 4160 or EVEN 4484.
Grading Basis: Letter Grade

ENVS 4201 (3) Biometeorology
Learn about the interactions between atmospheric processes and living organisms (plants, animals, and humans) through a meteorology/ biology lens. Topics include carbon and water cycling through vegetation, the energy and water balances in the system, and human temperature regulation to better understand how organisms adapt to a changing environment using a practical, problem-solving approach.
Equivalent - Duplicate Degree Credit Not Granted: GEOG 4201
Requisites: Prereq GEOG 1001 any of: (APPM1340 and 1345) or APPM1350 or ECON1088 or ECON3818 or MATH1081 or MATH1300 or MATH1310 or MATH2510 or ANTH4000 or BCOR1020 or GEOG3023 or GEOL3023 or PSCI2075 or PSYC2111 or SOCY2061 or SOCY4061 or STAT4000 (min grade D-)
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 4340 (4) Conservation Biology and Practice in Brazil's Atlantic Forest
Field Studies. Examines the application of conservation principles in the Atlantic Forest of Brazil, a 'biodiversity-in-crisis' setting. Explores successful conservation strategies integrated with efforts to alleviate socioeconomic issues. Three-week Maymester, Study Abroad Global Seminar.
Equivalent - Duplicate Degree Credit Not Granted: ENVS 5340, EBIO 4340 and EBIO 5340
Recommended: Prerequisites EBIO 2040 or ENVS 2000 or 2000/higher-level course in ANTH, EBIO, ENVS, EVEN, GEOG, IAFS or other discipline related to ecology or sustainability.
Grading Basis: Letter Grade
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sci Lab Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 4795 (3) Field Methods in Zoology and Botany
Class covers research and field methods for biological disciplines associated with natural history museums: vertebrates, invertebrates and plants. Emphasis is on field research techniques: observations, sampling, collection and preservation methods and comparisons among elevation zones. Includes 5 field labs, 2 weekend trips, 5 lab practica, experience with several taxonomic experts and individual research projects.
Equivalent - Duplicate Degree Credit Not Granted: MUSM 4795 and MUSM 5795
Additional Information: Arts Sci Gen Ed: Distribution-Natural Sci Lab Arts Sci Gen Ed: Distribution-Natural Sciences

ENVS 4800 (3) Capstone: Critical Thinking in Environmental Studies
Examines a specific environmental topic in depth, synthesizing information from complex and controversial issues. Different course sections present different topics. Fulfills capstone requirement for Environmental Studies major.
Requisites: Restricted to Environmental Studies (ENVS) majors only.
Recommended: Prerequisites ENVS 1000 and ENVS 3020.

ENVS 4840 (1-6) Independent Study
Students work with an approved faculty sponsor to explore a topic in greater depth and to pursue an interest that is not offered in the formal curriculum.
Repeatable: Repeatable for up to 8.00 total credit hours.
Recommended: Prerequisite ENVS 1000.

ENVS 4850 (1-3) ENVS Honors Thesis Research
To be taken in final academic year prior to graduation. Consists of honors research and thesis preparation under the guidance of a faculty mentor. Department enforced restriction: Requires a minimum 3.3 GPA and a declared ENVS major and approval by departmental honors committee. If a student wishes to use ENVS 4850 to complete the ENVS Capstone degree requirement, at least 3 credit hours of ENVS 4850 are required (by graduation).
Repeatable: Repeatable for up to 6.00 total credit hours.
Grading Basis: Letter Grade

ENVS 4950 (3) Seminar: ENVS Honors Thesis
Offers an opportunity for students who are either in the process of writing an Honors thesis, or are in the early process of conducting Honors research, to receive guidance on the process of thesis writing, evaluation and presentation of research results, and defending a thesis. Thesis requirements and the role of the A&S Honors Council will be discussed. Also offers the opportunity to hear practice defense talks from the graduating Honors candidates. Department enforced prerequisite: Requires a minimum 3.3 GPA and a declared ENVS major and approval by departmental honors committee.
Requisites: Restricted to students with 57-180 credits (Juniors or Seniors).

ENVS 4990 (3) Senior Thesis
Supervised writing project involving original research. Fulfills Capstone requirement in Environmental Studies major. Open only to Environmental Studies majors.
Requisites: Requires prerequisite course of ENVS 1000 (minimum grade D-). Restricted to students with 87-180 credits (Senior) Environmental Studies (ENVS) majors only.
Recommended: Prerequisite ENVS 3020 and ENVS students should have completed a cornerstone class (ENVS 3520, ENVS 3525, ENVS 3555, or ENVS 3621).

ENVS 5000 (3) Policy, Science, and the Environment
Introduction to methodologies of the policy sciences with emphasis on applications to environmental issues; role of science in decision making; professional roles and responsibilities as a policy analyst.
Requisites: Restricted to Environmental Studies (ENVS) graduate students only.

ENVS 5003 (3) Conceptual Foundations of Environmental Studies
Addresses basic theoretical questions underlying common methods employed by those conducting research in environmental science, values, and policy. The course provides a broad overview of the conceptual background relevant to work and research in environmental studies, with an emphasis on understanding many debates that have informed and challenged disciplinary research and, in so doing, shaped the interdisciplinary field of environmental studies.
Requisites: Restricted to Environmental Studies (ENVS) graduate students only.
Grading Basis: Letter Grade

ENVS 5004 (3) Research Design in Environmental Studies
Offers a conceptual understanding of the diverse methodological traditions used in empirical environmental research, when and why methods are deployed, and their relative strengths and weaknesses. Designed for students pursuing interdisciplinary environmental careers or those looking for a broad foundation prior to specializing. Emphasizes foundational research skills of developing a research question, scientific writing, interdisciplinary collaborations, and science communication. Formerly offered as a special topics course.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 5050 (3) Theories of the Policy Process
Examines the public policy process, including the influences and actors that shape policy outcomes. Focuses on the major theories, frameworks, and models of policy change, along with emerging scholarship that challenges, refines, and advances the theory.
Requisites: Restricted to graduate students only.

ENVS 5100 (1-3) Special Topics in Environmental Studies
A variety of topics not currently offered in curriculum; offered depending on instructor availability and student demand.
Repeatable: Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.
Requisites: Restricted to graduate students only.

ENVS 5110 (1-3) Topics in Environmental Social Science and Humanities
Covers various topics in the social sciences and humanities in environmental studies.
Repeatable: Repeatable for up to 9.00 total credit hours.
Requisites: Restricted to Arts and Sciences, Journalism, Law or Business Graduate Students only.

ENVS 5120 (1-3) Topics in Quantitative Methods
Covers a wide range of quantitative methods used in policy research and their applications. Topics may include decision-making under uncertainty, fundamentals of microeconomics, mathematics of economic efficiency, cost-benefit analysis, system optimization, budgeting, fundamentals or probability, risk assessment, risk perception, risk communication, and decision analysis. Includes practical exercises, as well as readings and discussion, of various strengths and weaknesses of the different methods.
Repeatable: Repeatable for up to 9.00 total credit hours.
Requisites: Restricted to graduate students only.

ENVS 5135 (3) Dogs, Wolves, and Humans
Humans have a closer and longer history with ancestral and domestic dogs than any other animal species. Ironically, the closest living relative of dogs (wolves) remain one of the world¿s most persecuted species ¿ an issue that rages today throughout the United States, including Colorado. This class centers on the biology of domestication, evolution of behavior, canid paleontology and genetics, wolf conservation, and the evolutionary, social, and cultural significance of wolves and dogs to humans.
Equivalent - Duplicate Degree Credit Not Granted: ENVS 4135
Recommended: Prerequisite ANTH 2010 or EBIO 1030 or EBIO 1210 or EBIO 1220 or EBIO 2040 or ENVS 2000.

ENVS 5155 (4) Ecosystem Ecology
Integrates information from physics (energetics), chemistry (element properties) and biology (evolutionary traits, photosynthetic pathways) to understand the structure and functioning of ecosystems. Provides an analysis of biotic community responses and feedbacks to environmental change drivers. Strong focus on water, nutrient cycling and carbon dynamics of diverse terrestrial and aquatic landscapes.
Equivalent - Duplicate Degree Credit Not Granted: EBIO 4155, EBIO 5155 and ENVS 4155
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 5240 (3) Environmental Philosophy
A survey of the major philosophical issues in environmental studies, comprising key issues in environmental ethics, in environmental political philosophy and in the philosophy of biology and ecology.
Equivalent - Duplicate Degree Credit Not Granted: PHIL 5240
Requisites: Restricted to Environmental Studies (ENVS) graduate students only.

ENVS 5340 (4) Conservation Biology and Practice in Brazil's Atlantic Forest
Field Studies. Examines the application of conservation principles in the Atlantic Forest of Brazil, a 'biodiversity-in-crisis' setting. Explores successful conservation strategies integrated with efforts to alleviate socioeconomic issues. Three-week Maymester, Study Abroad Global Seminar.
Equivalent - Duplicate Degree Credit Not Granted: ENVS 4340, EBIO 4340 and EBIO 5340
Recommended: Prerequisites EBIO 2040 or ENVS 2000 or 2000/higher-level course in ANTH, EBIO, ENVS, EVEN, GEOG, IAFS or other discipline related to ecology or sustainability.
Grading Basis: Letter Grade

ENVS 5510 (1) Environmental Studies Colloquia Series
All first year ENVS graduate students are required to attend the ENVS Colloquia Series. Speakers from around the world and within the department cover topics in all areas of Environmental Studies.
Repeatable: Repeatable for up to 2.00 total credit hours. Allows multiple enrollment in term.
Requisites: Restricted to Environmental Studies (ENVS) graduate students only.
Grading Basis: Pass/Fail

ENVS 5520 (1-3) Seminar in Environmental Studies
Addresses current topics in Environmental Studies. Provides forum for students to critically evaluate the primary literature on a particular theme.
Repeatable: Repeatable for up to 7.00 total credit hours. Allows multiple enrollment in term.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 5701 (3) Policy, Politics and Management: Foundations
Examines concepts related to policy and regulatory processes, institutions and management of the environment and natural resources. Explores environmental laws at the international, national, state and local levels as well as how the processes and institutions at various levels of government help shape laws and their implementation. Focuses on policy tools including property rights, regulation, voluntary compliance and market-based mechanisms.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 5702 (3) Environmental Governance: Actors and Institutions
Provides an examination of environmental governance issues across scales, from local to global. Focuses on foundational theory while critically examining empirical case studies of success and failure in managing common pool resources. Emphasizes understanding the role of diverse actors and institutions in driving environmental outcomes. Students will obtain practical tools and skills towards facilitating environmental sustainability of natural resources across scales.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 5740 (3) Context-Sensitive Research Methods
Prepares students to conduct research on topics where data is not obvious or not easily available. Encompasses variations in context and setting as part of data observations. Methods include interviewing protocols, interpretive methods, cluster analyses, case study methodologies and textual analyses.
Equivalent - Duplicate Degree Credit Not Granted: PSCI 7116
Requisites: Restricted to graduate students only.

ENVS 5750 (3) Climate Politics and Science-Policy
Explores, understands and critically analyzes influences and trends in climate politics and science-policy. Course participants will gain an improved understanding of the myriad factors, pressures and processes that are involved in contemporary climate politics undergirding explicit policy proposals. Course participants will more capably identify consequential spaces of decision-making, recognize tractable places for change and fashion constructive strategies for their own research by way of best available evidence from work done in these areas. Overall, our attention to these course themes, concepts and case studies will help us to more capably understand, analyze and engage in the high-stakes 21st century arena of climate politics and science-policy. Previously offered as a special topics course.
Equivalent - Duplicate Degree Credit Not Granted: ENVM 5750, GEOG 5750 and SOCY 5750
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 5760 (2) Inclusive Pedagogy
Classroom instructors have a critical role in promoting student success through inclusive teaching approaches. This graduate seminar will prepare graduate students in key areas of inclusive teaching. Students will explore questions like: How can you foster a class climate that supports a sense of belonging for all students? How can clear and transparent learning outcomes promote student success for all students? How can course assignments and teaching strategies contribute to inclusive teaching? Students will also examine the literature on inclusive teaching and create a teaching statement that integrates aspects of inclusivity.
Grading Basis: Letter Grade

ENVS 5810 (3) Water Resources and Environmental Sustainability
Assesses impacts of climate variability and regional growth on western U.S. water resources, and examines successes and failures of different management strategies, as well as ways that science is used and misused in support of water management.
Requisites: Restricted to Arts and Sciences, Journalism, Law or Business Graduate Students only.

ENVS 5820 (3) Energy Policy in the 21st Century
Examines energy policy and the problem of sustainability through a variety of disciplinary and topical perspectives: historical, political, behavioral, techno-economic and legal. A critical approach is applied to arguments about energy policy processes, systems and desired outcomes, with special emphasis on the role of renewable and sustainable energy in the changing global system.
Requisites: Restricted to graduate students only.

ENVS 5830 (3) Critical Issues in Climate and the Environment
Discusses current issues such as ozone depletion, global warming and air quality for graduate students in nonscientific fields. Provides the scientific background necessary to understand, follow scientific developments and critically evaluate these issues.
Equivalent - Duplicate Degree Credit Not Granted: ATOC 4800 and ATOC 5000

ENVS 5840 (3) Global Biogeochemical Cycles
Focuses on the cycling of elements at the global scale with a particular emphasis on human modification of biogeochemical cycles. Major biogeochemical cycles, their past dynamics, present changes and potential future scenarios will be addressed. Ecosystem to global-scale model of the earth system will be discussed, along with global-scale measurements of element fluxes from satellites, aircraft and measurement networks.
Equivalent - Duplicate Degree Credit Not Granted: GEOL 5305
Requisites: Restricted to graduate students only.
Recommended: Prerequisite general chemistry, some organic chemistry.

ENVS 5909 (1-3) Independent Study
Only 3 hours of independent study can be used towards degree requirements.
Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

ENVS 5930 (2) Internship
Provides academically supervised opportunities for environmental studies majors to work in public and private organizations on projects related to the students' research and career goals, and to relate classroom theory to practice.

ENVS 6007 (3) Foundations of Environmental Sociology
Provides overview of environmental sociological theory and research including topics such as: public environmental perception, concern, and knowledge; environmentalism as a social movement; environmental justice; energy, technology, and risk; human dimensions of environmental change; and natural hazards and disasters.
Equivalent - Duplicate Degree Credit Not Granted: SOCY 6007

ENVS 6201 (3) Qualitative Research Methods for Environmental Studies
Introduces students to research design, data collection and analysis methods. Exploration of the rationale underlying the use of various methods, the skills needed to employ qualitative method and the process of designing a research protocol will provide graduate students with a sound foundation to begin their own thesis research.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 6222 (2-3) Environmental Decision-Making
Explores the foundational issues that underlie agency decision-making, including environmental ethics, cost-benefit analysis, risk assessment, constitutional law and administrative law. Compares and contrasts National Environmental Policy Act and the National Historic Preservation Act and the Endangered Species Act.
Equivalent - Duplicate Degree Credit Not Granted: LAWS 7222
Grading Basis: Letter Grade

ENVS 6301 (3) Environmental and Energy Economics
Introduces non-economists to the study of energy markets, environmental externalities, economic regulation and public policy. This applied course uses examples from electricity generation, renewable energy, manufacturing, transportation and other energy intensive industries. A variety of policy instruments will be studies, including: technology standards, subsidies, environmental mandates, rate-based policies, emissions taxes and cap-and-trade systems.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 6302 (3) Sustainable Landscapes, Sustainable Livelihoods
Examines rural transformation and the adoption of recreation economies in communities across the U.S. West in response to burgeoning recreation industry and interest in public lands. Students will evaluate different approaches for developing and managing recreation economies in small towns that consider diverse social, cultural, economic, and environmental constraints as well as opportunities in a time of rapid change. Project-based course. Students learn techniques to gather and synthesize data that support solution development.
Equivalent - Duplicate Degree Credit Not Granted: ENVM 6302
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 6303 (3) Transportation and Sustainable Cities
Examines the problem of organizing transportation systems from a variety of perspectives and explores how transportation decisions get made at a variety of scales, from local to national. Covers some of the dramatic changes coming from technological innovation in arenas like vehicle electrification, autonomous vehicles and the potential shift from individual vehicle ownership to shared mobility.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 6304 (3) Introduction to Food Systems Internationally
Introduces students to contemporary food system challenges a the global scale, the course will first identify key historic and projected trends, to set the scene for the remainder of this specialization. Second it will draw on international case studies to explore some of the institutional, technological and market responses to food system challenges across the globe.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 6305 (3) Reducing the Environmental Impact of Food Systems: Evidence-Based Solutions
Explores the evidence and ideas underlying some of the most important contemporary food system debates. We will ask: in enhancing the environmental sustainability of food systems, what do the data tell us about the roles that can be played by genetically engineered food, organic agriculture, local food systems, changes to animal agriculture, and reductions in food waste? Students will draw on peer-reviewed research to address the science, policy, and ethical dimensions of these topics.
Requisites: Restricted to graduate students only.
Grading Basis: Letter Grade

ENVS 6940 (1) Master's Candidate for Degree
Registration intended for students preparing for a thesis defense, final examination, culminating activity, or completion of degree.

ENVS 6950 (1-6) Master's Thesis

ENVS 7118 (3) Foundations of Environmental Justice
Examines environmental justice movements, policies, institutions, objectives, and scholarship. Identifies factors that contribute to environmental inequality, and efforts to reduce it. Formerly offered as a special topics course.
Equivalent - Duplicate Degree Credit Not Granted: COMM 7118, GEOG 7118 and PSCI 7118
Requisites: Restricted to graduate students only.

ENVS 8990 (1-10) Doctoral Dissertation
All doctoral students must register for not fewer than 30 hours of dissertation credit as part of the requirements for the degree. For a detailed discussion of doctoral dissertation credit, refer to the Graduate School section.