

ENVIRONMENTAL STUDIES (ENVS)

ENVS 100 - Integrated Environmental Studies (4 Credit Hours)

In this course the student will consider environmental problems through the lenses of many different academic disciplines. The purpose of this approach is two-fold: 1) to enhance the student's understanding of environmental issues as multi-dimensional dilemmas, and 2) to encourage the student to seek synergistic solutions. The course focuses on three major realms of environmental studies. In the first, students will consider the human relationship with the non-human world, including problems of ethics, social and psychological connections with nature, ecological services, biodiversity, aesthetics and utility. The second section addresses agriculture and aquaculture in the context of ecological limits, economics and policy. The third section explores the global aspects of energy use and climate change, with special emphasis on technology, disparity and human rights. The laboratory component of the course will expose the student to local and regional environmental problems and solutions. Field trips, guest speakers, analysis and discussion will emphasize the necessity of multidisciplinary integration in the design of sustainable environmental systems. Students will apply concepts of quantitative, qualitative and representative analysis to evaluate environmental questions and will learn to convey these concepts in writing. Course fulfills Interdivisional (I) GE requirement.

ENVS 115 - Energy and Environment (4 Credit Hours)

Energy and Environment is an introductory course that provides a comprehensive overview of the current energy systems that are in use today; including fossil, nuclear and renewable. The course introduces the basic scientific and physical concepts associated with the origins, the use and the environmental/climate impact of these energy systems. Emphasis is placed on real world examples through the introduction of several related case studies including oil exploration and hydrofracking. Course can be used as a prerequisite for ENVS 215 or ENVS 274, and fulfills Quantitative Reasoning (Q) GE requirement.

ENVS 199 - Topics in Environmental Science (1-4 Credit Hours)

A general category used only in the evaluation of transfer credit.

ENVS 200 - Environmental Analysis (4 Credit Hours)

In this course students will learn and practice different methods of addressing environmental questions and expressing environmental perspectives. Central themes are writing and quantitative analysis: for each of the topics and methods used, students will gain experience with a variety of professional writing styles and analytical approaches. Environmental issues will be investigated through both quantitative and qualitative methods of data collection and statistical analysis, along with a variety of writing styles. Students will also examine the human connection with the nonhuman world through the use of media and spatial representation. Through successful completion of this course, students will have applied a variety of methods to the analysis of environmental issues. Course fulfills Quantitative (Q) and Writing (W) GE requirements, and fulfills the ENVS Methods requirement.

Prerequisite(s): ENVS 100.

ENVS 202 - Economic Growth and Environmental Sustainability (4 Credit Hours)

Economic growth is traditionally perceived as the solution to the socio-economic ills of poverty, unemployment and more generally underdevelopment. However, economic growth is also accompanied by increased pressure on and, over time, deterioration of the natural environment. The objective of this course is to explore the relationship between economic growth and the natural environment. While the concept of economic growth occupies a central place in economic policy-making, we will discuss whether economic growth is compatible with the sustainable development worldview adopted by the UN and many other global and local economic actors. Sustainable development emphasizes the need to embark upon a development path that not only takes into account the environmental, social and economic needs of the present generation, but also those of future ones. Course fulfills the ENVS Social Science requirement.

Prerequisite(s): ECON 101 and ECON 102.

Crosslisting: ECON 202.

ENVS 205 - Religion and Nature (4 Credit Hours)

An investigation of the religious value of nature in Christianity and Buddhism, particularly in America and Japan. We look at how people in these cultures have viewed the place of humanity within the world of nature, and the relationships among humanity, God and nature. Course fulfills the ENVS Humanities requirement.

Crosslisting: REL 205.

ENVS 209 - Drawing Terrain (4 Credit Hours)

Drawing helps us see! Students will make keen observations and interpretations about the landscape through the immediacy and directness of drawing. This course introduces illustrative methods in a variety of media to render our visual world accurately, but will also include explorative and experimental mark making methods to reveal what we cannot see. We will study a wide range of visual artists who use drawing to tackle the environment as subject matter, inspiration, and even as material. Art projects will occur in the studio and outside. Hands-on art activities about the landscape will be supplemented with various course readings, discussions, and presentations to contextualize an art practice to the broader world.

Crosslisting: ARTS 209.

ENVS 211 - Landscape Painting (4 Credit Hours)

This course introduces students to the genre of landscape painting. Art making will be completed in the studio and out in the field. Art projects are devised to have students develop acute observations about the landscape while creating newfound relationships to it. Technical demonstrations in paint application and design are coupled with strategies of research and preparation to produce thoughtful and critical pictorial representations. An introduction to the historical lineage of the painted landscape will be balanced with exposure to contemporary artists and concepts. Students will use painting as an excuse to probe their landscape, to dissect and invert it, to wander off path, and redefine where it starts and ends. Group readings, presentations, and discussions compliment the studio workshop environment by helping to contextualize an art practice to the broader world.

Crosslisting: ARTS 311.

ENVS 215 - Renewable Energy Systems (4 Credit Hours)

Renewable Energy Systems provides students with a comprehensive overview of the different alternative energy systems that are in use today. The course will introduce the basic scientific and engineering concepts used in designing and analyzing different energy technologies. Some emphasis will be placed on real-world applications of such technologies through the introduction of several case studies related to the field. Course fulfills the ENVS Natural Science requirement.

Prerequisite(s): Any 100 or 200 level science course.

ENVS 219 - Environmental Communication (4 Credit Hours)

"The "green" and "organic" language that is marking everything from our magazine racks to our grocery shelves, the increasing number of farmers' markets throughout urban and rural areas, and the increasing local discussions of the dangers of "fracking" serve as evidence that the current discourses in and around environmental care are not a fad. Rather, environmental awareness and practices comprise a "central issue of our time" that is laden with cultural concerns of ideological and material differences, power, privilege and marginality. This course will begin with an in-depth exploration of the philosophy that communication is the means through which we construct, participate, and convey the cultures we are a part of and therefore, is central to the creation of the kind of world we want to live in. We will then turn our attention to an analysis of current social, organizational and political discourses on the environment and our responsibility, or not, in its protection." Course fulfills the ENVS Social Science.

ENVS 222 - Geographic Information Systems I (2 Credit Hours)

This course is an introduction to the concepts and uses of Geographic Information Systems (GIS) with particular application to environmental issues. The course consists of laboratory exercises on GIS data structures and sources of data, on the use of specific GIS tools, and on practical applications of GIS to real-world tasks. The student will gain skills in spatial data analysis, map generation, and data presentation using ArcGIS software. After successful completion of this course, students who wish to develop advanced GIS skills may enroll in ENVS/GEOS 223.

Crosslisting: GEOS 222.

ENVS 223 - Geographic Information Systems II (2 Credit Hours)

This course is intended to give the student experience with advanced GIS applications. The focus will be on novel analyses of spatially explicit data pertaining to real-world environment issues. Completion of 222 & 223 satisfies ENVS Methods requirement, and can fulfill the ENVS Natural Science.

Prerequisite(s): ENVS 222 or GEOS 222.

Crosslisting: GEOS 223.

ENVS 229 - Landscape Painting (4 Credit Hours)

This course introduces students to the genre of landscape painting. Art making will be completed in the studio and out in the field. Art projects are devised to have students develop acute observations about the landscape while creating newfound relationships to it. Technical demonstrations in paint application and design are coupled with strategies of research and preparation to produce thoughtful and critical pictorial representations. An introduction to the historical lineage of the painted landscape will be balanced with exposure to contemporary artists and concepts. Students will use painting as an excuse to probe their landscape, to dissect and invert it, to wander off path, and redefine where it starts and ends. Group readings, presentations, and discussions compliment the studio workshop environment by helping to contextualize an art practice to the broader world.

Crosslisting: ARTS 229.

ENVS 236 - Political Ecology (4 Credit Hours)

What really causes deforestation? How is a fish 'cultural'? Why do Americans spend so much time and money on their lawns? Should we be saving people or endangered species? Why are ecosystem services so hard to privatize? Is obesity truly just a question of consuming too many calories? These are all questions that political ecology can help us to answer. Political ecology is an interdisciplinary field that situates environmental change within broader networks of political, economic, and social relations. It differs from other environmental approaches in that it views power, material nature, everyday struggles and practices, social justice, and discourse to be critical components of human-environment interactions. In this course, we will: (a) study the theoretical foundations of political ecology, (b) evaluate some of the theses it puts forward, and (c) apply political ecology insights to contemporary environmental issues. Course fulfills the Writing (W) GE and ENVS Social Science requirement.

ENVS 240 - Environmental Politics and Decision Making (4 Credit Hours)

This course gives students a chance to explore the realm of proactive change in the environmental arena. It combines the theories of policy, the tools of problem solving, and the practice of dealing with environmental challenges in the real world of American government. The premise of the course is this: if you want to improve the state of the planet, you have to propose a solution. To make a solution happen, you should understand the process of getting an idea through the decision-making system. Effecting change requires a background in the system(s) that make things happen, whether you ultimately want to work within the system or outside it. This course is divided into two main components: an overview and implementation of problem solving techniques, and an in-depth examination of the U.S. Congress' role in environmental policy formation. The latter section culminates in a "Moot Congress" undertaken by students at the end of the semester. Not recommended for first year students. Course fulfills the Oral Communication (R) requirement and the ENVS Social Science requirement.

ENVS 242 - Community Resilience (4 Credit Hours)

The impacts of a shock on a community are not necessarily determined by the scale of the shock, but greatly influenced by community preparation. Community resilience is the capacity of a community to withstand, recover from, and respond positively to crisis or adversity. This course focuses on place-based communities in a variety of local and global contexts and the assets that shape those community's efforts to maintain or improve local quality of life and sustainability.

Crosslisting: ANSO 242.

ENVS 248 - Environmental History of Latin America (4 Credit Hours)

This course examines how the peoples of Latin America have lived with, utilized, and transformed the environments in which they lived over time. Environmental History is a fascinating way to study the past and to understand the present. Many ideas that we may think of as static or unchanging – such as those about nature, wilderness, landscape, science, technology, land-use planning, and conservation emerged from historical relations with our physical environment. Yet these ideas about the environment are always embedded in power structures and social relations. Nature, as we will see, is as much cultural, social, political, and economic as it is natural or ecological. We will explore how human-nature interactions have shaped human history through the exploration of how natural disasters, ecological zones, natural resources, livestock and wildlife, and epidemic diseases (among other things) influence peoples' lives in various historical moments with a focus on Latin America.

ENVS 260 - Environmental Philosophy (4 Credit Hours)

This course investigates the question of our ethical relations and responsibility to objects and systems in the natural world, including animals, other living beings, non-living entities, ecosystems, and "nature" as a whole. It also asks about nature as such: what nature is, what the place in it is of humans, the role of human action in transforming nature, etc. The question of the relation of the natural to the social will receive special attention. Course fulfills the ENVS Humanities/Arts requirement.

Prerequisite(s): One previous course in Philosophy or Environmental Studies or consent of instructor.

Crosslisting: PHIL 260.

ENVS 262 - Negotiation and Environmental Conflict Resolution (4 Credit Hours)

An in-depth investigation of alternative dispute resolution (ADR) as an improved means to affect change in environmental conflict. Both an intellectual and hands-on introduction to the theory and practice of ADR, relying on research into theoretical aspects of conflict, attendance at both conventional litigatory and ADR hearings, and actual participation in ADR exercises. Fulfills University's Oral Communication (R) general education requirement. Course fulfills the ENVS Social Science requirement.

ENVS 263 - World Views: Spatial Imagination in East Asia (4 Credit Hours)

This course engages the question: 'How are images used to imagine our place in the world?' Students are invited to study fascinating practices of spatial image-making in East Asia from the inside out, by exploring these world-views from the perspective of their makers. You will be asked to pay special attention to how social and economic power structures inflect these representations: to envision and decode spatial imagery as a site of imagination, control and resistance. Artists and patrons in China, Japan, and Korea have for centuries produced elaborate maps and landscape imagery, photographs and film to imagine the world in a variety of ways. This course invites you to approach modern and contemporary representations of space in East Asia both in theoretically and historically informed ways. In the first part of the course, students build a frame of reference for their analysis of post-war case studies, by reading core texts in spatial theory, and exploring important visual representations of space from pre-modern East Asia. In the second part of the course, students apply these theoretical and historical approaches to select cases that exemplify more recent struggles over space and its imagination in East Asia. Course fulfills the ENVS Humanities/Arts requirement.

Crosslisting: AHVC 263.

ENVS 274 - Ecosystem Management (4 Credit Hours)

Many of Earth's ecosystems are stressed and degraded as a result of human activities. Ecosystem management is the process of evaluating the biotic and abiotic features of ecosystems and stressors and manipulating those features toward a defined goal, such as conservation or restoration. In this course, students will apply aspects of systems ecology to management scenarios in particularly stressed ecosystems. Students will gain an understanding of systems ecology and will learn how ecological communities function within ecosystems and landscapes. After establishing this foundation, students will lead the exploration of some of our planet's greatest ecological systems. Lab sessions will give the students an opportunity to construct a computer-based simulation of an ecosystem and to apply ecological modeling as a management tool in both lab and field settings. Course fulfills the ENVS Natural Science requirement.

Prerequisite(s): Any 100 or 200 level science course.

ENVS 276 - Environmental Justice (4 Credit Hours)

Using waste as a focusing lens, this course examines the theory and application of environmental justice and environmental inequality within a global context. The objective of this course is to understand, explore, and analyze the inequities and power dynamics associated with many types of socio-environmental issues, thus illustrating environmental (in)justice at multiple scales. Using several case studies (e.g., electronic waste, renewable energy, and climate change, among others), we explore three core questions: 1) How are justice issues experienced locally by different social groups? 2) How do socio-environmental issues relate to broader structural injustices? And 3) How can we reimagine solutions for environmental justice? By thinking critically about these questions, we challenge our thinking on a variety of topics, including consumption, circular economy, the meaning of waste, and why it matters today and in the future. Importantly, students in this course engage significantly with the oral communication of environmental justice issues to different audiences within the broader community.

ENVS 284 - Environmental Planning and Design (4 Credit Hours)

This course examines a variety of local environmental planning processes and issues, focusing primarily on the communities surrounding Denison (Granville, Licking County), as well as the theories, concepts and tools of design, both at a community level and for individual buildings. Particular attention will be paid to controversial models of architecture and planning in order to understand some of the negative implications of conventional approaches. Field trips, group exercises, research and project competitions will form the basis for course evaluation. Course fulfills the ENVS Social Science requirement.

ENVS 288 - Sustainability Seminar (1 Credit Hour)

New efforts to achieve sustainability in the face of environmental problems are generating innovation and opportunity at an ever-increasing pace. This seminar exposes students to cutting-edge ideas, technologies, research, and potential career pathways in environmental sustainability. The seminar will feature guest speakers, opportunities for networking with Denison alumni, presentations from students who have completed internships and off campus study, faculty research spotlights, and conversations with environmental professionals. Seminar participants will meet once each week during each semester. This course adheres to Denison's Academic Credit policy. It does not fulfill a GE requirement.

ENVS 289 - Environmental Careers (1 Credit Hour)

ENVS 290 - Special Topics in Environmental Studies (4 Credit Hours)
This course provides students with an opportunity to investigate particular environmental issues from diverse perspectives within the discipline. Students may enroll in this course more than once. Courses may fulfill different ENVS requirements depending on content; please consult course pre-registration materials for the particular semester when offered.

ENVS 291 - Environmental Literature (4 Credit Hours)

This course examines humanity's relationship with and shifting conceptions of the nonhuman world through a range of literary and cultural texts. While reading selections will vary, they will generally include writers who reflect different ethnic, regional, and/or national outlooks and who work in various modes, including fiction, poetry, memoir, natural history, and science writing.

Crosslisting: ENGL 291.

ENVS 301 - Environmental Practicum (4 Credit Hours)

This keystone course is primarily for ENVS majors; minors are welcome. This course provides the opportunity for students to gain hands-on experience working on real-world environmental problems. As a group, students work in an intensive format with a real "client" and real deadlines to research a problem, assess options, recommend solutions, and evaluate outcomes. Examples of projects include energy and water conservation, local land use planning, wetlands managements, reuse/recycling programs, agriculture preservation, and environmental education. Should be taken during the junior year. Core course in the major.

Prerequisite(s): ENVS 200; ENVS major or minor.

ENVS 334 - Sustainable Agriculture (4 Credit Hours)

This course will expose students to the purposes and methods associated with sustainable agriculture. We will do this through readings, discussion and actual experience on local and sustainable farms. Throughout the semester we will reflect on the social, economic and environmental aspects associated with sustainable agriculture as well as actual practices affiliated with the modern sustainable agriculture movement. Students must be prepared to commit to working on farms each week as part of the lab requirement of this course. Course fulfills the Writing (W) GE, and the ENVS Social Science requirement, and the ENVS Social Science requirement.

ENVS 351 - Restoration Ecology (4 Credit Hours)

Many of Earth's ecosystems are degraded to the point where they no longer fully support the species and processes on which we depend. In response, western science has recently applied ecological theory to techniques of restoration. Some of these practices have long been used by cultures around the world, while others are experimental approaches to novel situations. In this course, students will learn foundational concepts and skills for the planning, design, actualization, and evaluation of restored ecosystems. Using literature review, discussion, projects, and labs, we will explore the following: landscapes in which ecological restoration may occur, including sociocultural landscapes; abiotic features of ecosystems and associated physiological limits of organisms; genetic aspects of restoration; population dynamics and community assembly; principles of succession and disturbance ecology; nonnative species and invasion ecology; and methods of evaluation. A primary focus of the course is exposure to real-world situations through fieldwork and consultation with professionals. This is a lab science course that fulfills the Y GE and adheres to Denison's Academic Credit policy.

Prerequisite(s): ENVS 274, BIOL 230, or consent.

Crosslisting: BIOL 351.

ENVS 352 - Planetary Health (4 Credit Hours)

Human health is intimately linked to the natural systems on which it depends. With advances in technology, agriculture, and health knowledge, humans are living longer than ever. However, those same technologies have pushed planetary systems to a breaking point. This class seeks to elaborate a path forward that recognizes the profound impact human 'progress' has on our planet and the reciprocal impact changes in natural systems will have on the future of human health.

Prerequisite(s): GH 100.

Crosslisting: GH 352.

ENVS 361 - Directed Study (1-4 Credit Hours)**ENVS 362 - Directed Study (1-4 Credit Hours)****ENVS 363 - Independent Study (1-4 Credit Hours)****ENVS 364 - Independent Study (1-4 Credit Hours)****ENVS 391 - Nature's Nation (4 Credit Hours)**

This course explores how a range of nineteenth-century American authors represented the natural world, examining how those representations of nature are informed by gender, class, and racial identities and how they become implicated in discourses of nationalism and imperialism. Course fulfills the ENVS Humanities/Arts requirement.

Crosslisting: ENGL 391.

ENVS 399 - Advanced Topics in Environmental Studies (1-4 Credit Hours)

A general category used only in the evaluation of transfer credit.

ENVS 401 - Environmental Senior Project (4 Credit Hours)

This course is required for ENVS majors with senior standing unless they are pursuing senior research (ENVS 451/452 or equivalent). This course provides an integrating and culminating experience for students, individually or in small groups, to engage with an environmental issue, either by conducting research related to this issue or by taking action on it in a way that is informed by their academic understanding. The primary objective is for each student to integrate their study of environmental issues at Denison and to develop skills in critically analyzing environmental problems and promoting environmental change. A primary focus is on writing: crafting a project proposal, communicating objectives and cogent arguments, reviewing and incorporating relevant literature, analyzing results and synthesizing conclusions. Students will have the opportunity to hone a major written work through several stages and to provide and receive peer review on written work. Course fulfills the Writing (W) GE.

Prerequisite(s): ENVS core and ENVS 301, or consent of instructor.

ENVS 451 - Senior Research (4 Credit Hours)

Independent research arranged with a faculty advisor.

ENVS 452 - Senior Research (4 Credit Hours)

Senior. ENVS 452 is the continuation of ENVS 451; see information above.