

ENVIRONMENTAL STUDIES

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The environmental studies department takes an interdisciplinary approach to the study of the environment and sustainability issues, integrating perspectives from the humanities, social sciences, natural sciences, and fine arts, and applies these perspectives to issues ranging from global warming to the environmental impacts of our own lifestyle choices. Because environmental problems and their potential solutions do not stop at disciplinary boundaries, our curriculum teaches students to approach a particular topic not simply as a question of biology, politics, or theology, but rather to combine these (and many more) perspectives to better understand environmental and sustainability issues in all their complexity. Particularly important to this process is the inclusion of social science and humanities viewpoints, as even the most technical solutions to environmental problems must be implemented by individuals working within cultural, political, and economic contexts. Five environmental studies faculty and supporting faculty from over a dozen different academic departments contribute to the program; students also have access to professional staff with responsibility for environmental and sustainability issues on both campuses in areas ranging from physical plant to grounds, dining services to transportation, including Environmental Health and Safety, the Office of Sustainability, Saint John's Outdoor University, and other related offices. The unique ecological resources of our two campuses include nearly 3,000 acres of deciduous and coniferous forests, restored oak savanna, tall grass prairie, wetlands, and a diversity of large and small lakes. This setting, which is carefully managed in the tradition of Benedictine stewardship, provides a wealth of opportunities for the hands-on exploration of environmental issues as well as venues for outdoor recreation and reflection.

Students majoring or minoring in environmental studies come from a wide range of backgrounds and areas of interest, but all share an essential curiosity about and concern for the environment and a sustainable future. The interdisciplinary nature of the program requires students to hone their skills in reading, writing, critical thinking, quantitative analysis, and argumentation to become well-rounded thinkers adept at developing and expressing reasoned opinions not only about environmental and sustainability issues, but in all aspects of their intellectual lives. Undergraduate research is central to the major curriculum; all graduates must complete a senior thesis and competitive summer research fellowships are regularly available. Experiential learning components are incorporated into many courses, including laboratories, service learning projects, field studies, and a required internship for majors. A variety of co-curricular and volunteer activities offer students interested in environmental education, outdoor recreation, food and agriculture, environmental activism, campus sustainability practices, and other related topics frequent opportunities to directly connect with others who share their interests, often alongside faculty and staff affiliated with the program. Majors and minors in environmental studies pursue a wide range of careers, not only in environmental and sustainability fields but in many other professions for which a traditional liberal arts education serves as preparation. Many also go on to advanced study in related fields such as energy development, environmental law, public policy, natural resource management, journalism, landscape architecture, and environmental education. Complete information on the environmental studies program is available on-line at <http://www.csbsju.edu/environmentalstudies>

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Assessment

The Environmental Studies Department's curriculum emphasizes research, writing, and problem-solving skills in an environmental/sustainability context. The departmental assessment program thus focuses on evaluating student outcomes via problem-solving and skill-building exercises embedded in required courses and a variety of research activities. The assessment program culminates with the senior research theses, all of which are evaluated as a group annually by the department faculty.

Majors

- Environmental Studies Major (<https://catalog.csbsju.edu/catalog/academic-departments/environmental-studies/environmental-studies-major/>)

Minors

- Environmental Studies Minor (<https://catalog.csbsju.edu/catalog/academic-departments/environmental-studies/environmental-studies-minor/>)

ENVR 150 Introduction to Environmental Studies (4 Credits)

Interdisciplinary introduction to environmental studies. Case-based investigation of environmental issues combining perspectives from the social sciences, natural sciences, and humanities. Topics will vary but may include such subjects as endangered species, air/water pollution, environmental justice/racism, animal rights, global warming, ecotourism, agriculture, nature writing, campus ecology, and others. Both semesters.

Prerequisites: None

Attributes: Benedictine Raven (BN)

ENVR 175 Earth Systems Science (4 Credits)

An interdisciplinary introduction to the science underlying environmental issues. This course will focus on earth systems science, providing a basic understanding of how the earth's hydrosphere, lithosphere, atmosphere and biosphere work and how they interact. Both semesters.

Prerequisites: None

Corequisites: ENVR 175L

Attributes: Natural World (NW), Quantitative Reasoning (QR)

ENVR 175L Laboratory (0 Credits)

Prerequisites: None

Corequisites: ENVR 175

ENVR 200A Environmental Art and Architecture (4 Credits)

This course focuses on a range of issues addressing art, architecture and their relationship to a sustainable environment. Through an analysis of critical theory, students will gain an understanding of the language and critical issues of art, architecture and their impact upon the environment. Through a hands-on approach, students will apply these concepts to make ceramic artwork in the SJU Pottery Studio. By using all native materials, designing through a programmatic structure of indigenous systems, in a sustainable framework the student will parallel architectural and design schematics presented in theory and research to an applied reality. Students will critically analyze readings, will discuss examples of art and architecture and will meet with artists in order to expand their understanding of the relationship between art, architecture and the environment. Spring.

Prerequisites: None

Restrictions: Enrollment is limited to students with a major in Environmental Studies.

Equivalent courses: ART 200

Attributes: Artistic Expression (AE), Thematic Encounter1/2-Justice

ENVR 210 Environmental Field Experience (1 Credit)

Environmental Field Experience offers students the opportunity to apply a range of disciplinary and interdisciplinary field methods to a specific topic and geographical area. The course will incorporate on-campus work in the classroom, lab and outdoors with a multi-day field component off campus. The topics will be selected to offer breadth of exposure to methods and access to suitable field sites. Each iteration will provide students with an introduction to and practice with field methods from at least two different disciplines, along with the opportunity to apply them to a discrete topic/project in the off-campus portion of the course. This is a one-credit course that will include a mandatory field experience after graduation. The class is intended for both ENVR majors and minors; students from other majors are welcome as space permits. Topics and locations will vary.

Prerequisites: (ENVR 150 or ENVR 150Z) and (ENVR 175 or ENVR 175Z)

ENVR 215 Sustainability Workshop (2 Credits)

Workshop focusing on current environmental issues in application, intended for students new to the major or minor. Course may be repeated for credit when topics vary with approval of the Department Chair. Both semesters.

Prerequisites: None

ENVR 271 Individual Learning Project (1-4 Credits)

Supervised reading or research at the lower-division level. Permission of program director required. Consult department for applicability towards major requirements. Not available to first-year students.

Prerequisites: None

ENVR 275 Humans and the Environment (4 Credits)

An interdisciplinary scientific exploration of environmental issues through case studies. Specific case studies will be chosen by the instructor, but will typically center around the broad topics of population, climate change, food and agriculture, biodiversity, pollution and energy. Both semesters.

Prerequisites: ENVR 175 or ENVR 175Z

Corequisites: ENVR 275L

ENVR 275L Laboratory (0 Credits)

Prerequisites: None

Corequisites: ENVR 275

ENVR 278A 20th Century World Environmental History (4 Credits)

This course explores the history of the 20th century world through an environmental lens, emphasizing relationships between humans and the natural world, the impacts of social/political/economic systems on nature, and the evolving use of natural resources in human societies. Movements of people, raw materials, capital, manufactured goods, and living material between ecosystems receive particular attention. The impacts of human action on the natural world, including resource extraction, large-scale construction, agriculture, transportation of species between ecosystems, warfare, migration, and the generation of pollutants will be followed through the century on scales ranging from regional to global. Students will develop an understanding of how humans have shaped the environments they inhabit both directly and indirectly, how nature influences culture over time, and how the environmental crises of the 21st century are rooted in historical events, decisions, and actions. The skills of historical analysis and argumentation will be practiced throughout the course as well.

Prerequisites: You must take INTG 100 or 205 prior to taking a Thematic Focus Course. You must take a Cultural and Social Difference: Identity (CI) course prior to or at the same time as Thematic Focus Courses.

Attributes: Human Experience (HE), Thematic Focus - Movement

ENVR 279A Environmental Methods and Analysis (4 Credits)

This course serves as an introduction to the analytical tools and metrics of environmental studies, providing students with quantitative and qualitative methodological skills germane to environmental problem solving that can be applied in upper division courses and in their own research projects. Emphases will include basic quantitative literacy, units of measurement commonly used in environmental fields, estimation, basic applied statistical analysis, cost-benefit and other economic metrics, textual analysis of survey and interview data, and data visualization through construction of graphics and maps. Students will also be guided through the process of collecting both primary and secondary data. Students will learn to apply these methods and to critique the use of similar methods by the media, in marketing campaigns and by other researchers.

Prerequisites: ENVR 279A is a Thematic Focus - Truth course. You must take INTG 100 or 205 prior to taking a Thematic Focus Course. You must take a Cultural and Social Difference: Identity (CI) course prior to or at the same time as Thematic Focus Courses.

Equivalent courses: ENVR 250

Attributes: Social World (SW), Thematic Focus - Truth

ENVR 300D World Literature of Climate Change (4 Credits)

This course explores literary writing from around the globe about climate change, with particular attention to questions of post-coloniality and environmental justice. Texts will include readings from every continent, including Antarctica, as well as genres ranging from poetry to literary theory to "cli-fi" (climate science-fiction). Through reading, thinking, discussing, and writing critically about a wide range of genres and cultural expressions, students will gain an appreciation for the depth of the world's literary approaches to the climate crisis. Students will learn to actively engage such writing from a variety of approaches including historical analysis, ecocriticism, and ethical reasoning.

Prerequisites: None

Attributes: Human Experience (HE), Thematic Encounter3 - Justice, Writing Requirement (WR)

ENVR 300E Envisioning Nature (4 Credits)

This course will examine the evolution of our modern understanding of the natural world. How do we imagine nature, and do other cultures (past and present) imagine it differently? Where exactly did our current understanding of the natural world come from, and where does it seem to be heading in the future? In asking these questions, we will also explore how different visions of nature (nature as God's creation, nature as a mechanical structure, nature as a complex ecosystem, human nature etc.) have shaped our approach to our understanding of the lives we live. Students will examine a mix of history, biology, political philosophy, literature, film and cultural theory texts as part of a course of study designed to investigate where, why and how writing and nature intersect in our world today. Course Objectives: 1. To explore the social and historical importance of influential visions of nature from the ancient world up to more recent modern and/or postmodern periods, 2. To investigate the relationship between nature, economics and literature, 3. To examine how certain visions of nature have been used to justify social inequalities, 4. To read debates about the natural world from politically informed perspectives, and 5. To study how different visions of nature shape and reshape our understanding of the natural and social worlds in which we all live.

Prerequisites: None

Restrictions: Students with a class of First Year may not enroll.

Equivalent courses: ENGL 385I

ENVR 300K God and Nature (4 Credits)

This course surveys the relationships between Western religions and the natural world. The course traces the historical development of how nature has been perceived, beginning with Jewish and Christian origins, proceeding through the Middle ages and into modernity, giving special attention to the interactions between Christianity and other faiths (e.g., pre-Christian European traditions and Native American spiritualities). The primary focus of the course concerns contemporary issues within the United States, including religious environmentalism within church bodies and the non-profit sector, forms of spirituality within environmentalism, eco-feminism, the environmental justice movement, nature religions, and contested depictions of the natural world within Christianity.

Prerequisites: None

ENVR 300N Conservation and Natural Resource Management (4 Credits)

The course focuses on the management and conservation of natural resources in the United States, including the national parks, national forests, oil/gas/mineral resources, surface and ground water, fisheries, wildlife, grazing/rangeland, and other publicly-managed resources. It explores the scientific, economic, cultural, legal, administrative, and political dimensions of natural resource management challenges faced by resource managers at a variety of levels from local lake associations to state departments of natural resources to federal agencies like the US Forest Service, National Park Service, and Bureau of Land Management. Through an interdisciplinary approach we will examine specific issues faced by agencies tasked with managing parks, wildlife, fisheries, hunting, mining, grazing, logging, recreation, and other resource uses. Specific attention will be paid to the various roles of public-sector employees and careers related to natural resource management within public agencies, as well as to the legal and political contexts for decision-making and conflict resolution. The course is open to all majors and anyone with an interest in natural resource management, ecology, environmental conflicts, environmental law and policy, public-sector management, government, politics, outdoor recreation, and related topics.

Prerequisites: None

Attributes: Thematic Encounter3 - Movement

ENVR 300P Environmental Writing (4 Credits)

This course will offer the experience of exploring the interplay between the world of woods (nature) and the world of words (literature). Students will read, analyze and discuss a wide range of nature writing, but the main focus of the class will be on the creation of their own body of nature-based, written work, primarily in the form of creative nonfiction. Emphasis will be placed on the development of individual voices and styles.

Prerequisites: None

Restrictions: Enrollment limited to students with a class of Junior, Sophomore or Senior.

Equivalent courses: ENGL 315C

Attributes: Artistic Expression (AE)

ENVR 300Q Environmental Health (4 Credits)

This course will explore the health of the environment and how it relates to public policy by examining the issues and problems associated with environmental pollution and how pollutants impact our ecosystem. Students will develop an understanding of the physical processes involved in polluted environments as well as the socioeconomic consequences. Topics may include energy and resources; water treatment; geoengineering; climate change; remediation strategies; environmental public policy; in addition to pollution in the air, water, and soil including heavy metals, toxic organic compounds, ozone, greenhouse gases and pesticides.

Prerequisites: None

ENVR 300T Sustainable Agriculture Science (4 Credits)

Managing agricultural landscapes to provide the world with sustainable food, fiber, and fuel while conserving the environment and addressing climate change is a grand challenge of 21st century agriculture. This course examines agroecosystems as complex adaptive systems characterized by interactions and feedbacks among organisms, the atmosphere, climate, and the cycling of elements at local to global scales. Key elemental cycles of carbon and nitrogen and how human activities are affecting these cycles, and creating environmental challenges will be emphasized. Soil and crop management practices and resulting interactions between soil, water, organisms, and organic and chemical inputs form the basis for discussions on diverse cropping systems, soil health, water quality and quantity, bioenergy, greenhouse gases, and sustainability.

Prerequisites: None

Corequisites: ENVR 300TL

Attributes: Natural World (NW), Thematic Encounter3 - Movement

ENVR 300TL Laboratory (0 Credits)

Prerequisites: None

Corequisites: ENVR 300T

ENVR 300Z Outdoor Adventure Education & Leadership (2 Credits)

This course explores the foundational theory, pedagogies, and history of Outdoor Adventure Education (OAE) for children and adults. Utilizing a variety of adventure-based activities (e.g. rock climbing, backpacking, canoeing), students will apply OAE concepts to curriculum design, instruction, and leadership development. Classroom instruction in theory will be complimented by practica that will develop applied skills in adventure activities along with the associated facilitation techniques, risk assessments, and group management skills necessary to conduct effective OAE lessons. This course will be a combination of classroom lecture and discussion along with adventure-based experiential learning occurring mostly outdoors. All students interested in outdoor recreation, environmental education, work with youth and/or adult programs and camps, natural resource management, team building, and education pedagogies are encouraged to enroll regardless of major or minor. Notes: An optional weekend workshop leading to Wilderness First Aid and CPR certification, which is often needed for employment in the field, will be offered in spring.

Prerequisites: None

ENVR 303 Climate Action Workshop (4 Credits)

This course involves exploration of climate policy and climate justice action at the national, regional, and local level. Students will learn about climate change and its effects, policies, and technologies to address climate change, and debates over taking action, focused on the national and local level. Students will gain hands-on organizing skills through planning an event around climate justice, interview climate justice stakeholders in the MN region, and engage in solidarity work with MN-based climate justice organizations, including attendance at local events. Offered annually.

Prerequisites: ENVR 303 is a Thematic Focus Course. You must take INTG 100 or 205 prior to taking a Thematic Focus Course. You must take a Cultural and Social Difference: Identity (CI) course prior to or at the same time as Thematic Focus Courses.

Restrictions: Students with a class of First Year may not enroll.

Attributes: Experiential Engagement (EX), Thematic Focus - Justice

ENVR 305 United Nations Climate Change Conference (2 Credits)

This course involves preparation for, research in support of, and attendance at the United Nations Framework Convention on Climate Change (UNFCCC) annual Conference of Parties (COP). Meeting once per week in the fall semester, students will learn about climate change and its effects, policies and technologies to address climate change, and debates over taking action, all at the global level. Students will also learn about the Intergovernmental Panel on Climate Change, and the UNFCCC, in preparation for attending the conference. Each student will focus on one aspect of climate change, writing a research paper that includes both preliminary research before the conference then primary research at the conference itself, attending sessions devoted to that issue and interviewing stakeholders. Participants are required to attend the COP during the semester they take this course. Enrollment is by permission of instructor only. Applications for this course are accepted each spring semester. Students accepted into the course will be enrolled in the course by the instructor. This course can be combined with ENVR 303: Climate Action Workshop to create a four-credit course. Offered annually.

Prerequisites: None

Restrictions: Students with a class of First Year may not enroll.

Equivalent courses: ENVR 300V

Attributes: Experiential Engagement (EX), Social World (SW), Thematic Encounter3 - Justice

ENVR 306 Global Climate Change Policy (SW) (2 Credits)

This course involves intensive study and role play of global solutions to climate change, centered around the United Nations (UN) process. Students will learn about policies and technologies to address climate change and debates over taking action, all at the global level. Students will also learn about the UN Framework Convention on Climate Change (UNFCCC), in preparation for a multi-week role play of the UN climate negotiations in which each student plays a country or organization. Each student will complete research papers and speeches to support their role in the role play, becoming experts on particular countries or organizations and how they approach implementation of the Paris Agreement. Students will virtually interview stakeholders to inform the research for their role play and papers. This course can be combined with ENVR 305 (which travels to the annual Conference of the Parties to the UNFCCC) to create a 4-credit course. Offered annually.

Prerequisites: None

Restrictions: Students with a class of First Year may not enroll.

Attributes: Social World (SW), Thematic Encounter3 - Truth

ENVR 310 Environmental Geography (4 Credits)

This course is an upper level, reading intensive course focusing on global environmental issues from the perspective of geography. Using water as a topical focus, the course will consider human modifications of and responses to the environment; the sometimes unintended consequences of such actions; and water as a key resource and potential source of conflict in the 21st century. As an environmental studies course, the subject matter is interdisciplinary and will include physical geography. Annually.

Prerequisites: None

Attributes: CSD: Systems (CS)

ENVR 311 Introduction to Geographical Information Systems (4 Credits)

This is an introductory course in Geographic Information Systems (GIS). GIS is designed to collect, store, and use spatial and geographical information, such as land use, property ownership, roads, rivers, lakes, forest cover type, elevation, versus tract boundaries and data, and political boundaries. In this course, students will learn to use ESRI's ArcGIS software within a larger context that also includes a history of cartography, the uses and abuses of maps, elements of map design, mental maps, participatory GIS, and a range of ethical issues that must be considered in learning how to use this powerful technology responsibly. Annually.

Prerequisites: None

Equivalent courses: ENVR 300A

Attributes: Abstract Structures (AS)

ENVR 315 American Environmental Literature (4 Credits)

This course explores the long history of American writing about nature and the environment, with particular attention to questions of the human place in nature. Some of this literature is about exploration—what is out there? Some of this is about the utility of nature—what can we do with vast forests, grasslands, or rivers? But the most interesting examples are often about what we can learn from nature and what obligations we may have to non-human life—what is our place in nature? The styles and traditions of American nature/ environmental writing have changed dramatically over time and today are quite diverse, incorporating at times elements of philosophy, theology, ethics, science, economics, politics, and art. Through reading, thinking, and discussing, and writing critically about a wide range of examples from genre students will gain an appreciation for the depth of the American literary approach to nature, become familiar with many of the writers and texts that could be said to form a “canon” in the field. And will learn to actively engage such writing from a variety of approaches including historical analysis, ecocriticism, and ethical reasoning.

Prerequisites: None

Attributes: Human Experience (HE), Thematic Encounter3 - Justice

ENVR 320 Research Colloquium (4 Credits)

In depth, interdisciplinary study of a single topic in environmental studies. By design the course will provide both depth of exposure in a topic and methodological instruction and application of research skills in the field, as preparation for the research requirements of other upper division ENVR courses and for the application in post-collegiate career settings. Topics will vary each semester, but skills covered will include group discussion, formal oral presentation, poster design and presentation, secondary literature analysis, research design, collaborative project design and implementation, and written presentation of research results. This course is intended for junior/senior Environmental Studies majors and must be taken before enrolling in the ENVR 395: Research Seminar capstone. Both semesters.

Prerequisites: ENVR 279A

Attributes: Writing Requirement (WR)

ENVR 327 Gender & Environment (4 Credits)

This course explores the links between gender, women, and environments, with an emphasis on the interconnections between environments and the workings of power that shape gender-based inequality, resistance, and strategies for social change. Through reading, discussion, documentary films, and research projects, we will explore how gender inequalities and norms of femininity and masculinity shape and are shaped by environments. The course will focus on local (U.S.) and global climate change; women's leadership in the environmental movement and community resilience; development; gendered perceptions of environmental risk; queer perspectives on environmental issues; how gendered divisions of labor (particularly care of children and elderly) affect environmental experiences; sustainable agriculture and redistribution of global resources; the effects of globalization and militarism on women and the environment; social constructions of gender and science; and the relationship between gender and environmental policy-making, inequalities, and health.

Prerequisites: Before taking a Cultural and Social Difference: Systems Courses (CS) you first must complete the following Integrations requirements; Learning Foundations (LF), Theological Encounter (TE), and Cultural and Social Difference: identity (CI).

Equivalent courses: ENVR 300U, GEND 360M

Attributes: CSD: Systems (CS)

ENVR 331 Science of Climate Changes (4 Credits)

Heated ideological debates and images of imminent environmental catastrophe generated by the issue of climate change often obscure the scientific foundation upon which it rests. In this course we will explore: (i) Earth's climatic history and how we know about this history, (ii) the drivers of climate change past and present, and (iii) the impact of climate changes and stability on the biosphere and human societies on the past. By understanding how climate naturally changed in the past we will be able to better understand current human-driven change. The impacts of, and potential solutions to the current climate crisis will be covered within this historical context.

Prerequisites: None

Equivalent courses: ENVR 300G

ENVR 331L Laboratory (0 Credits)

Prerequisites: None

Corequisites: ENVR 331

ENVR 360 U.S. Environmental History (4 Credits)

Environmental history is the study of the relationship between humans and nature over time. This course examines the changing American understanding of nature in the 19th and 20th centuries with particular attention to the development of public policies toward natural resources and wildlife, the emergence of a new set of values recognizing non-utilitarian values in nature, and to the evolution of the conservation and environmental movements. Intellectual, political, economic, scientific, and social evidence will all be examined in the process of placing nature back into the human history of North America. This course is suitable for students of any major, including those who have not taken a previous history course.

Prerequisites: None

Equivalent courses: HIST 360

Attributes: Human Experience (HE)

ENVR 371 Individual Learning Project (1-4 Credits)

Supervised reading or research at the upper-division level. Permission of program director required. Consult department for applicability towards major requirements. Not available to first-year students.

Prerequisites: None

ENVR 377A Energy and Society (4 Credits)

This course explores the relationship between energy and society. Through diverse materials and field trips, we will learn about the energy infrastructures that power our society, the social, political, and cultural factors that shape energy production and consumption, and the relationship between energy, environment, and climate. Throughout, we will examine how all of these factors inform inequalities in who has access to energy and who is impacted by energy extraction, processing, transportation, and consumption. Students will leave the course prepared to assess the social and environmental impacts and benefits of different types of energy, and to contribute to discussions about building sustainable and just energy futures.

Prerequisites: ENVR 377A is a Thematic Focus Course. You must take INTG 100 or 205 prior to taking a Thematic Focus Course. You must take a Cultural and Social Difference: Identity (CI) course prior to or at the same time as Thematic Focus Courses.

Equivalent courses: ENVR 300X, ENVR 317

Attributes: Social World (SW), Thematic Focus - Justice

ENVR 395 Research Seminar (4 Credits)

Capstone seminar for majors/minors; intensive research project and formal presentation in collaborative setting. Both semesters.

Prerequisites: ENVR 320

Restrictions: Enrollment limited to students with a class of Senior.

ENVR 397 Internship (1-8 Credits)

Supervised career exploration which promotes the integration of theory with practice. An opportunity to apply skills under direct supervision in an approved setting. Prerequisites: approval of the department chair and a faculty moderator; completion of the pre-internship seminar.

Prerequisites: None

Attributes: Experiential Engagement (EX)