

# ENVIRONMENTAL AND SUSTAINABILITY STUDIES

## Faculty

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## Environmental and Sustainability Studies Program Mission Statement

The environmental and sustainability studies program equips students with an interdisciplinary framework for analyzing, assessing and responsibly engaging contemporary environmental issues and problems affecting earth systems and human societies across the world. Responding to the call to take care of creation, the program develops students who are ecologically literate citizens of the globe, able to understand and conduct science, to develop policy and to provide moral leadership based on an in-depth understanding of the complexity of contemporary environmental issues and concerns.

## Environmental and Sustainability Studies Program Goals and Learning Outcomes

Students majoring in environmental and sustainability studies pursue diverse programs of study depending on which concentration they choose and which particular courses they take as electives within their concentration. However, the program provides all students with learning experiences that prepare them to achieve a common set of goals and learning outcomes.

The environmental and sustainability studies program provides learning experiences that prepare students to achieve the following outcomes:

1. Understand the ecological connectivity (interactions and relationships) of the living and nonliving systems on earth, from the organismal to the global scale;
2. Understand how cultures shape human attitudes toward the natural environment;
3. Understand the social, economic and political dimensions of environmental issues, both locally and globally;
4. Synthesize the many perspectives needed to explore and articulate sustainable solutions to local and global environmental problems;
5. Engage responsibly in providing greater environmental sustainability in the world beyond Concordia.

The program is administered by two co-directors who consult with a faculty steering committee. Each student seeking the major or minor should contact one of the program chairs for advisement in the environmental and sustainability studies program.

Program Maintained Site (<https://sites.google.com/view/essconcordia/>)

## Programs Offered

### Majors

- Environmental and Sustainability Studies Major with Concentration in Contract (<https://catalog.concordiacollege.edu/arts-sciences/environmental-sustainability-studies/environmental-sustainability-studies-major-concentration-contract/>)
- Environmental and Sustainability Studies Major with Concentration in Environmental Humanities (<https://catalog.concordiacollege.edu/arts-sciences/environmental-sustainability-studies/environmental-sustainability-studies-major-concentration-environmental-humanities/>)
- Environmental and Sustainability Studies Major with Concentration in Environmental Policy (<https://catalog.concordiacollege.edu/arts-sciences/environmental-sustainability-studies/environmental-sustainability-studies-major-concentration-environmental-policy/>)
- Environmental and Sustainability Studies Major with Concentration in Natural Sciences (<https://catalog.concordiacollege.edu/arts-sciences/environmental-sustainability-studies/environmental-sustainability-studies-major-concentration-natural-sciences/>)
- Environmental and Sustainability Studies Major with Concentration in Sustainability Studies (<https://catalog.concordiacollege.edu/arts-sciences/environmental-sustainability-studies/environmental-sustainability-studies-major-concentration-sustainability-studies/>)

The **Contract Major** provides students the option to shape a program for their particular interests and aspirations, while still meeting program learning objectives. Students might propose programs, for example, to emphasize Sustainability Leadership, Environmental Education, Sustainable Design, Sustainable Architecture, Sustainable Agriculture, Ecofeminism, Environmental Activism, Indigenous and Traditional Ecological Knowledge, Climate Justice, Animal Studies, and more.

The **Environmental Humanities Concentration** is an interdisciplinary track in the Environmental and Sustainability Studies program that attends to how human communities portray their relationship to nature and face ecological challenges throughout time. This concentration engages students in rigorous inquiry into and reflective practice of the cultural strategies, arts, theories, beliefs, and ideas that move people to connect or disconnect from the environment. The environmental humanities provide historical and cultural context for environmental concerns while insisting on how the environmental context grounds historical and cultural questions.

The **Environmental Policy Concentration** is an interdisciplinary track in the Environmental and Sustainability Studies program that focuses on how public policy is negotiated. The concentration provides students the tools necessary to contribute to policy decision making and change. Some of the upper-level science options are listed as suitable substitutions for students who have the prerequisites because they are double majoring.

The **Natural Science Concentration** provides a strong foundation in interdisciplinary environmental science with an emphasis on the natural and physical sciences. This concentration draws perspectives from environmental policy, humanities, and arts.

The **Sustainability Studies Concentration** is an interdisciplinary track in the Environmental and Sustainability Studies program that examines

the ecological, ethical, and economic forces of human–environment interactions and how organizations design their activities to mitigate human impacts with ecological sustainability in mind. The concentration provides students with the tools necessary to contribute to the development of resilient human-natural systems and organizations in a changing climate.

## Minor

- Environmental and Sustainability Studies Minor (<https://catalog.concordiacollege.edu/arts-sciences/environmental-sustainability-studies/environmental-sustainability-studies-minor/>)

The interdisciplinary **minor** provides students with the opportunity to pursue a pathway through their core curricular and disciplinary coursework that emphasizes environmental and sustainability questions and concerns.

## Program Maintained Site (<https://sites.google.com/view/essconcordia/>) Courses

### ENVR 103 - Ecosystems and Human Influence, 4 credits.

Consideration of basic ecological principles and human influences on ecosystems, emphasizing major environmental problems. This course can also count toward the global studies program.

**Frequency:** *Every Semester*

**Core designations:** International-Global Prspct G, Natural Science N

### ENVR 250 - Pre-May Seminar, 2 credits.

**Frequency:** *Not offered on a Regular Basis*

### ENVR 265 / ENG 265 - Animal Stories, 4 credits.

An exploration of literature written about animals and from animal points of view. Topics will include animal consciousness, animal rights, anthropomorphism, anthropocentrism, environmental history, and the human interaction with animals over time as companion species, totems, rivals, and food sources. The course includes excursions, visits, and research with community partners who work with animals.

**Frequency:** *Every Year - First Semester*

**Core designations:** Humanities H

### ENVR 300 - May Seminar, 4 credits.

**Frequency:** *May Seminar*

### ENVR 310 / HIST 310 - Nature's Place in U.S. History, 4 credits.

Nature's Place in U.S. History will investigate the relationship between human beings and the natural world and how this relationship has changed over time. The key premise is that nature is an active force shaping U.S. history. This course will integrate nature, place and environmental justice into the more familiar narratives of the American Past. This course can also count toward the environmental and sustainability studies program.

**Frequency:** *Every Year - Second Semester*

**Core designations:** U.S. Cultural Diversity U, Humanities H

### ENVR 312 / BUSN 312 / SOC 312 - Global Development Issues, 4 credits.

Students are introduced to the social scientific approaches used to understand how demographic, institutional, cultural, economic and ecological factors influence, and are influenced by, societal development. Comparative case studies enable students to understand the structure and dynamics (e.g., population change) of human populations as they relate to socioeconomic development. This course can also count towards the Environmental Studies Program.

**Frequency:** *Every Year - First Semester*

**Core designations:** International-Global Prspct G, Social Science S

### ENVR 325 / BIOL 325 - Urban Ecology, 4 credits.

Urban Ecology is the study of organisms, their environment, and the physical, chemical, and biological factors that influence them and their interactions in the urban environment. This course is interdisciplinary. As such, it covers the physical and chemical factors of the urban environment; the flora, fauna, and ecosystems that develop therein; the socioecological issues of the urban environment; and conservation and sustainability of urban natural resources. Course consists of two 135-minute integrated lecture/laboratory meetings and one 70-minute student-led journal club per week.

**Frequency:** *Alternate Years - 1st Semester*

**Prerequisites:** BIOL 221 or ENVR 103

**Core designations:** Natural Science N

### ENVR 327 / BIOL 327 - Conservation Biology, 4 credits.

Students will develop their understanding of biodiversity, the skills needed to participate in the science and management of Earth's biological systems, and individual perspectives on responsible engagement in the world as scientists and as citizens. There will be a 8-9 day field experience involving hiking and camping. There will be a fee for this field experience.

**Frequency:** *Alternate Years - 2nd Semester*

**Prerequisites:** BIOL 221 and CHEM 127

**Core designations:** Natural Science N

### ENVR 335 / PSC 335 - Climate Change and Conflict, 4 credits.

This course will challenge our traditional understanding of what causes armed conflict. We will investigate the possible linkages between climate change and violent conflict. As the 21st century climate deteriorates, will conflict propensity increase around the world? If so, where and why? Special attention will be devoted to the rise of water wars.

**Frequency:** *Alternate Years - 1st Semester*

**Core designations:** Social Science S

### ENVR 339 / PHIL 339 - Environmental Ethics, 4 credits.

This course draws on the world's philosophical traditions, both Eastern and Western, to understand our place within and responsibility for the natural world. The course will consider major theories of ethics (consequentialism, deontology, virtue ethics) as well as major approaches to environmental philosophy (Social Ecology, Ecofeminism, Deep Ecology). In addition to broad theoretical approaches to the environment, students will use philosophical resources and methods to examine specific environmental issues and controversies.

**Frequency:** *Every Year - First Semester*

**Core designations:** Humanities H

**ENVR 350 / PSC 350 - Environmental Policy- Politics, 4 credits.**

One of the greatest challenges of our time is determining how to generate global prosperity while ensuring that the ecological environment in which we live remains healthy enough to continue to support thriving human populations. This course focuses on environmental politics and policy at the national and sub-national levels, examining how various perspectives and interests intersect in the struggle to develop the policies that govern the interaction between humans and the natural environment. It is for all students who wish to prepare themselves to engage with the environmental challenges that will increasingly dominate public life in the coming decades. This course can also count toward the global studies program and the environmental studies program.

**Frequency:** *Alternate Years - 1st Semester*

**Corequisites:** PEAK 400

**Core designations:** Social Science S

This course is PEAK Required

**ENVR 355 / PSC 355 - Petroleum Politics & Planet, 4 credits.**

This course explores the links between energy, politics, and the environment through several critical topics of global importance associated with our expanding use of energy and its impact on our environment. Alternatives to fossil fuels, such as renewable and efficient energy, will be examined as solutions to our current fossil fuel-based economy, which is unsustainable.

**Frequency:** *Every Year - Second Semester*

**Core designations:** Social Science S

**ENVR 360 / BIOL 360 - Introduction to Geographic Information Systems (GIS), 4 credits.**

Students will develop a basic understanding of a GIS and how it is used to make geospatial decisions using the software ArcGIS. Students will learn the use of spatial analytical tools to answer questions and solve problems concerning spatial data, and present their results in professional quality maps. Prerequisite: sophomore standing. Three lectures and four hours of laboratory per week. This course can also count toward the global studies program and the environmental and sustainability studies program.

**Frequency:** *Every Year - Second Semester*

**Core designations:** Natural Science N

**ENVR 363 / GER 363 - Sustainability in Germany, 4 credits.**

This English-language course will focus on sustainability in public discourse in Germany, past and present. Historical overview of the exploitation of natural resources in Germany, followed by examination of contemporary environmental issues. Counts toward German or environmental and sustainability studies majors. Readings in German required only for German credit.

**Frequency:** *Every Third Year*

**Core designations:** Humanities H

**ENVR 365 / PSC 365 - Global Sustainability Issues, 4 credits.**

This course examines two general categories of global issues - sustainable development and ecological sustainability - and the various interpretive perspectives that offer understandings of each. Integrating the contributions of several disciplines, we examine the historical origins and future trends of these problems, their causes and consequences, and their potential solutions. In addition, students will learn a variety of transferable skills, including the ability to construct policies and negotiate differences among competing interests.

**Frequency:** *Every Year - First Semester*

**Core designations:** International-Global Prspct G, Social Science S

**ENVR 380 - Special Topics, 0-4 credits.**

Courses covering various topics of interest in this particular discipline are offered regularly. Contact department or program chair for more information.

**Frequency:** *Not offered on a Regular Basis*

**Repeatable:** Yes

**ENVR 390 - Academic Internship, 1-8 credits.**

**Frequency:** *Not offered on a Regular Basis*

**Repeatable:** Yes

**ENVR 475 - Interdisciplinary Research, 4 credits.**

This course examines and applies principles of interdisciplinary research on currently relevant environmental topics of interest to the class. This class is a seminar and is intended to serve as a capstone course for the program.

**Frequency:** *Every Year - Second Semester*

**Corequisites:** PEAK 400

This course is PEAK Required

**ENVR 480 - Independent Study, 1-4 credits.**

This course provides an opportunity for individual students to conduct in-depth study of a particular topic under the supervision of a faculty member. Contact the department or program chair for more information.

**Frequency:** *Not offered on a Regular Basis*

**Repeatable:** Yes

**ENVR 483 / HIST 483 - Sustainability in History, 4 credits.**

This course examine sustainable practices from a variety of historical contexts to discover how they developed, their evolution, and in some cases what factors led to movement away from these practices.

The purpose of this historical investigation will be to craft evidence-based analysis of the implications that different kinds of sustainable practices in history have upon contemporary society. This course features a research project that will draw upon historical analysis, and demonstrate how it can be utilized towards goals of increasing sustainability in contemporary contexts. This course can also count toward the environmental and sustainability studies program.

**Frequency:** *Alternate Years - 2nd Semester*

**Core designations:** Humanities H

**ENVR 487 - Directed Research, 1-4 credits.**

This course provides an opportunity for individual students to conduct research in a specific area of study, completed under the direction of a faculty mentor. Specific expectations of the research experience to be determined by the faculty. Repeatable for credit. Prerequisite: consent of instructor.

**Frequency:** *Not offered on a Regular Basis*

**Repeatable:** Yes