

# Environmental Studies Course Offerings Fall 2024

## **ENVR 150 INTRODUCTION TO ENVIRONMENTAL STUDIES (BN) (4)**

*MWF 9:10 – 10:05 am PENGL 225 Lavigne, J*

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.

*Required For: ENVR Major, ENVR Minor, Climate Studies Minor*



## **ENVR 175 EARTH SYSTEMS SCIENCE (NS, NW, QR) (4)**

*MWF 10:20 – 11:15 am PENGL 225 Storlien, J*

*Laboratory M 12:40 – 3:40 pm PENGL 206 Storlien, J*

*Laboratory R 12:45 – 3:45 pm PENGL 206 Storlien, J*

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.

*Required For: ENVR Major, ENVR Minor*



## **ENVR 275 HUMANS AND THE ENVIRONMENT (NS) (4)**

*TR 9:35 – 10:55 am PENGL 225 Knight, T*

*Laboratory W 12:40 – 3:40 pm PENGL 210 Knight, T*

*Laboratory R 12:45 – 3:45 pm PENGL 210 Knight, T*

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.

*Required For: ENVR Major, ENVR Minor*



## **ENVR 279A ENVIRONMENTAL METHODS & ANALYSIS (SS, SW, TF-TR) (4)**

*MWF 10:20 – 11:15 am PENGL 236 Grosse, C*

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, qualitative analysis of survey and interview data, and data visualization through construction of graphics. 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.

*Required For: ENVR Major*



**ENVR 300T SUSTAINABLE AGRICULTURE** (NS, NW, TE3-MV) (4)

TR 9:35 – 10:55 am PENGL 212 Storlien, J

Laboratory T 12:45 – 3:45 pm PENGL 206 Storlien, J

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.

*Approved For: ENVR Major, ENVR Minor, Climate Studies Minor, BIOL Major*



**ENVR 303 CLIMATE ACTION WORKSHOP** (EX, TE3-JU) (4)

TR 12:45 – 2:05 pm PENGL 212 Grosse, C

This course involves exploration of climate policy and action at the national, regional, and local level. 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, 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. Sophomore standing required. No course pre-requisites. Offered annually.

*Approved For: ENVR Major, ENVR Minor, Climate Studies Minor, GEND Minor*



**ENVR 305 UN CLIMATE CHANGE CONFERENCE** (SS, SW, EL, EX, TE3-JU) (2)

R 11:10 am – 12:30 pm PENGL 225 Grosse, C

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. Sophomore standing required. No course prerequisites. Offered annually.

*Approved For: ENVR Major, ENVR Minor, Climate Studies Minor*



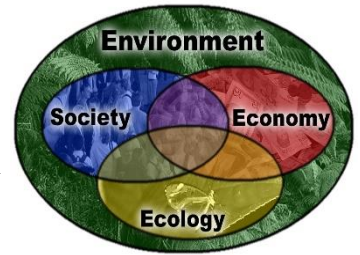
United Nations Framework  
Convention on Climate Change

**ENVR 310 ENVIRONMENTAL GEOGRAPHY (SS, SW, TE3-MV) (4)**

*MWF 11:30 am – 12:25 pm PENGL 212 Lavigne, J*

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.

*Approved For: ENVR Major, ENVR Minor*

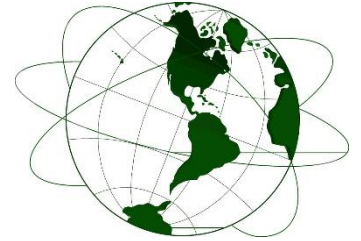


**ENVR 320 RESEARCH COLLOQUIUM (WR) (4)**

*MW 1:50 – 3:10 pm PENGL 238 Knight, T*

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.

*Required For: ENVR Major*



**ENVR 360 US ENVIRONMENTAL HISTORY (HM, HE) (4)**

*TR 11:10 am – 12:30 pm PENGL 212 Larson, D*

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.



**ENVR 395 RESEARCH SEMINAR (4)**

*MW 1:50 – 3:10 pm PENGL 232 Lavigne, J*

Capstone seminar for majors/minors; intensive research project and formal presentation in collaborative setting. Prerequisite: senior standing or permission of instructor.

*Required For: ENVR Major*



**ENVR 397 INTERNSHIP (1 credit minimum)**

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.

*Required For: ENVR Major*

# Other Courses of Interest

## **ART 212 INTRO TO BIOLOGICAL ILLUSTRATION (AE, FA, TE1/2-TR) (4)**

TR 1:05 – 3:00 pm BAC C100/C108 Melis, R

This course teaches biological illustration as a way of thinking, seeing, and communicating. No science or art experience necessary. Students learn basic traditional and digital drawing techniques through introductory projects that teach close study of natural subjects. Then students design and complete an independent project that illustrates a concept or topic of personal interest for a hypothetical or actual textbook page, poster, or other educational resource. Through projects, readings, discussions, and professional examples, students learn how to solve scientific visual communication problems, while understanding how their choices relate to truths conveyed through other forms of illustration, art, and design.

## **ART 218 INTRO TO COMPUTER ART (AE, FA, TE1/2-TR) (4)**

MW 10:40 am – 12:45 pm BAC C100 Shaker, Andrea

Introduction to the Macintosh platform, digital imaging, and the principles of two-dimensional design. Understanding the computer as a tool for creative expression.

*Approved For: Climate Studies Minor*

## **BIOL 334 GENERAL ECOLOGY (NS, NW, TE3-MV) (4)**

TR 9:35 – 10:55 am PENGL 369 Brown, D

Laboratory T 12:45 – 3:35 pm PENGL 234 Brown, D

An exploration of the ecology of lakes, streams, wetlands and other aquatic ecosystems. Lakes are common features of our landscape and play key roles as habitats and resources. Topics include the formation of lakes, how they change over the year, ecological interactions in lakes and streams, and lake management. Laboratories take place on campus lakes, on shore, and in the lab. Prerequisites: BIOL 201 or ENVR 175.

*Approved For: ENVR Major*

## **BIOL 337 AQUATIC ECOLOGY (NS, NW, BN, TE3-MV) (4)**

MWF 10:20 – 11:15 am PENGL 369 Lamberts, W

Laboratory W 12:40 – 3:30 pm PENGL 234 Lamberts, W

Laboratory R 12:45 – 3:35 pm PENGL 234 Lamberts, W

An exploration of the ecology of lakes, streams, wetlands and other aquatic ecosystems. Lakes are common features of our landscape and play key roles as habitats and resources. Topics include the formation of lakes, how they change over the year, ecological interactions in lakes and streams, and lake management. Laboratories take place on campus lakes, on shore, and in the lab. Prerequisites: BIOL 201 or ENVR 175.

*Approved For: ENVR Major*

## **EDUC 323 ELEMENTARY SCIENCE CONTENT (NS, NW, TE3-TR) (4)**

TR 9:55 – 11:15 am HAB 115 Fenton, D

The purpose of this course is to provide pre-service teachers with content specific knowledge, methods, and theoretical basis necessary for success in the elementary science education classroom. The course content emphasizes: teaching for conceptual understanding, problem solving, reasoning and sense making, inquiry, modeling, representations, science as a coherent and connected subject, and technology integration. The course is also designed to help pre-service teachers develop an understanding of how to use national and state science standards in lesson planning, instruction, and assessment, and become aware of various teaching resources that are available to enrich the science instruction. Prerequisite: EDUC 111 and Sophomore standing.

*Approved For: Climate Studies Minor*

**POLS 330 ENVIRONMENTAL POLITICS/POLICY (4)**

TR 11:10 am – 12:30 pm SIMONS G60 Lindstrom, M

This course is about the politics and policies surrounding environmental issues at all levels of government. Many issues are both local and global. Transportation, electricity, and food are locally experienced but have global as well as local environmental ramifications. Environmental politics and policies draw upon a range of disciplines including economics, history, ecology, and ethics in addition to political science, public policy, and public administration. In covering environmental politics, we focus on the themes of environmentalism from lobbying, legislating and litigating to protests and the politics of corporate sustainability. The policy focus emphasizes content related to major federal laws and the federal agencies that oversee environmental policy. The second half of the course concentrates on specific local, national and international issues such as the management of national forests, food politics, and local land use planning. We study each issue by discussing the players and major debates.

*Approved For: ENVR Major*

**SOCI 349 ENVIRONMENTAL ANTHROPOLOGY (SW, TE3-JU) (4)**

TR 12:45 – 2:05 pm SIMONS G60 Sheehan, M

We interact daily with the environment in a multitude of ways which often pass unnoticed. When we use cell phones powered by lithium batteries, when we wash our dishes with chlorinated water, when we drink coffee produced in other countries, and when we walk through the arboretum, we engage with nature and the politics that manage it. In this course, students will gain an anthropological framework for observing and critically analyzing diverse human relationships to the environment. The course addresses the questions: In what ways do human cultures perceive, use, and care for the natural world? What does it mean to live in the Anthropocene? How does resource management mediate the natural world? In what ways do people plan for, participate in, subvert, and are affected by environment management schemes? This course examines the relationships between human cultures and the environments they inhabit through ethnographic examples drawn from around the world.

*Approved For: ENVR Major, Climate Studies Minor*