

Environmental Studies Courses

Fall 2022

ENVR 150 INTRODUCTION TO ENVIRONMENTAL STUDIES (4)

MWF 9:10 am—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.



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

MWF 10:20 am—11:15 am PENGL 225 Storlien, J
Laboratory M 12:40 pm— 3:40 pm PENGL 206 Storlien, J
Laboratory R 12:45 pm— 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.

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

MWF 11:30 am—12:25 pm 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, 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.



ENV 3001 ENVIRONMENTAL ANTHROPOLOGY (4)

W 6:15 pm—9:15 pm SIMONS 360 Sheehan, M

This course examines the relationships between human cultures and the environments they inhabit. We will engage with the ways in which environments are collusions of human knowledge, perspective, histories, and economic and other cultural systems. Many of the course texts grapple with environmental management systems throughout the world, and ways that people plan for, participate in, subvert, and are affected by environment management schemes. Furthermore, this course also emphasizes the ways in which people shape knowledge about the environment and environmental management throughout historical vantage as well as Western science, particularly of conservation biology and ecology. Prerequisite: Any one of the following: SOCI 111 or 121, PSYC 111, ECON 111, POLS 111 or 121, PCST 111, or Permission of Instructor.





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

TR 9:35 am—10:55 am PENGL 212 Storlien, J
Laboratory T 12:45 pm—3:45 pm PENGL 210 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. Laboratory experiences will involve local field studies and a student-designed experiment to further understanding of human impacts on drivers of global climate change.

ENVR 300Z **OUTDOOR ADVENTURE EDUCATION & LEADERSHIP** (2)

R 12:45 pm—3:45 pm PENGL 225 Rauch, K

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 Responder and CPR certification, which is often needed for employment in the field, will be offered in spring. This 2cr course may be combined with other credits to fulfil elective credits in the ENVR major or minor.



ENVR 303 **CLIMATE ACTION WORKSHOP** (EX, TE3-JU) (2)

T 11:10 am—12:30 pm PENGL 238 Grosse, C

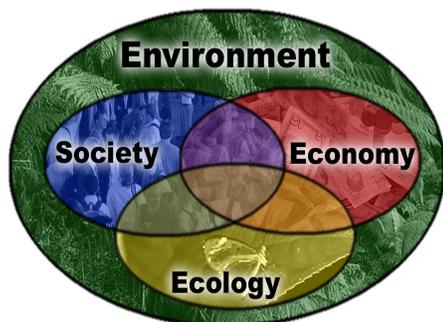
This course involves exploration of climate policy and action at the national, regional, and local level. Meeting once per week in the fall semester, students will learn about climate change and its effects, policies, and technologies to address climate change, and debates over taking action, focused 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. This course can be combined with ENVR 305: Global Climate Policy to create a 4-credit course. Sophomore standing required. No course pre-requisites. Offered annually.



ENVR 305 **GLOBAL CLIMATE POLICY** (EX, SS, SW, TE3-JU) (2)

R 11:10 am—12:30 pm PENGL 238 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. This course can be combined with ENVR 303: Local Climate Action Workshop to create a four-credit course. Sophomore standing required. No course prerequisites. Offered annually. **If COVID restrictions prevent travel, the course will continue as scheduled as a COP simulation.*



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

MWF 11:30 am—12:50 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.

ENVR 315/ENGL 384 **AMERICAN ENVR LITERATURE** (HM, HE, TE3-JU) (4)

TR 9:35 am—10:55 am PENGL 229 Lyndgaard, K

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, discussing, and writing critically about a wide range of examples from the 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 academic perspectives including historical analysis, ecocriticism, and ethical reasoning,





ENVR 320 RESEARCH COLLOQUIUM (4)

MW 1:50pm—3:10pm PENGL 232 Grosse, C

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.

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

TR 12:45 pm—2:05 pm SIMONS 310 Lindstrom, M

This is a course 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 policy are necessarily multi-disciplinary topics so we will 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 mostly on the major, albeit shifting, themes of "environmentalism" from white-collar lobbying, legislating and litigating to the direct action protests and the politics of corporate sustainability. The policy focus emphasizes content related to major federal laws governing public lands and other environmental issues, 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 will study each issue by discussing the players and major debates circulating around the respective ecological issues.

ENVR 360/HIST 360 US ENVIRONMENTAL HISTORY (HM, HE) (4)

MWF 9:10 am—10:05 am 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 1:50pm—3:10pm PENGL 238 Lavigne, J

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

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.



Non-ENVR Courses of Interest

BIOL 334 GENERAL ECOLOGY (4)

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| <i>TR</i> | <i>9:35 am—10:55 am</i> | <i>PENGL 369</i> | <i>Keyler, T</i> |
| <i>Laboratory R</i> | <i>12:45 pm— 3:35 pm</i> | <i>PENGL 234</i> | <i>Keyler, T</i> |
| <i>Laboratory F</i> | <i>12:40 pm—3:30 pm</i> | <i>PENGL 234</i> | <i>Keyler, T</i> |

An exploration of the historical, theoretical and empirical development of the science of ecology. Topics include dynamics of populations, interactions among species, and the organization and function of ecosystems. We devote special attention to the interplay between theoretical and empirical studies, with emphasis upon current research whenever possible. In the laboratory, students are expected to work in teams to design and implement a research project and present their findings in a public forum. Prerequisites: BIOL 222 or 202, or ENVR 275. Recommended: MATH 124.

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

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| <i>MWF</i> | <i>9:10 am—10:20 am</i> | <i>PENGL 319</i> | <i>Lamberts, W</i> |
| <i>Laboratory M</i> | <i>12:40 pm—3:30 pm</i> | <i>PENGL 234</i> | <i>Lamberts, W</i> |
| <i>Laboratory T</i> | <i>12:45 pm—3:35 pm</i> | <i>PENGL 234</i> | <i>Lamberts, W</i> |

An exploration of the ecology of lakes, streams, wetlands and other aquatic ecosystems. Topics include lake ontogeny, physical limnology, ecological interactions in lakes and streams and lake management. Laboratories take place on campus lakes, on shore and in the lab. BIOL 202 or ENVR 175 and 275 prerequisites.

Summer 2022 Course of Interest

BIOL 277A PLANTS AND SOCIETY (NS, NW, TF-JU) (4)

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| <i>MTWR</i> | <i>9:00 am—12:00 pm</i> | <i>July 1—August 12</i> | <i>Cary, K</i> |
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This course will be of interest to students who want to complete their natural world way of thinking, students who want a justice thematic focus course, and/or students who are interested in food security, conservation, climate change, and Ojibwe and Dakota plant sciences. Students will wrestle with questions like: How can we feed 10 billion people in the future; What can the Ojibwe and Dakota/Lakota cultures teach us about plant sciences and how has cultural erasure prevented our understanding; and What do we need to do about climate change to be fair to future generations? Course includes both classroom and laboratory components (labs take place in the arboretum!).