Environmental Studies
Course Offerings Fall 2020

ENVR 150 INTRODUCTION TO ENVIRONMENTAL STUDIES (4)

C3-MTRF  8:00 am—11:00 am  New Science 140  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) (4)

B2-MTRF  8:30 am—11:30 am  PENGL 225  Knight, T
Laboratory  MR  1:00 pm—4:00 pm  PENGL 210  Knight, T
Laboratory  TF  1:00 pm—4:00 pm  PENGL 210  Knight, T

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 250 ENVIRONMENTAL METHODS & ANALYSIS (4)

D4-MTRF  1:00 pm—4:00 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.

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

A1-MTRF  8:30 am—11:30 am  PENGL 225  Knight, T
Laboratory  MR  1:00 pm—4:00 pm  PENGL 210  Knight, T
Laboratory  TF  1:00 pm—4:00 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.
ENV 300Q **ENVIRONMENTAL HEALTH** *(4)*

**B2-MTRF**  1:30 pm—4:30 pm  **PENGL 212**  **Strollo, C**

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 re-sources; 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.

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ENVR 303 **CLIMATE ACTION WORKSHOP** *(2)*

**C3-MR**  8:30 am—11:30 am  **PENGL 225**  **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 stake holders 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.

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ENVR 305 **GLOBAL CLIMATE POLICY** *(2)*

**C3-TF**  8:30 am—11:30 am  **PENGL 225**  **Grosse, C**

Covid-19 has delayed the 2020 United Nations climate change negotiations, but that doesn't mean we can stop building climate solutions! We need all hands (and all majors) on deck, now! This course involves intensive study and role play of global solutions to climate change, centered around the UN process. Meeting once per week in the fall semester, 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, in preparation for a multi-week role play of the UN climate negotiations. Each student will complete a research paper that pairs with 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 stake holders to inform the research for their role play and papers. This course can be combined with ENVR 303: Climate Action Workshop to create a 4-credit course. Sophomore standing required. No course prerequisites. Offered annually.
ENVR 310 ENVIRONMENTAL GEOGRAPHY (4)
A1-MTRF 9:00 am—12:00 pm PENGL 229 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 311 INTRODUCTION TO GIS (4)
B2-MTRF 8:30 am—11:30 am PENGL 236 Lavigne, J
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.

ENVR 320 RESEARCH COLLOQUIUM (4)
D4-MTRF 9:00 am—12:00 pm PENGL 229 Lyndgaard, K
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 360 US ENVIRONMENTAL HISTORY(4)
A1-MTRF 9:00 am—12:00 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)
D4-MTRF  8:30 am—11:30 am  PENGL 225  Larson, D
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.

**Cross-Listed and Non-ENVR Courses**

PHIL 322 ENVIRONMENTAL ETHICS (ES) (4)
A1-MTRF  9:00 am—12:00 pm  QUAD 343  Wright, C
B2-MTRF  9:00 am—12:00 pm  QUAD 343  Wright, C
This course investigates a variety of ethical issues that arise from consideration of the relation between humans and the non-human natural world (i.e., the environment, animals, land, ecosystems, wilderness areas). This course will introduce students to the basic concepts of environmental ethics, to specific ethical issues associated with environmental policy, and to philosophical theorizing about the environment.

BIOL 334 GENERAL ECOLOGY (4)
A1-MTRF  8:00 am—4:30 pm  PENGL 325  Brown, D
Lab-MTRF  8:00 am—4:30 pm  PENGL 234  Brown, D
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.

BIOL 337 AQUATIC ECOLOGY (4)
B2-MTRF  8:00 am—4:30 pm  PENGL 234  Lamberts, W
Lab-MTRF  8:00 am—4:30 pm  PENGL 234  Lamberts, W
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.