Environmental Studies
Course Offerings Spring 2022

ENVR 150 INTRODUCTION TO ENVIRONMENTAL STUDIES (4)
MWF 8:00 am—8:55 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 T 12:45 pm—1:45 pm PENGL 206 Storlien, J
Laboratory F 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 200A ENVIRONMENTAL ART AND ARCHITECTURE (FA) (4)
MW 12:40 pm—1:35 pm ART 102 Lemke, S
F 12:40 pm—3:10 pm ART 102 Lemke, S
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 al 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, discuss examples of art and architecture and meet with artists in order to expand their understanding of the relationship between art, architecture and the environment.

ENVR 210 ENVIRONMENTAL FIELD EXPERIENCE: MOUNTAINS & PRAIRIES (1)
W (D mod only) 6:15 pm—9:15 pm PENGL 225 Knight, T
Mandatory field experience tentatively planned May 9-18, 2022
Explore the natural and cultural history of the mountains and prairies with visits to Badlands National Park and Rocky Mountain National Park. Expect front and back country experiences exploring these ecosystems, their wildlife, and how park management balances wild nature with human visitation and recreation. Prerequisites are ENVR 150 and ENVR 175 or permission of the instructor. Course fees will be assessed to cover the cost of the field experience in an all-inclusive approach (travel, food, lodging, etc.) for all participants.
ENVR 275 HUMANS AND THE ENVIRONMENT (NS) (4)

TR  9:35 am—10:55 am  PENGL 225  Knight, T
Laboratory T  12:45 pm—3:45 pm  PENGL 210  Knight, T
Laboratory R  12:45 pm—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.

ENVR 278A 20TH CENTURY WORLD ENVIRONMENTAL HISTORY (HM, HE, TF-MV) (4)

MWF  1:50 pm—2:45 pm  PENGL 212  Larson, D

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.

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, 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.

NEW COURSE ADDED

ENVR 300R SUSTAINABLE URBAN PLANNING (4)

T  6:15 pm—9:15 pm  SIMONS G10  Lindstrom, M

A sustainable world requires continual examination and debate related to the ways we plan, design and manage human settlements. Urban planners and policy makers address both the built and natural environment and the relationships between town and country. Sustainable development has ecological, economic and social aspects. The organization and design of space is a prime source of resource and energy use, as well as being a key to well-functioning and healthy communities. The course includes discussion and debate on themes including land use, economic development, ecological footprint, social neighborhood planning, citizen participation, work and mobility, and urban ecology.
**ENVR 300S SUSTAINABLE BUSINESS (4)**

*TR*  2:20 pm—3:40 pm  REINHART LC 391  Schwarz, S

The rules of business have changed. Long-term success for business requires more than a positive cash flow. Companies now must be economically, environmentally, and socially sustainable in order to survive in today’s global business economy. Sustainability has gone beyond a buzzword and is now integrated in the business strategies of nearly every major company. This course will take an in-depth look at the drivers for sustainability and the reasons why businesses are pursuing sustainability. The course will also look at the best industry practices of companies pursuing sustainability initiatives and analyze how these companies are using those practices to create a competitive advantage. Major areas of sustainability such as energy, food, water, waste, transportation, and personal responsibility will be covered.

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

*T*  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 regard-less 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.

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

*MWF*  10:20 am—11:15 am  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.

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**ENVR 311 INTRODUCTION TO GIS (AS) (4)**

*MWF*  12:40 pm—1:35 pm  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 331 AMERICAN ENVR LITERATURE (HM, HE, TE3-JU) (4)
TR 11:10 am—12:30 pm  PENGL 212  Lynggaard, 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 1:50 pm—3:10 pm  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 331 SCIENCE OF CLIMATE CHANGES (4)
MWF 9:10 am—10:05 am  PENGL 212  Knight, T
F 12:40—3:40 pm  PENGL 225  Knight, T
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.
ENVR 377A ENERGY AND SOCIETY (SS,SW,TF-JU) (4)
TR 12:45 pm—2:05 pm  PENGL 212  Grosse, C
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.

ENVR 395 RESEARCH SEMINAR (4)
MW 1:50pm—3:10pm  PENGL 238  Storlien, 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

ECON 359C ENVIRONMENTAL ECONOMICS & POLICY (4)
MWF 9:30 am—10:25 am  MAIN 006  Kunwar, S
This course will study the economics of public policy toward natural resources and the environment. It will start by developing the concepts of externalities, public goods, property rights, market failure, and cost-benefit analysis and will then consider additional problems such as information, uncertainty, and risk analysis. These concepts be used to evaluate environmental policy towards actual policy problems such as air pollution, water pollution, solid waste management, and hazardous materials. The course will also cover public policy towards nonrenewable resources, such as fossil fuels, and renewable resources, such as forests and fisheries. Prerequisite: 332 & 334 or written perm of instructor.